

**School of Public Health
Health Policy and Management**

**Innovation in Community-Based Health Services:
A Multiple Case Study Exploration**

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**This thesis is presented for the Degree of
Doctor of Philosophy
of
Curtin University**

July 2020

Declaration

To the best of my knowledge and belief, this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007) – updated March 2014. The proposed research study received human research ethics approval from the Curtin University Human Research Ethics Committee (EC00262). Approval Number SPH-54-2014.

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ABSTRACT

Innovation is often considered inherently good without due consideration given to its consequences. Positioning innovation as a means to an end rather than as an end in itself, this health services research aimed to explore the meaning of productivity and production of innovation by small groups.

A qualitative multiple case study design, aligned with Stake's methodology, was used to explore three cases of small groups creating and implementing novel health services. Data was sourced from minimally structured interviews with 18 case participants; observation of 12 settings; and analysis of public and project documents, including meeting papers, commissioned reports and websites. The groups comprised:

1. a nurse practitioner-led primary health care clinic;
2. a Steering Committee; and
3. Wellness Clinics in four accommodation facilities.

All three cases were part of a single initiative initially funded for four years to 2016 to increase clinical placements for students training to be health professionals. The initiative involved government and not-for-profit agencies from health, education and human service sectors, to provide health services for people at risk of homelessness.

The individual case findings consistently associated productivity with outcomes. Productivity was contingent on contextual factors more than any physical technological change in resource-constrained community settings. Rather than small group structure, the process and success of each innovation seemed more influenced by sociocultural factors; such as shared language and meaning, relationships, and intersecting purpose.

To complement operational service production, four alternative modes of innovation production emerged from across the cases:

- *a project mode* - using project logic, including explicit service models, and project management methodologies;
- *a political mode* - highlighting the importance of an advocacy coalition led by policy entrepreneurs presenting an appropriate policy image to suitable fora to influence change;
- *a strategic mode* - where executive networks shape potential vision within 'innovation spaces' appropriate to public interests and agency mission; and
- *a relational mode* – with action linking or connecting between services, people and sectors, which created pathways and shaped health services suited to each setting.

Separately or in some combination, these four modes of innovation production provide organising frameworks for actions in the various stages of innovation, including ideation, implementation, goal setting, and evaluation.

In these purposefully selected 'low tech' health service innovations drawn from the health system conceptual margin, a productive innovation appears one that establishes both cultural embeddedness and a perceived adequate contribution to the setting's mission. Understanding cultural embeddedness provides analytical insight by situating each innovative health service in a dynamic, diachronic and negotiated health or human service environment. Social actors interpreting the relationship between the health service and the setting's mission shape the value proposition of the health service innovation. The outcomes of a health service innovation are established through their contribution to that setting's mission as perceived by service users, providers and decision-makers.

ACKNOWLEDGEMENTS

The author acknowledges the contribution of an Australian Government Research Training Program Scholarship in supporting this research.

This research would not have been possible without the involvement of the many people who participated in the study. These people were invited from government and non-government, human and health service sectors, and their involvement was yet another illustration of their ongoing efforts to help people. Their commitment to equity and human dignity for all people, including those at risk of homelessness, was at times both an inspiration and a reminder. That for many of us, it is a privilege to serve.

I wish to thank Associate Professor Janice Lewis for introducing qualitative research methodologies as forms of valid and valuable inquiry. While unable to stay to share the journey, pointing out the route was plenty. To Dr Delia Hendrie and Professor Bruce Maycock for their guidance; often, it was enough just to know the support was there.

Thank you to Professor Phillip Della for picking up a stray, and continuing to locate research in a pragmatic and political sense. No ivory towers here.

I remain ever grateful to the many people who quietly encouraged, indirectly supported, and did not judge. Reminders that qualifications do not define, that study can be for knowledge, and sometimes just for fun, gave me permission to complete this thesis 'just because'.

My love to Teresa, with thanks for her patience and assistance, and to our incredible children Eamon and Claire. My world, to infinity, plus infinity, plus one.

Love you Dad. But, as always, for Mum.

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LIST OF ABBREVIATIONS

ACT Australian Capital Territory

CIS Community Innovation Survey

CMS Critical management studies

CNS Clinical nurse specialist

ED Emergency department

EMR Electronic medical record

EN Enrolled nurse

GP General practitioner

ICT Information and communication technology

KPI Key performance indicator

MBS Medicare Benefits Schedule

MDT Multidisciplinary team

MOU Memorandum of understanding

NGO Non-government organisation

NP Nurse practitioner

OT Occupational therapist

PBS Pharmaceutical Benefits Scheme

PHC Primary health care

Physio Physiotherapist

PM Project management

PRECEDE-PROCEED ... Predisposing, Reinforcing and Enabling Constructs
in Educational Diagnosis and Evaluation – Policy, Regulatory, and
Organizational Constructs in Educational and Environmental Development

RE-AIM Reach, Effectiveness, Adoption, Implementation, Maintenance

RN Registered nurse

SWOT Strengths, weaknesses, opportunities, threats

UK United Kingdom

US United States (of America)

VET Vocational education and training

WA Western Australia

CHAPTER 1

Introduction

There seems extraordinary potential for benefits from innovation involving community-based services. Innovation, broadly defined as the introduction of something new, a new technology, is a staple of human history. From fire to the wheel to waterwheel and beyond (Greene, 2000; Pacey, 1993), people have always invented or found a novel application. Hence innovation is key to economic and social development through the increased capability of individuals, organisations and societies (Hoffecker, 2018; Schillo & Robinson, 2017). Community-based services are an innovation central to this progress in many service sectors.

Community-based service innovation is frequently on the fringe academically, with innovation scholarship principally focused on innovation by manufacturing firms. Despite the majority contribution of service sectors to many contemporary economies, the modern innovation discourse remains dominated by manufacturing industry examples, primarily of new products developed through research and development efforts (Hipp & Grupp, 2005).

Innovation has become commonly framed as an action of organisations (i.e. firms) (Hoffecker, 2018). Innovation is essential for firm performance and competitiveness, and the key to their future success and survival (Andriopoulos & Lewis, 2009; Demircioglu, 2017). Recently, some attention has been drawn to activities beyond the firm through concepts such as open innovation and user innovation (Hoffecker, 2018). In public policy, the focus has been on 'national systems of innovation' (Acs, Audretsch, Lehmann, & Licht, 2017; Lundvall, Johnson, Andersen, & Dalum, 2002). Interest in service innovation is growing likely in response to the more substantial contribution of services to the economy (Hipp & Grupp, 2005). However, this interest continues to be predominantly about initiating and managing service innovation rather than the actual impact of these innovations (Durst, Mention, & Poutanen, 2015).

Why does innovation matter for health and human services? Authors point to various reasons. These include the importance of innovation for increasing service quality, effectiveness, efficiency, or sustainability. Innovation is necessary to meet the changing expectations of consumers and health needs of the general public, to sustainably address the increasing but different demands of an aging population (Reid, Daube, Langoulant, Saffioti, & Cloghan, 2004; Sustainable Health Review, 2019). Innovation is considered essential to sustainable health systems capable of addressing the growing number of people with multiple complex and chronic conditions, who are increasingly in receipt of inadequate care from health systems not designed for their needs (Epping-Jordan, Pruitt, Bengoa, & Wagner, 2004). In particular, non-hospital service innovation is a crucial element, delivering more multidisciplinary health services away from hospitals, closer to home, in primary care, in the community (Davis, Devoe, Kansagara, Nicolaidis, & Englander, 2012; Epping-Jordan et al., 2004; Reid et al., 2004).

Interestingly, despite the scale of these claims across society, sectors and systems, innovation is rarely challenged as anything but inherently good, and the impacts, benefits or consequences of innovation infrequently measured. Although interest is emergent in areas such as innovation in government health systems (Cucciniello & Nasi, 2014), the emphasis remains primarily on firm performance (Demircioglu, 2017). The limited reviews of innovation within the public sector have considered societal impacts as well as returns on investment, but the benefit of innovation remains an open topic for debate (Nasi, Cucciniello, & Degara, 2018). While impacts of innovation are of interest in several disciplines including evaluation (Patton, 2002) and implementation science (Moullin, Sabater-Hernández, Fernandez-Llimos, & Benrimoj, 2015), this has had limited influence on innovation theory. Innovation theory scholars seem to give primacy to other aspects of innovation. These aspects include antecedents, preconditions and sources of innovation as well as processes of innovation diffusion. Despite the plethora of attention to a seeming alphabet soup of innovation types, innovation theory remains essentially unchanged in relation to consequence, impact or

benefit (Godin & Vinck, 2017); the underlying assumption of inherent goodness remains solid.

The purpose of this health services research was to conceptually 'lift the lid' or 'shine a torchlight' on this assumption, through exploring examples of community-based innovation. The research explored innovation at the micro-level of organisation and related it to production theory, including the aim to increase productivity. Understanding the innovation, and how and why it was conceived, implemented and valued by the people involved, could help generate and build innovation theory, particularly about the consequences of innovation.

The remainder of this introductory chapter is arranged as follows. The next section discusses the motivation for this qualitative health services research, highlighting the discordance experienced by this researcher in previous clinico-managerial roles. The subsequent background section outlines the three premises underpinning the research. These premises are; that innovation is a means to an end; that within production theory that end is increased productivity; and that micro-level organisation from the health system periphery can inform and potentially generate innovation theory related to health and human services more broadly.

Expanding on the last premise, this researcher further contends that community-based health service occupies a particular paradoxical position as both a prioritised source of innovation for health systems and yet a marginalised type of health service. Community-based services may warrant special attention for both their intrinsic value and their potential contribution to the broader health and human service systems. To explore the organisational arrangements of community-based services requires a specific and relevant unit of analysis; the micro-level, as illustrated in this research by the multidisciplinary team (MDT). The introduction then moves to a section outlining the research aim and objectives before concluding with an outline of the thesis structure.

A final point is made here concerning some key terminology before moving on to the next section. Except where quoting sources including participants, this thesis utilises 'health services' and 'human services' when referring to the various concepts communicated by terms such as health care and social care, or health and care systems as commonly described in the United Kingdom (UK). This language is a deliberate choice to focus on service innovation, rather than the potentially more emotional language of 'care'. However, the intention is to remain relevant to that broad set of services suggested by the various terms. Outside of quotations, formal organisations as legal entities are referred to as 'firms' in this thesis, irrespective of factors such as profit motive or charitable status, to reduce confusion with various forms of organisation of work that may cross entity boundaries. Agency is the term used to refer to a government service provider or department.

1.1 Motivation for the research

This qualitative research originated from a seemingly simple yet niggling problem that was difficult to express; there was a sense that something was wrong, and it related to the ideas of innovation and productivity. Mainstream economic and organisational ideas were discordant with the lived experience of this researcher for almost 20 years as a health service provider and manager across rural, community and disability settings. While located in high-income countries, relative to some other parts of the health system, these were resource-constrained settings where creativity, flexibility and adaptability seemed to thrive. Nevertheless, productivity measures of service occasions per day were low relative to more typical health system settings such as hospital inpatient wards and outpatient clinics. Did these resource-constrained settings have inherently lower productivity, was the measure wrong or was there a more fundamental conceptual issue at hand? Perceived high levels of innovation were changing the services in these resource-constrained settings in many ways, including enabling service continuity, but seemed unable to increase measured productivity.

This conundrum superficially seemed to support economic views dating back over 200 years to Adam Smith that many services may be inherently unproductive activities (Bladen, 1960; Gallouj, 2002). Not unimportant, just unproductive. However, more than 50 years of services research and application of management ideas to service industries to increase productivity, suggested this could surely not be the answer (Gallouj & Savona, 2009). It was time to explore this discordance, from both conceptual and contextual standpoints. Conceptually it seemed apparent that the consequences of innovation, such as increased productivity, should be included in innovation theory. Contextually, specific attention to outlier cases in health services research could aid conceptual breadth and navigation of apparent paradoxes. By this, the researcher means purposively sampled cases that were more marginal or fringe rather than representative of the dominant areas of the health system. In addition, the combination of contemporary and connected context and concept suggested the qualitative case study method as “empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (Yin, 2009, p. 18). Moreover, a multiple case study research design seemed to benefit the research aim to advance innovation theory (Stake, 2006).

1.2 Background to the research

Three main premises are fundamental to this health services research. These premises inform all aspects of this theory-building research, from the aims to develop concepts and theory, the theoretical perspectives, the use of a qualitative multiple case study research design, the choice of cases, to the approach to analysis and dissemination. The first premise is that health service innovation is a means to achieve ends, rather than an end in and of itself. The second is that production theory, wherein innovation is an important method to increase productivity, potentially provides a useful frame within which to develop innovation theory. The third premise is that micro-level analysis and synthesis from the health system periphery may inform innovation theory in health service organisation and management.

Community-based services are a particular example from the system periphery used in this research. The following background sections outline the basis for these premises, and in doing so, provide support for the research approach expanded in Chapter 3.

1.2.1 Health service innovation is a means to an end

The starting point for this research is that health service innovation is a means to achieve ends, rather than an end in its own right (Ng, Lee, Lee, & Abdullah, 2013). Other authors have also made this point, in public sector innovation (Torfing, 2016); social innovation (Britton, 2017; Seelos & Mair, 2012); health service continuous improvement (Dixon-Woods, Amalberti, Goodman, Bergman, & Glasziou, 2011); value creation in health services (Mazzucato & Roy, 2018); and as the case for responsible innovation (Von Schomberg, 2013) including responsible innovation in health services (Lehoux et al., 2019; Silva, Lehoux, Miller, & Denis, 2018). These and other contributions have expanded innovation to include involvement and interests of key stakeholders, from service users to public systems to society in general. However, there remains limited evidence of efforts to explicitly connect this ‘means to an end’ concept to innovation theory. Instead, there appears to have been further fragmentation into subfields on distinct types of innovation rather than efforts to combine or synthesise these topics.

Shifting attention to innovation as a means to achieve ends also challenges the belief that innovation is inherently good. Some authors have already challenged this belief, perceiving there is an unwarranted bias for newness, as opposed to respecting and improving established routines (Roth, 2009; Seelos & Mair, 2012), as well as innovation contributing to socio-economic inequalities (Schillo & Robinson, 2017). Some critics see innovation and its variants as a fashionable buzzword (Britton, 2017; Buttigieg & Gauci, 2015; Demircioglu, 2017), a love affair (Iglehart, 2001), or “a go-to answer, a *panacea* that carries the promise of curing socioeconomic ailments almost irrespective of what these ailments are or how they have arisen” (Pfothenauer & Jasanoff, 2017, p. 784). The term innovation has become

insidious in government policy positions, organisation and management literature, and in health services research. There is a dedicated, although seemingly fragmented, corpus of knowledge developing about the innovation concept (Crossan & Apaydin, 2010). However, fashionable overuse is not in itself a reason to ignore the concept and does not alter the long history of innovation. Perhaps this overuse instead supports arguments for more effort to establish reasoned and balanced views on both innovation and its effects.

There is some recognition that attending to innovation is insufficient without considering intended results and actual consequences, whether desirable or undesirable, unintended, or unattended consequences (Sveiby, Gripenberg, Segercrantz, Eriksson, & Aminoff, 2009). However, the attention has been more towards the macro level, of whole sectors and societies (Sveiby et al., 2009), for opportunities for beneficial innovation (Buttigieg & Gauci, 2015; Lehoux et al., 2019), with impacts judged (see for example Hutchison, Abelson, and Lavis (2001) for a critique of the limited innovation impact on Canadian primary health care). Social innovation and collaborative innovation scholars aim to integrate the interests of citizens in co-creation of value (Seelos & Mair, 2012; Torfing, 2016). These contributions have expanded the idea of innovation into areas such as public policy, but there remains limited examination of innovation at the practical service interface beyond the idea of implementation. Indeed, Pfothenauer and Jasanoff (2017) propose that innovation models generally have taken a 'practice turn', separating practitioners implementing an innovation from academic theorising about the topic. Authors report business firm innovation commonly has a similar separation (Crossan & Apaydin, 2010). If accurate, this disconnect represents a serious knowledge-practice gap for innovation, which is an applied concept reasonably expected to be grounded in applied scholarship.

There is even less clear attention to innovation as a 'means to an end' in more micro levels of organisational analysis. Criticism of evaluation of health service innovations includes its narrow focus, not considering all the impacts (Dixon-Woods et al., 2011). These authors note the case-by-case assessment of many clinical and service delivery innovations. The individual

cases of innovation may provide evidence for the diffusion of successful innovations within firms, or even within systems. However, as a corpus, these cases do little to advance innovation theory for different reasons. For example, publication may be disproportionately biased towards reporting successful innovations. Reporting may also narrowly focus on positive changes. A more theoretical connection of innovation to outcomes seems a valuable step forward to help provide a framework for future innovation research.

1.2.2 Health service innovation is intended to increase productivity

Health service innovation is a means to an end, and that end in production theory is increased productivity.

To undertake health service research into the 'ends' of innovation required a suitable starting point, and this was determined to be production theory. The organisation and management literature is replete with proposed goals or benefits of innovation, with many couched in business-type language (Seelos & Mair, 2012) such as competitive advantage, company performance, and profitability (Crossan & Apaydin, 2010). These innovation claims seemed to have limited utility given the high level of government involvement in health systems (Djellal, Gallouj, & Miles, 2013) and the limited explicit theoretical connection to innovation (Gallouj & Djellal, 2011). A 'tabula rasa' type grounded theory approach could have provided insights, but pragmatically seemed unwarranted with the available theoretical perspective on production introduced below, and expanded on in Chapter 2.

The economic theory of production explicitly includes innovation as a means to increase productivity. Although the productivity concept has arguably narrowed or even diminished over time into a microeconomic measurement, the concept has a rich history and strong relationship with the seminal organisation literature as a key aim of management techniques. Criticism includes the limited logical application of production theory to general service industries as well as health services (Djellal & Gallouj, 2009, 2013; Windrum

& Garcia-Goni, 2008). Respected authors have argued the incompatibility of advancing innovation theory within a production frame (Nelson & Winter, 1977). However, Nelson and Winter (1977) also argued for further theoretical grounding of innovation literature, so starting with a critical exploration of the existing production theory seemed one logical way forward.

1.2.3 Innovation theory informed by resource-constrained settings

The health system periphery may inform innovation theory.

This research was concentrated on health service innovation in resource-constrained settings. Health service innovation comes in all shapes and sizes, and there is not the same clear distinction as in manufacturing between product and process innovation. For example, there are research and development in pharmaceuticals and the physical medical technology space that is high risk and often high cost (Iglehart, 1977), and occasionally harmful (McGuire & Serra-Sastre, 2009).

The 'low tech' service end (Kirner, Kinkel, & Jaeger, 2009) of the health service innovation spectrum is the particular focus of this research. 'Low tech' services have been found to have more and varied innovation than previously reported (den Hertog, Gallouj, & Segers, 2011). Specifically, this is health services research exploring organisation and management design of health service delivery; the often-intangible aspects of health service process and delivery. The 'low tech' term is not meant pejoratively but rather intended to shift focus away from the physical and information and communication technology (ICT) nexus, which can dominate innovation dialogue. Attention to physical and ICT solutions is not a new phenomenon and has only grown with greater emphasis on electronic health records, digitisation, interconnectivity and 'the Internet of Things' as critical solutions to health service sustainability (Sustainable Health Review, 2019). The position taken in this research is that these physical and ICT innovations are indeed important, but will still require organisation and management of the services surrounding them.

In one sense all health services are resource-constrained, but the term here refers to those settings that are relatively more resource-poor, both in total aggregate and in the mix of worker skills and capabilities available. More resource-constrained settings such as rural and remote health services have been suggested as potentially innovation rich, with much organisation and management knowledge to offer specialised metropolitan settings (Petrich, Ramamurthy, Hendrie, & Robinson, 2013). This 'reverse innovation' notion has been proposed between nations, suggesting removing unnecessary cost from over-design and over-engineering through the diffusion of innovation from resource-poor settings to relatively more abundant settings can improve sustainability (Zeschky, Winterhalter, & Gassmann, 2014). In contrast to reverse innovation, frugal innovations have focused mainly on reducing production cost and complexity of existing types of goods to sell at lower price into poorer countries (George, McGahan, & Prabhu, 2012). Learning from the success of home-grown innovation in countries such as India has essentially flipped the frugal innovation idea on its head (Govindarajan & Euchner, 2012). Reverse innovation propose a reversal of diffusion direction or 'trickle-up' gradient, suggesting that the new and innovative ideas from resource-constrained settings can provide cost-effective innovations for higher-income countries, by understanding the value proposition for individual consumers (Govindarajan & Ramamurti, 2011). Reverse innovation has been challenged as an old idea in new clothes and perpetuating colonial views, as well as questioned for relevance outside business firms. However, frameworks in the literature include reverse innovation concerning health services (DePasse & Lee, 2013), including whole health systems (Snowdon, Bassi, Scarffe, & Smith, 2015; Syed, Dadwal, & Martin, 2013).

This study extends reverse innovation from an international concept to also consider domestic diffusion within a single nation. This position proposes a diffusion gradient reversal can also apply within higher-income countries such as Australia, as well as between lower and higher-income countries as already established in reverse innovation literature. Rather than privileging perspectives focused on national-level markets for tangible goods, this view

contends that as with new physical goods, service innovation from relatively more resource-constrained settings within a society can also provide appropriate, cost-effective and sustainable innovation for use in more abundant settings. While there is some preliminary suggestion that rural innovations require adaptation before being suited to poor urban settlements (Adongo et al., 2014), this idea of value from a reverse domestic diffusion gradient seems little discussed in more wealthy settings and countries.

Metropolitan tertiary hospitals are more resource-abundant settings in Australian health services, and health service innovations are reportedly more frequently conceived and initiated in hospitals as the notional centre of the health system (Djellal & Gallouj, 2007), and then diffused to the periphery of the system. This diffusion may meet with limited success due to the different context, particularly the more limited resources, both in aggregate and in skills and capabilities. Even the sustainability of the innovation in the metropolitan hospital may diminish, as it embeds into established routines along with reduced resource allocation and focus. This diminished sustainability beyond the initial apparent success and positive trends of the project period may occur in projects such as audits of emergency department triage (L. Burgess, Kynoch, & Hines, 2019) and implementation of quality improvement projects such as Lean (Woodnutt, 2018). In a sense, the experience from some innovative projects may be comparable to those hypothesised by a Hawthorne or observer effect (Greineder, Loane, & Parks, 1998; Kidwai & Abujudeh, 2015; Leonard & Masatu, 2010) or social desirability bias (Edwards et al., 2013). Once the attention recedes, the innovation dilutes back towards established socio-cultural norms.

Hence, the argument posited here is that the system periphery can contribute knowledge to innovation theory concerning system margins and sectoral interfaces, but also to the health system core. Therefore, this research focused on utilising 'low tech' organisation and management innovation at the periphery or boundaries of the health system. At least two ideas of the system periphery are possible. Firstly, as the geographical periphery from the system centre such as illustrated by rural and remote settings. Secondly, as

in this research, the care continuum periphery such as illustrated through community-based health services.

1.2.4 Community-based services - an innovation paradox

Description of the Australian health system usually commences and sometimes ends, with hospitals, primary medical care by general practitioners, and public health. On occasion defined as non-hospital care, community-based health service definitions often do not include primary medical care by general practitioners (GPs). For example, in government services in Australia:

Community health services generally comprise multidisciplinary teams of health and allied health professionals and aim to protect the health of people who experience barriers that impede access to private sector primary and community health services.

Governments (including local governments) provide services directly or indirectly through funding of service provision by a local health service or community organisation. There is no national strategy for community health services and there is considerable variation in the services provided across jurisdictions. (Productivity Commission, 2019)

Theoretical problems presenting a dominance paradox with researching the organisation and management of health services in resource-constrained settings, such as community-based health services, motivated this research as much as a gap in the literature. On the one hand, for many years community-based health services have been uncritically viewed as an innovative solution, a lower cost saviour to an unsustainably growing health sector (Reid et al., 2004; Sustainable Health Review, 2019). On the other hand, community-based health services remain a poor cousin to hospital and, although perhaps to a somewhat lesser extent, primary medical care by GPs (Lum, Shields, & Evans, 2016). Reid et al. (2004) [Reid Review] emphasised the risks of paying lip service to community-based service despite the need to for substantial investment and increased focus on these

services to improve health status and reduce growth in hospital demand. Community-based services were identified along with population health by these authors as a priority for investment, particularly for complex, chronic care by MDTs, with integration between the hospital, primary care, and community settings and across sector interfaces (Reid et al., 2004). Despite the Reid Review being the basis for fundamental Western Australian (WA) health system reform, over the subsequent 15 years, there arguably appears to have been more hospital building development undertaken than community-based service innovation.

The combination of conviction that innovation is good coincides with hospital and GP dominance of resources for research and practice to create an impoverished and uncritical theoretical landscape for community-based health services research. This disadvantage is despite the potential benefits from community-based innovation that seem extraordinary (Walsh, 2002). Community-based innovation is claimed to be how Australia can close the gap in disadvantage for Indigenous people (Moran, 2016), and improve older person care and autonomy across health and human services (Ghiga, Cochrane, Lepetit, Meads, & Pitchforth, 2018). Community-based innovation is key to improving health service delivery (El Arifeen et al., 2013), including the integration of services across settings and sectors (Agency for Clinical Innovation, 2019a). Innovation through community-based health services may provide spill over benefits to national economic growth, with improved population health contributing productivity gains in other sectors of the economy (Crisp et al., 2016). In North America, community-based health service delivery through integrated multidisciplinary models have been recognised for decades as improving access to care, reducing hospital service use, and more cost-effective than single-service and fee-for-service models (Wanke, Saunders, Pong, & Church, 1995). Despite this, community-based services have struggled to influence health and human service sectors. For example, in Australia, community health services that strengthened through the 1970s based on progressive notions such as social justice and universal access have been challenged since the 1990s with neo-

liberal economics privileging market and a 'user-pays' mentality (cohealth, 2016).

Studies of innovation through community-based services include the fields of mental health (Burns & Birrell, 2014; Thomas & Staiger, 2012), and Indigenous health (S. Henderson, Kendall, & See, 2011). Different approaches to community-based service delivery have been identified, including community health workers, outreach models, and community-based MDTs. However, the integration or connection of these community-based services with the remainder of the health system, and overall role in the coordination of people's complex and multiple health needs, remain in question (World Health Organization, 2015). For the UK, Crisp et al. (2016, p. e25) call for accelerating "the transformation of the health and care system from a hospital-centred and illness-based system to a person-centred and health-based system". This change will require:

a massive increase in services in homes and communities and new ways to empower front-line staff, enabled by technology, to manage the complex needs of patients across different services and organisations. It will also require the involvement of many different partners and providers and the development of new infrastructure. (Crisp et al., 2016, p. e25)

The research suggests that innovation through community-based services receives limited direct critical attention. Perhaps almost counterintuitively, innovation through and of community-based health services is assumed to be inherently positive, a good thing. Claims place community-based health services as a key to patient-centred care and health system sustainability (Sustainable Health Review, 2019), despite limited direct evidence for this in practice. The innovation is essentially congratulated as an end in itself, rather than a means to some further goal. The innovation literature is growing dramatically; no doubt encouraged with innovation being the buzzword in health care (Buttigieg & Gauci, 2015). Much is now better understood about innovation types and processes, including diffusion of innovation. However, the limited focus on innovation consequences is a commonly missing thread

throughout much of the innovation theory. Absolute or relative ideas such as positive or negative outcomes, value creation, or impacts, are little considered in innovation theory.

Institutional dominance within the health system may arguably be as influential as the oft-discussed idea of medical dominance (Willis, 1989, 2006). Community-based health services may be thought of, in part, as the translucent glue between the big health care institutions. As institutions, hospitals and primary care dominate health care policy and research. This dominance comes from the importance of these institutions to health system costs, and for health system visibility, even to the social fabric. The high total costs of hospital and primary care to the health system spark keen interest in economic, policy and management research. The medical dominance of these subsystems further assures their central importance. Their standing as social institutions is evident when the local GP or hospital risks closure in a small country town, or through the media attention to these services.

This hospital and primary care dominance create both attention distortion and colonising effects. The attention distortion for community-based services is similar to that experienced by the fields of public health and health promotion. Specialised individual acute hospital care is perceived publicly as high technology, high acuity, saving lives. Immunisation and changing behaviour do not have that immediacy, to create media attention. The keen focus of hospital management and their funders on annual budgets and core services ensure continued marginalisation of community-based services. Clinicians can contribute to this dominance through attention to disease specialisation over person-centred care.

The attempts at colonising community-based health services are not dissimilar to those experienced within the broader hospital system itself. New clinical practice, organisation of services, management techniques and financing models are just some of the innovations that commence in large tertiary hospitals and then disperse to secondary, general and country hospitals with varied results. The contextual factors that enabled the

innovations to succeed in central tertiary hospitals are not always present. The support, attention, and resources are not there.

It is not about attributing blame. Community-based health services can be characterised in a similar vein to country health services as relatively resource-poor settings creatively incubating situation-specific innovation (Petrich et al., 2013). The power differential between these resource-poor settings and the dominant health institutions ensures the latter receives more attention than the former, more money, more research, frankly just 'more'. There is more influence of the centre on the system periphery, when the resource-poor settings may have much to inform the wider system. Greater attention is usually given to the central tendency rather than the outliers, to adopt a statistical turn of phrase. These system periphery outliers are interesting, in and of themselves, as well as to the constellation of health services.

1.2.5 Small groups are a logical 'first level' of work organisation

As stated previously, community-based services are one part of the health system periphery situated within an impoverished and uncritical theoretical landscape. The incentive relationship between funding models and management provides a relevant and contemporary Australian example for public hospitals and primary care (Productivity Commission, 2017). In public hospital funding, an individual patient's separation from hospital concludes a single hospital stay episode comprising a bundle of goods and services. The public hospital budget includes a weighted payment for this episode. Managers have an incentive to try and operate with their hospital costs below the budget of collective episodes.

Most health organisations in non-hospital settings are much smaller affairs, even as small as a single person. The episode of non-hospital care is a single service occasion, a visit by a patient. The funding model pays a specified price for a service occasion. Much management is again about operating with costs below the service occasion price. However, without the

bundle of goods and services of a hospital episode to re-organise, management becomes mainly about time. The incentives promote shorter service occasions and the creation of more service occasions per worker.

Because primary care is a large scale and hence high aggregate cost to the Australian Government, policy-makers explore ways to create health service bundles in this example of non-hospital care. These have included capitation payments per annum, with the 12 months of the year serving as a notional 'episode', with recent versions called the patient-centred medical home or healthcare home (S. Moore, 2019). All of these alternative funding models are trying to provide an incentive frame within which management can try to re-organise (or administratively innovate) to reduce cost.

Community-based health services are not directly part of these initiatives in Australia. There is not the funding incentive to re-organise in the same manner as for the health institutions of hospitals and primary care. To consider community-based health service innovation through an organisation and management lens also needs some collection of resources to manage and re-organise. One approach to create organisation and management could be an artificial proxy for an episode, such as the annual capitation model. An alternative is to acknowledge that any single community-based service is usually one of the multiple services necessary or desirable to provide comprehensive health and human services for a single individual. A small group, one that can be termed an MDT, provides this collection of services.

In this research, the MDT provides a conceptual unit of analysis, as the first or most service-user proximate micro-level analysis of work organisation and management. The MDT here is conceived as two or more people contributing different, and often complementary, knowledge and skills to service production. This MDT definition is consistent with other micro-level analysis of work organisation, such as interprofessional and cross-functional teams or groups. The MDT is increasingly recognised as essential to provide comprehensive service delivery, particularly for people with complex and

multiple issues. The MDT literature is extensive, in organisation and management literature primarily attending to teamwork effectiveness, and within clinical and health services research predominantly focused on MDT effectiveness for specific disease groups and health settings.

1.3 Research aims and objectives

This research used teams to represent the micro-level of work organisation to investigate examples of innovation occurring in one part of the health system periphery; namely community-based health services. The research was to explore this micro-level innovation using production theory, including the aim to increase productivity. Understanding innovation, and how and why it was conceived, implemented and valued by the people involved, could help generate and build innovation theory concerning the consequences of innovation.

Thus, the aims and objectives of this research were to explore the relationship between the studied instances of innovation and productivity and production theory. Given the exploratory nature of the research, including its commencement from a sound theoretical base of questioned utility (Nelson & Winter, 1977), the aims and objectives were to guide rather than prescribe the research (Stake, 2006). The multiple case study design was instrumental in its intent to generate innovation theory around the phenomenon of productivity.

However, it was also respectful of preserving a balance in multiple case study research between what Stake (2006) terms the case and the quintain. Each case was special, with the first objective to understand the case (Stake, 2006); as each case also had a story worth telling. Exploration of the activity of the case for patterns of coherence and sequence from the many variables within it and the contextual features without, generates a picture or portrayal of the case (Khan & VanWynsberghe, 2008; Stake, 2006). This approach meant each case was independently studied around innovation, productivity and production through a sociological lens, with iterative interpretation by the

researcher resulting in a narrative (Holstein & Gubrium, 2016) that started from and was informed by the aims and objectives but did not prescriptively end there. The aims and objectives provided conceptual structure to the questions posed of each case (Stake, 1995, 2006), with the sociological imagination template providing a critical lens to uncouple or denature ideas and thoughts from the case before recombining into categories to form themes in a narrative form.

Subsequently, comparison between cases included identified narrative themes as well as the aims and objectives. Each case was meaningful in itself, but also in comparison to other cases that share some common characteristic. This collective, not of any cases but cases sharing a common phenomenon, is what Stake (2006) terms a quintain. The quintain in this research is not just the cluster of cases, but the common phenomenon in context. For this research, it is the productivity of service production within the selected innovative cases.

Within the above qualitative context, this research aimed to explore the meaning of productivity for innovative groups. The purpose of the research was to use productivity and production to extend innovation theory to include consequences, such as value creation.

The objectives were to:

1. Identify and categorise health service outputs within selected cases
2. Describe the concepts of productivity, efficiency and innovation
3. Conceptualise models of efficient production by small groups
4. Categorise and evaluate the innovation strategies in the cases
5. Synthesise theory of innovative health service production

1.4 Outline of the thesis

This thesis is organised into eight chapters, as follows. This introductory chapter has outlined the motivation for the study and placed particular emphasis on the three background premises that justify the research design.

The first premise is that health service innovation is a means to achieve ends, rather than an end in and of itself. The second is that production theory is useful to develop the consequences aspect of innovation theory. The third premise is that micro-level analysis from the health system periphery may usefully inform innovation theory. The micro-level and periphery concepts are operationalised respectively as the small group (team) level and community-based services.

The introduction chapter followed on from this background by introducing the research aims and objectives, indicating their provisional status as guides to the exploratory qualitative research, which was instrumental in intending to build theory. The final section of the introductory chapter is this outline of the thesis structure.

The second chapter provides the literature review, initially outlining the literature on innovation consequences before situating the research within conventional production theory. The chapter then introduces separate and distinct strands of innovation theory literature, appraising their contribution to the idea of innovation as a means to an end. A brief exploration follows of contrasting alternative approaches to the assessment of innovation impacts, including from strategic management, evaluation and implementation science literature. The concepts of production theory, and in particular productivity, are then further elucidated in some breadth.

The research methodology is detailed in a third chapter, situating the researcher within a qualitative multiple case study research design. Knowledge claims, theoretical perspectives, research method, and techniques for data collection, analysis and knowledge dissemination are outlined in turn, building a logical and coherent picture justifying the overall research design.

Individual case findings are presented consecutively in chapters four to six. In turn, thematic description of each case provides a rich and interesting narrative or account, before a separate analysis drawing on these themes.

These chapters present an independent understanding of each case about small group innovation, production and productivity.

The seventh chapter provides the cross-case analysis. This chapter commences with descriptive findings framed from the guiding research objectives, before proceeding to a more interpretative analysis of common and disparate elements.

The contribution of the research to theory is discussed in the eighth chapter, including both premises and findings.

CHAPTER 2

Literature review – consequences and innovation, production and productivity

Unsurprisingly given the contemporary interest in innovation, the volume of literature related to innovation is enormous and expanding. While not seeming to exhibit quite the same recent escalation, literature related to production and productivity is also grand in scale. Rather than make any necessarily limited attempt to traverse this literature across multiple academic disciplines and practice fields, this chapter approaches the intersection between the two theories of innovation and production in a critical fashion. This scene-setting is entirely consistent with the qualitative multiple case study research approach utilised in this study, where the analysis of the relevant case study findings also presented an iterative review of the literature.

This literature review commences with a summary of approaches to the consequences of innovation. The chapter outlines critical deficiencies in the extant body of research on innovation, including the limited consideration of innovation consequences especially at the more micro-level of analysis, and the general focus in the literature on the process for firms to attain 'innovativeness'. This review demonstrates the approach to innovation as a mechanistic, rational and technical process dominating the literature, that while fragmented is consistent with customary innovation thought. More contemporary innovation theory extending beyond the business firm to consider social process in public sector, collaborative and open innovation, is shown to contribute human agency and dynamic actor relationships to innovation models but is still limited concerning innovation consequences. Nonetheless, these alternatives, including from evolutionary and economic areas of sociology and heterodox service economics, indicate potential from a rereading or reimagining of the existing theory. One particular theory contributing a consequence-oriented take on innovation is production theory. Production theory in its dominant microeconomic form is briefly outlined, including conceptual and practical deficiencies identified in services generally

and health services in particular, before alluding to some alternative approaches to production. The consequence identified in production theory, namely that of productivity, is critiqued in terms of its use in health services as well as its meaning and discourse. This critique of productivity is to facilitate potential broad reinterpretation of the concept as situated in time and space.

This chapter reviews the contributions to the idea of innovation consequences from different literature threads. Seminal authors and works from the diffusion of innovation, organisational theory, evaluation, public sector impact and public value creation fields are outlined, before specific attention to health service sustainability. A common feature is that, except for diffusion of innovation literature and health service sustainability, there is a disconnect between most of these literature threads, with each focused around different organising principles.

With the acknowledged exceptions of diffusion and health service sustainability, these literature threads are also generally disconnected from innovation theory. In the case of the acknowledged exceptions, the innovation theory is mainly about the 'innovativeness'; that is the process from identification to adoption or implementation, rather than the consequences themselves or even preconditions in which to consider specific innovation consequences. Exploration of the consequences of innovation is principally at the more macro levels of societies and sectors, with limited consideration at the more micro-level service interface and an emerging gap between innovation theory and practice.

A series of additional literature 'fragments' and 'frameworks' offer further breadth to the diverse considerations given to innovation consequences. The fragmentation and limited efforts using theoretical models suggest that innovation consequences remain relatively immature as an area of inquiry. Efforts to categorise innovation consequences across dimensions, such as by Rogers and Wejnert, are somewhat extended by referring to examples of consequences frameworks specific to public sector and health services.

Notably, these frameworks either categorise types of innovation in matrix form or describe a process heuristic similar to public sector performance frameworks (Productivity Commission, 2019). In the latter, rather than situated in the context of a specific innovation, consequences largely remain broad performative ideas such as efficiency, effectiveness, equity and quality.

The second section of the chapter introduces the state of innovation theory, contrasting the dominant rational process theories with alternative propositions, signalling some small shift from firm-centric logic to socio-cultural perspectives. Contributions from heterodox economics and sociology provide valuable counterpoints to innovation theory based on process models, potentially suited to considering the consequences of innovation in public services provided across agencies.

Next, production theory is outlined from its dominant mainstream position in neoclassical microeconomics, as the production process of transforming inputs into desired (and intended) outputs, with productivity defined as the efficiency of this process. A critical examination follows of limitations and issues in the conceptual and practical application of production theory, particularly to health services, with an introduction to some alternative approaches to production. An exploration of literature follows this section, providing alternative perspectives or interpretations of the desired consequence in production theory, namely productivity.

2.1 The consequences of innovation

The consequences of innovation are peripherally present in seminal contributions to innovation theory extending over the past half a century but have never really captured the limelight. Rogers' (2003) work on the diffusion of innovation, arguably the most influential modern contribution to innovation theory, explicitly considers innovation consequences. While Rogers' contribution draws principally from sociological perspectives, others have addressed the issue from alternative perspectives such as organisation and management (e.g. Damanpour), public sector innovation (e.g. Osborne), and

in terms of creating public value (e.g. Moore). This section outlines the contributions of these seminal authors with a focus on innovation consequences. The specific in/attention within health service innovation (e.g. Greenhalgh and colleagues), and recent attention on the public sector, including welfare services, unintended consequences, and second-order impacts, are also considered.

Any review of innovation literature is incomplete without considering the contribution of Rogers through the 'diffusion of innovation'. The first book edition in 1962 presented a theoretical framework of generalisations based on similarities in the spread and adoption of innovation across sectors. Subsequent editions developed the diffusion theory and the role of change agents with further exemplars (Rogers, 2003). The consequences of innovation received a dedicated section in every edition of the book, highlighting important considerations, including types of consequences and in particular issues with the equity of beneficial consequences across society. This focus on the inequity of benefit is consistent with the academic foundation in rural/medical sociology and consistent with the marginalised areas (literally system margins) in this research.

Rogers (2003, p. 470) highlights the critical importance of consequences as:

the changes that occur to an individual or to a social system as a result of the adoption or rejection of an innovation. An innovation has little effect until it is distributed to members of a system and put to use by them. Thus, invention and diffusion are but means to an ultimate end: the consequences from adoption of an innovation.

He further acknowledges that, despite this importance, there is little study of consequences in diffusion research and little consideration by change agents in practice, with the latter assuming a "pro-innovation bias" that only beneficial results will occur (Rogers, 2003, p. 110). The limited study of innovation consequences is attributed to a focus on 'innovativeness' (a capacity for a more innovation) as the dependent variable rather than the more meaningful objective of the innovation consequences (Rogers, 2003).

In presenting a model for studying innovation consequences, Rogers (2003) suggests three dimensions to classify consequences: desirable versus undesirable; direct versus indirect; and anticipated versus unanticipated. With these three dimensions, Rogers (2003) proposes that undesirable consequences are often indirect and unanticipated. However, the management of innovations cannot usually separate desirable from undesirable consequences. Based on studies and further to the dimensions of innovation consequence, Rogers (2003) also made relevant generalisations about the role of change agents, and to effects on equity. In brief, change agents understand the technical “form and function” of innovation, however, struggle to anticipate social meaning, especially when applied in different situations, including different cultural contexts (Rogers, 2003, p. 471). Secondly, unless the agents pay specific attention, the consequences of innovation adoption tend to widen socioeconomic gaps, or inequity, particularly when the structure of a social system is already unequal. Authors highlight this inequity risk as the ‘innovativeness’/needs paradox in public health, where people most likely to benefit are often last to respond (Sundstrom, 2016).

The contribution of Rogers to theory on innovation diffusion is extraordinary. However, it is particularly noteworthy that Rogers’ book chapter on innovation consequences has not gained as much attention as the diffusion of ‘innovativeness’; Rogers’ call to focus on the end rather than the means has gone largely unheeded. Throughout the book editions, less than three per cent of studies analysed addressed consequences. This lack of attention to consequences appears to have continued in more recent decades (Sveiby et al., 2009). Perhaps it is evident throughout Rogers’ editions and title changes, that the emphasis was always on communication or diffusion as the research program rather than the consequences of innovation (Rogers, 2003). The more recent editions do not appear to focus on or extend this consequences concept much further despite suggestions offered to expand this area of the theory (Berger, 2005; Goss, 1979).

There have been other explicit contributions to innovation consequences beyond Rogers. For example, attempting to further synthesise a theoretical framework for the diffusion of innovation, Wejnert (2002) distinguished between innovation characteristics using three dimensions of consequences. She suggested different mechanisms for innovations with private consequences for individuals versus those with public consequences for collectives (particularly related to well-being) while recognising that these consequences could be direct/indirect, as well as a positive/negative dimension of benefits versus costs (Wejnert, 2002). However, this categorisation aimed to propose diffusion and adoption mechanisms relatively consistently for each type of consequence, not attempting to predict or preference consequences themselves.

Echoing Rogers (2003), authors considering the state of the diffusion of innovation literature in public health highlight innovation consequence uncertainty as a factor weighing on individual (managers) at the decision phase of the diffusion process (Haider & Kreps, 2004), but do not predict or make value judgements on these consequences (Haider & Kreps, 2004; Sundstrom, 2016). Others have considered reducing the uncertainty of both positive and negative consequences in this decision phase of diffusion as an exercise primarily in information gathering and analysis (Gouws & Van Rheede van Oudtshoorn, 2011). Common to these views is the social nature of the information exchange and the individual agency in the decision phase of diffusion theory (Dearing & Kreuter, 2010). With few exceptions, the emphasis remains more on 'selling the message' rather than measuring or predicting the consequences of the innovation, and under what conditions they will or could occur.

One particular exception is a 40-year-old contribution from Australia in rural sociology (Goss, 1979). Noting some undesirable consequences from the diffusion of agricultural programs into poorer countries with non-Western cultures, Goss (1979) argues the individualistic nature of the classical diffusion research contained inadequate consideration of contextual factors such as social structures. In essence, the diffusion model was culturally

attuned to an individualistic society consistent with Western cultural norms. The diffusion model also assumed a colonial view, with technical transfer from modern to traditional societies. Further, this diffusion model assumed an integration over time with increased homogeneity evident between core and periphery, which some authors reportedly contested, even within Western countries other than the United States (US) (which was usually the origin country of the innovations under analysis) (Goss, 1979). These factors highlight potential for inequity when support for innovation and its distribution of consequences in practice is through the classic diffusion model.

Drawing on Merton (1936), Goss (1979) argued that unanticipated consequences might hold particular value in understanding the role of social forces in innovation, yet suggested practical limitations to identifying these consequences. These limitations included; resource costs and error of research to predict these consequences, a focus on immediate (first-order) consequences rather than subsequent effects, the values of participants, and the very act of making predictions (Goss, 1979). Goss (1979) proposed a framework extending diffusion theory, with consequences as the dependent variables, and innovativeness and the technical process (including adoption/rejection) as independent variables. In this framework, the consequences were expanded beyond previous treatments to include the level and distribution of direct and indirect individual, group and social system consequences, for both adopters and rejecters of the innovation.

Goss (1979) undoubtedly built upon Rogers' three dimensions of consequence; namely directness, predictability and desirability (Berger, 2005). However, research exploring consequences in this way indicates that consequences are often (and sometimes predominantly) either unanticipated or undesirable or both (Berger, 2005). These findings imply there may be more of a forced or path dependence nature to adopting some innovation; it may be an institutionalised necessity to adopt almost irrespective of consequences. Berger's (2005) findings also ran contrary to Rogers and the widespread assertion that consequences have relatively typical dimensional attributes as both unintended and undesirable, rather than an

unintended/desirable combination. Interestingly, Berger (2005) cited two additional diffusion models from education research, however, noted that these and the few other diffusion theories focused on the rational process to innovation adoption, and not the actual consequences themselves.

In contrast, Sveiby et al. (2009) reiterated the critical role of the idea of consequences in economic traditions from Adam Smith's unintended 'invisible hand' to Joseph Schumpeter's 'creative destruction', with each potentially resulting in desirable and undesirable consequences for different individuals. There would be winners and losers. Drawing on these traditions, together with expanding Rogers' typology of consequences by combining with work on purposeful action (Merton, 1936), Sveiby et al. (2009) developed a framework of direct and indirect, multi-generational (i.e. first, second and third-order), and intended and unintended consequences. In addition to Roger's estimated three per cent interest in innovation consequences across the innovation diffusion literature, these authors estimated a 0.1% interest in unintended/undesirable consequences. From a survey of innovation authors, Sveiby et al. (2009) suggest the limited attention to undesirable consequences is due to the pro-innovation bias of authors and the vested interests of funders in the desirable consequences. Interestingly, the majority of the articles identified in their review involved information technology adoption with undesirable consequences potentially affecting a diverse range of individuals; including employees, consumers, bystanders or broader society. Overall, the literature explicitly exploring undesirable consequences seems limited, internally fragmented as a corpus, and separated from the study of desirable consequences of innovation (Berger, 2005; Sveiby et al., 2009).

Despite substantial interest in innovation as following a sequential or multistage process, and multi-level syntheses of innovation theory from individual actors to organisations and societies (Damanpour, 2017; Sears & Baba, 2011), these theoretical frames often end at the introduced change, with limited consideration to further consequences of the change. The

suggestion by Goss (1979) for multiple levels of innovation consequence analysis seems to have gone virtually unheeded.

2.1.1 Organisational lens on innovation consequences through performance

For more than 30 years, Damanpour has addressed innovation through an organisational lens (see Damanpour (2017) for a summary of organisational innovation). Central to this contribution has been ideas such as organisational constraints on manager decisions, the existence of managerial as well as technological innovations, and the extension of organisational innovation theory to consider the impact on organisational performance. Noting that much previous innovation adoption literature focused on communication between individual members of social systems, Damanpour and Evan (1984) argued that individuals often could only use innovations that their firm adopts. Daft's (1978) dual-core model differentiates top-down managerial/administrative innovations from bottom-up technical innovations in organisations. Drawing on Daft's dual-core model, studies have included the impact of these different types of innovation (i.e. technical and administrative) on public and private organisational performance. Organisational performance change has been considered the fundamental consequence of innovation in this field; however, the definition and measurement of organisational performance have varied considerably.

Organisation and management scholars have noted the limitations of historical literature on organisational innovation. These limitations have included a narrow focus on research to develop products in goods industries, on product innovations rather than administrative innovations, and on antecedents of innovation rather than impacts on organisational effectiveness or performance (Damanpour, Walker, & Avellaneda, 2009). The benefit to the firm has been through competitive advantage from being a first mover in a for-profit sector, or with an actual/potential performance gap in public and private sectors (Damanpour et al., 2009). Performance in these analyses includes one or composites of factors such as quantity, quality, efficiency,

satisfaction (Damanpour et al., 2009) with hard economic measures and institutional views on social gains. Examples of hard economic measures used include productivity as well as profit, growth, and competitive advantage. Institutional views on social gains include factors such as reputation or legitimacy, satisfaction, and environmental impact (Walker, Chen, & Aravind, 2015).

The more recent organisational literature further emphasises administrative innovation, as well as contributing an intermediate meso level of firm performance to the micro (individual and group) and macro (social system) perspectives on innovation consequences. “Management innovations, also called organizational, administrative, and managerial innovations, are nontechnological innovations that have been conceptualized in contrast to technology-based product and process innovations and pertain to new organizational structures, administrative systems, and management practices” (Damanpour, 2014, p. 1265). While research on this form of innovation is still less evident than technical concerns surrounding product or process innovation, it extends Rogers’ work on socio-cultural and communicative structures to place organisation and management as not only the means to facilitate the novel application of ideas, but to be the novel idea itself.

The contributions to understanding innovation consequences from an organisational perspective have been many, yet findings remain somewhat contradictory (Wisdom, Chor, Hoagwood, & Horwitz, 2014; Zornoza, Navarro, & Segarra, 2007). The empirical research has utilised the narrow organisational performance measures which are available and has not necessarily been multifactorial or considerate of intent, often assuming a simple cause-effect relationship between the innovation and the performance measure/s (i.e. a basic production model) (Lewis, 2015). The raft of literature addressing for-profit business firms in the US context may have limited relevance to the Australian health system that is dominated by public sector influences on financing and service delivery. In particular, the dominant organisational frame as bound by firms as legal entities may limit the

application to public health services crossing multiple organisations and sectors.

2.1.2 Evaluation, linearity and innovation consequences

Evaluation is itself a large and diverse field where many of the new activities could be considered innovations. Hence, evaluation is potentially a key field for innovation consequences, but is an extensive literature in its own right that is generally not well connected to innovation theory. Exceptions to this highlighted below include developmental evaluations with either linear (logic models) or non-linear (systems approaches) to innovation consequences, a small 'positive thinking evaluation' literature focused on learning from innovation, and literature on social relations in evaluation.

As opposed to incremental formative evaluations (Patton, 2016) or summative judgements of failure or success (Frechtling, 2007), authors identify developmental evaluation as particularly relevant to innovation (Patton, 2011; Stame & Presti, 2017). Patton has produced multiple texts explicitly connecting innovation, and in particular social innovation, to the practice of developmental evaluation (Patton, 2011, 2016). Central requirements for developmental evaluation contributing to social change include systems approaches that consider the specific context, connecting the innovator with the evaluation and focusing on adaptive rather than incremental development (Patton, 2011, 2016).

However, even in instances where developmental evaluation literature suggests a connection with innovation consequences, some authors contend there is limited evidence of practical usage (Lobo, Petrich, & Burns, 2014) with increasing emphasis on linear logic models (Julian, 1997; Julian, Jones, & Deyo, 1995; Savaya & Waysman, 2005), including examples in primary care and community-based health services (Hayes, Parchman, & Howard, 2011; Lobo, 2012; Watson, Broemeling, Reid, & Black, 2004). The logic model often acts as a device to illustrate the theoretical connection between program actions and program objectives, and is sometimes situated within

open systems theory (Frechtling, 2007; Julian et al., 1995; McLaughlin & Jordan, 2004).

In contrast to linear logic models, the importance of non-linear systems approach to innovation is sometimes highlighted, situated in a particular socio-economic context of institutional relationships and actor networks (K. Smith, 2000). Although noting the importance of innovation impacts, in line with other literature on innovation, this author focuses on indicators of innovation (or innovativeness) at the firm and policy level, rather than the consequences themselves. Notably, this author has recognised substantial limitations in the innovation indicator movement including potentially excess focus on technological and particularly ICT innovations in economic activity that can be measured quantitatively (Arundel & Smith, 2013; K. Smith, 2005). This focus limits analysis in areas such as the informal economy, innovation outputs in service sectors, especially when prices are input-specified such as public sector, and non-technological or administrative innovations (K. Smith, 2005). For example, the Community Innovation Survey (CIS) is a survey focused on innovation activity within organisational entities; “designed to provide information on the innovativeness of sectors by type of enterprises” (Eurostat, n.d.), rather than cross-organisational innovation within health systems or public sectors. Although the CIS is not the only innovation indicator program in existence, it is illustrative of issues with an indicator approach to innovation, and its use in fields such as public sector health services.

Some articles support a shift from linear process models of innovation both conceptually (Ortt & Smits, 2006) and empirically (Leyden & Menter, 2018) to cyclical, dynamic and lifecycle models, including authors in the evaluation literature (Lobo et al., 2014; Perrin, 2002). Critically, according to Perrin (2002, p. 17) “there is still considerable evaluation activity that assumes a direct relationship between input and output, including many evaluations that attempt to specify the return on investment in science and other forms of innovation.” Perrin (2002) claims this assumption results in traditional evaluation approaches that preserve the status quo and reward mediocrity,

and actually stifle genuine innovation due to the negative results of perceived failure.

In contrast, a small 'positive thinking evaluation' literature draws explicit connections between innovation consequences and evaluating innovation, including learning from innovation failures (Perrin, 2002). Learning from innovation failure can be tipped on its head, such as by positive thinking approaches to evaluation (Stame, 2014; Stame & Presti, 2017). These approaches posit that rather than focus on the negative aspects, evaluation should use appreciative inquiry, and particularly relevant to innovation, the use of developmental evaluation using a systems approach (Stame & Presti, 2017). This positive thinking ensures evaluators and the users of their findings do not overemphasise artificially dichotomised failure over learning (van der Knaap, Nielsen, & Turksema, 2017). The evaluation should focus on learning and development rather than binary judgements of success or failure, and all the implications that can stem from these judgements in practice.

Relating evaluation to innovation consequences may be part of a broader conversation, suggesting performance measurement creates conditions that restrict novelty and risk-taking through increased discomfort with uncertainty. These sources cited above indirectly challenge the rational-technical process model of innovation, inferring this model promotes a risk-averse culture that is potentially inconsistent with the very notion of innovation, and the risk of overly focusing on diffusion generally rather than implementation lessons for specific socio-economic contexts. Extending this further, some evaluation authors highlight the importance of social relations in evaluation (Abma, 2006; Abma & Widdershoven, 2008). A narrow interpretation of these social relations considers only program consumers or key stakeholders in evaluation. However, the evaluation itself (as well as the program) can also be conceived as an inherently social practice (Abma & Widdershoven, 2008). In many cases of innovative programs, this idea may equally consider innovation conceived, implemented and evaluated as an inherently social practice rather than a mechanistic process of diffusion.

2.1.3 Impacts and value as public sector innovation consequences

The evaluation of programs and policies is interconnected with public administration theory and practice. However, it seems necessary to consider public sector innovation separately from the evaluation field due to particular research programs involving innovation consequences, such as performance indicators and policy impacts, but perhaps most notably around the idea of public value.

Despite the tantalising prospects of innovation to reform public service delivery and 'do more with less', some authors claim little was known about the impacts of innovation in the public sector until relatively recently (S. Osborne & Brown, 2013). Noted authors in public policy innovation argue three main flaws regarding public sector innovation; a flawed understanding of the nature of innovation as compared to continuous service improvement; beliefs in the inherent goodness of innovation or a need to innovate; and its derivation principally from manufacturing-based theory (S. Osborne & Brown, 2013). Additional conceptual problems include the comparison of public sectors between countries using performance indicators (Van de Walle, 2008), measures of the innovation process that use research and development (as an input measure) and patents (as a partial output measure of novelty rather than innovation) (Walker, Jeanes, & Rowlands, 2002).

Public sector innovation in areas such as welfare reform has been dramatic in Western societies for the better part of a century (Room, 1986). Despite the large amount of attention to public sector innovation over the past four decades (Nasi et al., 2018), with recognition that different evaluations suit different types of innovation (Room, 1986), evaluation of innovation has remained a "minor stream of research" (Nasi et al., 2018, p. 203). There has been limited investigation of potential impacts of innovation in the public sector, including return on investment, organisational transformation as well as societal benefits (Nasi et al., 2018). As interest in public sector innovation has grown, there has been further recognition of the limits of applying private-

sector models to the public sector, particularly “overlooking their public value and collaborative nature” (Chen, Walker, & Sawhney, 2019, p. 1). However, public sector innovation aims of productivity and program adequacy have been considered somewhat analogous to private sector aims of profitability and market share (Cucciniello & Nasi, 2014).

Exceptions again exist concerning public sector impacts, such as economic evaluations and social return on investment (Millar & Hall, 2013; Noveck & Verhulst, 2016). These approaches aim to provide evidence, as well as prediction, of impacts from a particular innovation. For example, the framework developed by Sillanpää (2013) guides measurement of the innovation impacts of the welfare sector at multiple levels. While this framework offers practical measurement strategies for system cost-benefits and individual feedback, how these are combined remains an acknowledged challenge (Sillanpää, 2013). Further, the author suggests the framework is to facilitate decision-making on aspects such as future budget, but how this may occur is not clear. Social return on investment through social enterprises delivering health and other services offers substantial promise as an innovation consequence; however, uptake remains low. Authors suggest this is due to a series of information problems such as reconciling use of ‘soft’ information, inadequate proxy data for key information, and limited counterfactual evidence (i.e. considering what was going to happen anyway) (Millar & Hall, 2013).

Authors have noted limitations with public sector performance measures such as social return on investment. For example, narrow traditional management literature and economic principles can complicate the measurement of the public sector value proposition (Chen et al., 2019; Cucciniello & Nasi, 2014). These and other authors claim that while public services have value to individuals similar to traditional economic transactional theory, they also contribute public outcomes to society. This claim suggests individual and community value potential of innovations (S. Osborne & Brown, 2013) that may also be indirect and partial (Cucciniello & Nasi, 2014).

Strategic public administration has succeeded in extending this community perspective, within a literature stream on the idea of public value popularised by authors such as M. H. Moore (1995). M. H. Moore's (1995) classic book explicitly focused on informing public managers of their role in creating public value, claiming to draw from literature in political science, economics, organisational theory, public administration, administrative law, and private sector management. Notably, the private sector field provided some different managerial perspectives, such as innovation and enterprise, challenging those more commonly associated with public administration (M. H. Moore, 1995). From a public perspective, there was interest in connecting public management to policy implementation and strategic management ideas, which both offer particular focus to achieving public purposes. Measurement of performance success in M. H. Moore's (1995) approach was less about personal managerial achievement, organisational survival, or even managerial achievement of desired policy objectives. The focus was 'purposeful', on creating public value through emphasising performance information. This performance was specifically through retrospective program evaluation acting as a proxy for private sector profitability as a measure of production value, rather than what M. H. Moore (1995) saw as excessive focus on prospective policy analysis attempting to predict the future.

Public value is different from consumer or customer value and may have more similarity with shareholder value, particularly in a democratic society where every societal member is conceptually a shareholder in public activity. This idea is broader than a single business entity, involving public value creation through collaborative networks of public managers and non-government organisations (Agranoff, 2007). Public value has been considered almost a counterpoint to individual cost-benefit analyses, with numerous definitional challenges to understanding the "impact on how people think and feel about society" (Meynhardt, 2009, p. 193). In the eyes of some authors, public value creation is not limited to public sector activity alone and crosses organisational boundaries (Meynhardt, 2009; Page, Stone, Bryson, & Crosby, 2015) involving multiple actors, levels and logics (J. Bryson, Sancino, Benington, & Sørensen, 2017).

M. H. Moore's classic book was primarily addressing how managers could create public value. The limitations of this managerial focus are evident with the publication of a subsequent book about how to recognise when public value had been created (M. H. Moore, 2013). More recent attention has included exploration of mechanisms for creating public value such as co-creation and co-production (Alford & Yates, 2016; S. P. Osborne, Radnor, & Strokosch, 2016) including in health services (Dunston, Lee, Boud, Brodie, & Chiarella, 2009). This recent attention is also intersectoral, exploring public value creation through collaborative innovation including across organisations (Crosby, 't Hart, & Torfing, 2017), and other traditional boundaries between politics, public administration and the civil society (Yang, 2016). These recent efforts have connected creation and adoption type processes to the consequence of public value, with seemingly ever-increasing inclusion and participation; presenting as a democratic antithesis to the individual managerialism evident in the New Public Management ideology (Alford & Yates, 2016).

It is unclear how much this is simply part of a broader pendulum swing away from individualistic New Public Management (Meynhardt, 2009). However, the literature on creating public value remains principally founded from strategic public administration, governance and policy perspectives, with little direct connection to innovation theory. Strategic management and public administration literature such as the strategic triangle (M. H. Moore, 1995) refer to terms such as 'new' and 'change' and 'innovation'. However, there is little explicit application of innovation theory which with few exceptions primarily focuses on the private business sector (M. H. Moore & Hartley, 2008). The role of strategic ideas is commonly emphasised, such as creating public value, in stimulating innovation in government (M. H. Moore, 1995), including innovations in governance (M. H. Moore & Hartley, 2008). Through four case studies, these authors argue that innovations in governance require more attention, with five characteristics that distinguish them from private sector innovation, namely:

go beyond organizational boundaries to create network-based financing, decision-making and production systems; tap new pools of resources; exploit government's capacity to shape private rights and responsibilities; redistribute the right to define and judge value; and should be evaluated in terms of the degree to which they promote justice and the development of a society as well as by their efficiency and effectiveness in achieving collectively established goals. (M. H. Moore & Hartley, 2008, p. 3)

From a policy design perspective, others highlight how public value creation can form the basis of policy goals, creating policy and organisational antecedents for public managers to be innovative in policy implementation through public management (Mintrom & Luetjens, 2017).

The idea of public value creates some complexity simply through the use of the term 'value' (Meynhardt, 2009). For example, Mintrom and Luetjens (2017) discuss non-trivial distinctions between the literature on Moore's 'public value' with manager-as-steward, and the literature on Bozeman's 'public values' which conceives multiple actors logically contributing to input-process-output-outcome measures. The public value is agreed in both as meaning in the public interest; it is merely how that interest is conceived and measured, and by whom, that seems to differ (Mintrom & Luetjens, 2017). One specific form of innovation, namely governance innovation, seems to dominate literature that explicitly connects public value creation with innovation theory (Hartley, 2005). Many other contributions, including one contrasting public sector reform with innovation, seem to "obscure" the contribution of innovation theory to practice (Lynn, 2013, p. 33).

2.1.4 Sustainability of health service innovations

A further literature thread for innovation consequences particularly pertinent to this research centres on the sustainability of health service innovations. This literature draws strongly from the previously mentioned literature on diffusion of innovations, organisational theory, as well as public sector

service innovation. Hence, this section will only clarify key points additionally relevant to innovation consequences.

Through a systematic review, the seminal article in this field sought to answer the question of how to “spread and sustain innovations in health service delivery and organization?” (Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004, p. 581). This article, authored from research commissioned by the UK government (Greenhalgh, Robert, Bate, Macfarlane, & Kyriakidou, 2005), provided a clear foundation for the interdisciplinary nature of the innovation literature relevant to health services from a series of research traditions. A self-proclaimed “parsimonious and evidence-based model” (Greenhalgh et al., 2004, p. 581) provided comprehensive heuristic guidance on factors influencing the spread and adoption of innovation. This guidance developed from evidence derived from many of the authors already identified in this chapter, particularly Rogers and Damanpour. Although presented differently, the model parallels open systems theory with processes including feedback occurring within a specific context and considers influence at various levels by actors and structural factors. Notably, the authors explicitly flagged the emphasis in the literature on formal central innovation rather than informal diffusion from the periphery (Greenhalgh et al., 2004). However, despite the model being inclusive of innovation consequences, the paper itself was relatively silent on this area other than providing feedback to potential future adopters of innovation. This silence is relatively consistent with other diffusion of innovation literature reviewed in this chapter.

Further, the systematic review followed an atomistic empirical approach, separating diffusion of innovation literature into concepts. While the conceived heuristic model is practical for diffusion, it remained generally disconnected from broader innovation theory and innovation consequences. Notably, this paper identified from organisation research that greater innovativeness occurs in larger organisations and those with slack resources. These findings are interesting to contrast with traditional Schumpeterian views on the role of the entrepreneur in the private sector and pose some

challenges for community-based services delivered by relatively small organisations at the fringe of government services.

Fox, Gardner, and Osborne (2015) argue that the restricted consideration of health service innovation sustainability by Greenhalgh and colleagues is due to limited evidence. Noting the small and fragmented literature on health service innovation sustainability, Fox et al. (2015) propose a theoretical framework comprising five factors of the political, organisational, financial, workforce, and innovation-specific (nature and type) to guide further research. However, the connection of this framework to innovation theory remains centred in the diffusion of innovation, and the sustainability of the innovation rather than its consequences. This sustainability model has been considered regarding improvement projects (Lennox, Maher, & Reed, 2018). While these authors note the frequency with which improvement projects may recede and return towards the status quo as enthusiasm wanes, this project definition may relate to either continuous incremental improvement or projects that are more step-wise and innovative.

2.1.5 Fragments and frameworks connected to innovation consequences

The fragmentation and limited explicit connection to theory on innovation consequences are evident within most of the fields outlined thus far in this chapter. There are other research programs, many of which seem marginal or marginally connected to innovation consequences, including some developing heuristic frameworks in health and human services. A few key literature strands are reviewed here as 'fragments', exploring their and other theoretical contributions in the form of frameworks.

Some of these strands appear connected in an obvious fashion. For example, there is an association between public value creation and the extensive strategic management literature and its idea of value creation in for-profit business firms. In addition, innovation is explicitly an applied practice term, warranting some expansion on areas directly associated with

practical implementation despite not being directly associated with innovation theory. From a pragmatic standpoint, relevant implementation fields include implementation science and its connection to program evaluation and policy implementation.

Implementation science is an area of burgeoning literature with practical scholarship around introducing innovations, primarily within firms. As a field primarily intended to expand the translation of research into evidence-based practice, numerous implementation frameworks and models have developed at various levels of analysis, from individuals and firms to communities and systems (Tabak, Khoong, Chambers, & Brownson, 2012). This translation is viewed as a process, where implementation is the final practical phase of a continuum passing from passive diffusion to active dissemination to a targeted audience (Nilsen, 2015). While process models describing this continuum are one type amongst the array of broad and context-specific models and frameworks used within implementation science, Roger's diffusion of innovation remains an influential theory in this field (Nilsen, 2015).

Existing implementation frameworks used in human services are recognised as requiring further refinement and better grounding in theory (Albers, Mildon, Lyon, & Shlonsky, 2017). These authors identified eight implementation frameworks used across 33 studies. While the main aim of these frameworks appeared to be improved outcomes, the frameworks are primarily context-dependent heuristics developed to aid practice and support firms with their implementation. Albers et al. (2017) suggest the theoretical grounding could be in program logic models that explicitly link outcomes to inputs. This approach provides for a production style equation and perhaps provides further support for production theory as an approach to innovation value. However, this retains some of the potential limits of logic models as previously discussed, as well as the issues with programmatic designs as outlined below.

The evaluation literature has been profoundly influential in exploring process, impact and outcomes of various forms of implementation and innovation,

particularly of programmatic design. Evaluation study has included community-based services such as pharmacy (Moullin, Sabater-Hernández, & Benrimoj, 2016) and integrated care across the health service continuum (Busetto, Luijkx, & Vrijhoef, 2017). However, some of the most significant evaluation models have emerged from public health and community health promotion, such as RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance) and PRECEDE-PROCEED (Predisposing, Reinforcing and Enabling Constructs in Educational Diagnosis and Evaluation-Policy, Regulatory, and Organizational Constructs in Educational and Environmental Development) (Nilsen, 2015). There may be some theoretical limits to applying aspects of these evaluation frameworks to innovative community-based services. As the name implies, community health promotion programs are commonly set up programmatically. By that, they are a discrete program of work with designated government funding rather than a broader and potentially fluid set of operations (Issel & Wells, 2017). While the evaluation frame, including the evaluand, can (and likely should) be identified before program development, evaluations often need to be responsive to the commissioning body (Lobo et al., 2014). Their suitability for evaluating potential ongoing operational activity is uncertain, which falls into the space between evaluation and performance measurement.

This program/operational gap contains separate fields linked with both implementation science and evaluation, and also involving public policy research and analysis of policy implementation. This literature can address evaluation of programs developed as a policy action. However, various performance-based models are also common (Productivity Commission, 2019). Although performance measurement is not solely limited to productivity, this assertion is often dependent upon the applied definitions of productivity and technical efficiency (Boyle, 2006). Whether focused on outputs or outcomes, the proposed performance relationships look much like a production model, respectively, with output as health service production and outcome as health production.

There are additional literature fragments of varying size. There are large literature fields existing as fragments in this sense due to their limited or marginal consideration, implicitly or explicitly, of innovation consequences. These fragments arguably include service innovation from heterodox economic scholars. While this research tradition is relatively mature (Djellal et al., 2013), it still provides limited insights into innovation consequences, particularly in the public sector (Djellal & Gallouj, 2005; García-Goñi & Windrum, 2009). A similar issue is evident in the literature on national systems of innovation, that focus more on preconditions for innovativeness than consequences of any particular innovation (Acs et al., 2017).

There are smaller fragments with evidence of a connection to innovation consequences, which are literature fields of small size and potentially limited activity. Interestingly, many of these fragments seem associated with the concept of value and emphasise consequence frameworks as needing links to practice. These fragments address topics such as the values-based innovation (Breuer & Lüdeke-Freund, 2017); and sustainability-oriented innovation which “involves making intentional changes to an organization's philosophy and values, as well as to its products, processes or practices to serve the specific purpose of creating and realizing social and environmental value in addition to economic returns” (Adams, Jeanrenaud, Bessant, Denyer, & Overy, 2016, p. 180). Additional fragments involving the idea of value include digital innovation using the value spaces framework (Henfridsson, Nandhakumar, Scarbrough, & Panourgias, 2018; Holmström, 2018); and situated novelty as a model that involves constructing the value of innovation (Janssen, Stoopendaal, & Putters, 2015).

Consequences of innovation are of interest in established literature fields and disciplines as already outlined, and are also appearing in more emergent fields such as implementation science (Moullin et al., 2015). Categories of innovation consequences comprise dimensions including directness, predictability and desirability (Berger, 2005) as well as private/public and cost/benefit (Wejnert, 2002). However, these and similar dimensions, used individually or collectively (Berger, 2005; Rogers, 2003) categorise the nature

of the innovation consequence, without necessarily connecting or contributing to broader innovation theory.

Beyond these dimensions or typologies, there are examples of consequences (including evaluation of impacts) frameworks offered in relation to public sector and health services. For example, Chen et al. (2019) provide a timely contribution through a typology for public sector innovation. The typology resulted in six innovation types of mission, policy, management, partner, service, and citizen innovation. The authors derived the typology from the public value creation concepts of M. H. Moore (1995), including internal/external locus to include contemporary approaches such as collaborative innovation. The typology aims to guide research and practice “in terms of the antecedents and consequences of each innovation type, and the relationship among different innovation types” (Chen et al., 2019, p. 19). The authors argue that their framework is more contemporary, economical and typological than previous efforts they review. However, they also note their typology focuses on the formal organisation as the unit of analysis (Chen et al., 2019), which may be problematic when broadly addressing public sector innovation. An organisational focus also limits the evolving theory on public value creation. These problems may stem from relating all the characteristics and prospects of impact for each innovation type to organisational objectives and mission. In practice, multiple actors, organisations and agencies may be involved in establishing veracity, and the actual process of public value creation.

Other innovation consequence frameworks have explicitly considered the health system but based on relatively narrow approaches to performance. The performance approaches are consistent with logic models and systems theory. For example, based on a systematic literature review, Nasi et al. (2018) developed an evaluation framework for measuring public sector innovation impacts from empirical health sector research. As with their previous work (Cucciniello & Nasi, 2014), this framework was based on a lifecycle model of innovation rather than a linear model of innovation, and included innovation objective, contextual and process factors, leading to

outputs and outcomes. Recognising the challenges with measuring the impacts of innovation in the public sector, Cucciniello and Nasi (2014) undertook a comparative analysis of the impacts of electronic medical records in Spain and Italy using this framework. However, quantifying impact was limited to questionnaire responses on efficiency, effectiveness, clinical governance, and quality. Moreira, Gherman, and Sousa (2017) investigated the relationship between innovation and quantitative measures of performance in 34 Portuguese hospitals. These authors concluded that there were differences in 'level of innovativeness' between hospitals, and innovation seemed associated with more activity, but these authors could not establish a relationship between innovation and financial performance (Moreira et al., 2017).

2.1.6 Summary on innovation consequences

There is an overt reference to innovation consequences in the seminal works on the diffusion of innovation and health service sustainability. However, despite this, any explicit theoretical development of innovation consequences remains minimal. There is a diverse range of academic disciplines and small and large research programs that consider innovation consequences, even if utilising different jargon. As well as this different language, there have been different organising principles of research threads, different levels of analysis and from differing perspectives, reflecting the breadth of innovation. Outside the private for-profit business innovation literature, attention has arguably been more towards the level of whole societies and sectors (Sveiby et al., 2009), including health systems (Buttigieg & Gauci, 2015; Hutchison et al., 2001; Lehoux et al., 2019). However, most of this literature appears to focus on innovativeness as an end in itself, rather than a means to some further aim (Durst et al., 2015). Genuine consideration of innovation consequence mostly considers narrowly conceived and direct organisational performance measures as a consequence of product, process (and sometimes administrative) innovation.

Fundamentally, there are two problems. Firstly, there is no literature identifiable as a corpus on innovation consequences, in effect creating isolated pockets with little communication or synthesis of ideas. Secondly, the diverse fields discussing innovation consequences primarily utilise a rational-technical process of cause and effect. It may be that many of the reviewed authors would not consider their field as innovation, or their topic as innovation consequences. If innovation consequences are addressed, they are narrowly identified rather than broadly considered. The focus on narrow performance approaches is also implied in the use of open system and program logic models, contributing a large swathe of jargon that primarily considers simple cause and effect.

Further, there is a substantial gap in models to aid research and practice beyond the above problems, particularly within health services. The positivist approach to evidence-based practice dominates health service innovation research, and practical evaluations are narrowly focused (Dixon-Woods et al., 2011). Randomised controlled trials and economic cost-benefit analyses are only part of theoretically informed practice. However, there is yet to be a maturing body of literature on innovation consequences to inform this practice. This lack is in part due to a widening gap between innovation theory and practice (Pfothenauer & Jasanoff, 2017), but also the fragmented state of innovation theory, particularly outside of literature focused on the business firm.

2.2 The fragmented state of innovation theory outside for-profit business literature

‘Innovation’ has almost become a buzzword and there is no one single definition of its meaning. In general, it is a positively loaded term that brings hope in difficult times for the actors in the private sector, the public sector, the idealistic (non-profit) sector as well as in whole economies. (Ottosson, 2019, p. 11)

This section critically examines the innovation theory literature by calling attention to its current popularity and diversity outside business literature, a situation that has not necessarily contributed clarity concerning innovation consequences. The evolution of this field contrasts the dominant rational process theories with alternative propositions calling for more inclusivity, modification or rejection of neoclassical economic foundations, and a shift from firm-centric logic to socio-cultural perspectives. Following some definitions, a brief outline is offered of the major contemporary innovation theories grounded in rational process, including descriptive innovation theories, and previously described diffusion of innovation theory. Two critiques of mainstream innovation theory follow this outline. One is from heterodox economics, challenging the dominant neoclassical production as a theoretical basis, connected to the exploitation/exploration literature on organisational learning (March, 1991). The second critique is sociological, where dissatisfaction with firm-based models has led to consideration of political and socio-cultural context. These non-firm models include ideas around collaborative innovation and social innovation, and signify the potential for a systemic social theory of innovation. This second critique suggests the numerous rational-technical process innovation theories, including the prominent diffusion of innovation theory, may not be suitable for non-firm-based innovation, questioning their theoretical connection to production. Discussion follows of the limited theoretical connection to production and productivity of the more recent theoretical contributions of social and collaborative innovations.

2.2.1 An introduction to the innovation concept

A number of authors describe the evolution of innovation as a concept (Godin & Vinck, 2017; Meissner, Polt, & Vonortas, 2017). Historically innovation was a pejorative term used to describe people and actions challenging the status quo, notably of church and society. However, by the late nineteenth century, a shift towards a more positive conception was underway with the development of diverse social science theories. Up to the early to mid-twentieth century, innovation was a broad social paradigm for sociologists

and anthropologists to explore technological and cultural change (Meissner et al., 2017). In contrast, economists concentrated on innovation as a technical means “for competitive struggle, a method to increase productivity and create new products, processes or services” (Meissner et al., 2017, p. 1186). Innovation was hence fundamental for both economic growth and societal development, but the focus was on the creation of economic value (Autio, Kenney, Mustar, Siegel, & Wright, 2014; Feldman, 2004).

Principally at macro levels, and increasingly mathematical, authors highlight the emergence in the latter half of the twentieth century of organisational innovation, internal innovation process models, and diffusion of innovation concepts (Meissner et al., 2017). This emergence broadly situated innovation as an economic concept focused on the production of material products and situated in organisations or firms. This orientation positioned innovation about organisational productivity, renewal, and survival (Adams et al., 2016). Irrespective of whether the unit of analysis was society, sector or a single firm, contributions from Schumpeter onwards often centred on the business firm (Meissner et al., 2017).

There was also increasing confusion and conflation between processes of invention, improvement and dissemination. Definitions of innovation abound, with substantial variation. Dictionary definitions include innovation as “1: the introduction of something new 2: a new idea, method, or device: novelty” (Merriam-Webster, 2019). For some authors, innovation as a process comprises two distinctive yet nonlinear phases of creativity (generation of novel and useful ideas) and implementation, with each phase requiring different conditions for success (Thayer, Petruzzelli, & McClurg, 2018). However, authors also contrast innovation with creativity and invention, suggesting that innovation is more of a process that has a practical implementation component necessary to change the target, often within a single firm. Nelson and Winter (1977, p. 48) “posit that almost any nontrivial change in product or process, if there has been no prior experience, is an innovation.” A ten-year panel from Swedish CIS found that firms choose different innovation strategies from other firms, yet each firm tends to select

the same strategies over time (Karlsson & Tavassoli, 2016). Consistent with the implementation theme but with broadened scale, innovation may be defined as “the intentional introduction and application within a role, group, or organization of ideas, processes, products, or procedure, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, organization or wider society” (M. A. West & Farr, 1990, p. 8).

Despite the broadened ‘unit of adoption’ to everything from individual, group, organisational, sectoral and societal levels, there remains a sense of rational, technical and economic process in many definitions of innovation. There is some incoherence between macro and micro-analysis in the neoclassical economic synthesis on production, productivity and innovation, but the persistent mathematical process remains consistent. This technical approach contrasts with authors who recognise the inherent uncertainty of innovation; it is not merely a technical exercise with steps to success, but a socio-culturally situated activity with often numerous actors involved (Ruzzeddu, 2018). From a heterodox economics perspective, Nelson and Winter (1977, p. 37) defined innovation “as a portmanteau to cover the wide range of variegated processes by which man’s technologies evolve over time”, also noting the need for academic input to inform policy “aimed at so complex a web of social phenomenon as innovation” (Nelson & Winter, 1977, p. 37). Ruzzeddu (2018, p. 373) emphasised that “innovation is a social phenomenon and, consequently an object of sociological investigation since the 1940s.”

2.2.2 Rational-technical models of innovation

This section critically outlines the rational-technical models of innovation, including descriptive and categorical models, as well as rational processes of diffusion. Despite four decades of research on innovation, there remain inadequate theories to guide the research (M. Gupta, 2018). There is substantial theorising, but the theories are disparate and disconnected. M. Gupta (2018) lists theories relating innovation to organisational structure and learning; process theories including models of diffusion and stages of innovation adoption; typologies categorising innovation based on the degree

of radicalness; dual core theory of firm innovation; four factor theory; interactionist theory and componential theory. While these and other innovation theories are not well connected generally, many share a common attention to the organisation or firm. The suitability of these theories for interorganisational, public or social innovation remains unclear. However, even those theories that extend beyond the firm such as diffusion theory remain rooted in a rational-technical process logic.

The body of innovation research regarding business firms is extensive, and can only be touched upon here. Descriptive mainstream models of innovation tended to dichotomise innovation between a radical, revolutionary, destructive, or discontinuous form; and an evolutionary, incremental, or continuous innovation form (R. M. Henderson & Clark, 1990; Yu & Hang, 2010). Authors propose that these two forms of learning require different firm capabilities (Dosi, Nelson, & Winter, 2000). Incremental innovation exploits the existing product design with relatively minor changes and may reinforce the market dominance of leading firms, while radical innovation can create difficulty for established firms, open up new markets and applications, and potentially even alter sector boundaries (R. M. Henderson & Clark, 1990). This dichotomous model was extended by R. M. Henderson and Clark (1990), who proposed distinguishing between innovation to the components of the product, and innovation that changes the relationships between components in the product architecture, or layout. These architectural innovations can destroy a firm's system and process knowledge, and hence workflows. Authors also distinguish between production process innovation as a change to the combination of existing knowledge, skills and capital, compared with product innovation as a new output of production.

More recently, interest has included business model innovation as changes to how firms convey a product to market (Chesbrough, 2007; Maus & Sammut, 2018), including health services, particularly in the US (Christensen, Bohmer, & Kenagy, 2000; Hwang & Christensen, 2008). Disruptive innovation is not the same as destructive innovation (Yu & Hang, 2010). Disruptive technologies are distinguished from revolutionary ideas

through their disruption of an existing market, including the existing firms and their networks (Chesbrough, 2006). This disruptive innovation occurs in a process; early development where the product serves a niche, followed by further development towards a level near comparable but still inferior to meet mainstream market needs, followed by displacement of the mainstream product (Yu & Hang, 2010). For this last stage to occur, the existing product has to suffer “performance overshoot” on attributes valued by customers, and there must be the existence of asymmetric incentives between existing and disrupting firms. Yu and Hang (2010) identify four explanations on how firms enable or discourage disruptive organisation; through human resources, organisational culture, resource allocation, and organisational structure. More recent organisation and management research explore how to motivate radical innovation in established firms. Longitudinal comparative case studies of 12 established firms that commercialise radically innovative technologies on an ongoing basis found the established firms failed to suitably select, incentivise and monitor the implementation activities the farther they were removed from initial identification (O'Connor & Shaikh, 2018).

Literature that extends beyond the organisation or firm to social systems retains a rational-technical process logic. This literature includes the body of work on diffusion theory already outlined in this chapter, specifically about innovation consequences. The main body of the diffusion theory relates to the communication of innovation across social systems. Rogers (2003) proposes diffusion of innovations as an explanatory theory of how and why ideas and technology are diffused through communication amongst participants in a social system. Core elements include the type of innovation (knowledge, process or product), adopters as units within a social system, channels of communication, and time. Rogers (2003) further proposes five stages of an individual: developing knowledge of the innovation; persuaded to actively seek out more detail; decides whether to adopt or reject; implements in their specific context; and confirms the decision to continue using the innovation. Diffusion of innovation research is extensive with several reviews undertaken. From a service perspective, Greenhalgh et al. (2004) suggested areas requiring additional research, including the nature

and extent of social networks and how they work as channels for social influence, the nature of informal interorganisational networking, and most importantly, what processes implement and sustain particular innovations in health service delivery and organisation.

Issues with rational-technical logic approaches to innovation theory are not new, with heterodox economics and sociology providing useful counterpoints. For some heterodox economists, issues with innovation theory centre on the lack of utility to address the issue of differential productivity growth between sectors of society. This position presumes targeting any innovation policy at low productivity growth industries, such as complex service industries and government-provided services, rather than general macro stimulation of the economy (Nelson & Winter, 1977). These authors identified two problems with this use of innovation theory to guide policy on improving the productivity growth of lagging sectors of society. The first was the fragmentation of innovation theory across intellectual disciplines. The second was the focus by the dominant discipline of economics on production functions excluding so-called exogenous factors and externalities, neglecting both the inherent uncertainty of innovation and the socio-institutional context of each sector (Nelson & Winter, 1977). While agreeing that technological advances had progressed humanity in the past, Nelson and Winter (1977) questioned whether innovation theory was able to inform policy for positive impact or predict the effect of any of these changes.

For some sociologists, classical approaches to innovation are criticised for a narrow focus on the economy and for presenting as ahistorical. As an example, Ruzzeddu (2018) argues that key historical figures in 'innovative thought' were situated in a period of rationalism, oriented towards profit maximisation, where "every delay in the introduction of innovation is just an organizational matter, which is possible to overcome with no regards for social, cultural and political factors" (Ruzzeddu, 2018, p. 374). Of these key actors, criticism of Schumpeter relates to utilising an economic lens focused on the innovative firm initiating cycles of 'creative destruction', and Rogers' subsequent (both chronologically and as stages in an innovation process)

diffusion thinking which was developed in the “manufacturing industry’s golden years” in situations where the innovation/invention already existed (Ruzzeddu, 2018, p. 374). Ruzzeddu (2018) suggests that the narrow economic focus on the firm and the focus on a diffusion (or commercialisation) stage of innovation are not useful in today’s knowledge economy, with co-mingling of industry and research sectors.

At the level of firms, Nelson and Winter (1977, p. 47) believed the disjointed theory and lack of “conceptual bridges” had limited the contribution of the already rapidly increasing innovation theory literature. They noted that research included understanding how technologies evolve, including organisational factors influencing innovation adoption. They did recognise that production theory had provided the one theoretically grounded research stream, before dismissing it as a future basis for understanding innovation:

There has been, however, one cluster of research that has been aimed directly at the differential productivity growth puzzle, and which has had a sufficiently strong theoretical structure so that knowledge is relatively integrated and has been cumulative. This structure derives of the text book economic theory of production. (Nelson & Winter, 1977, p. 42)

This work has focused on research and development in manufacturing industries explaining productivity growth, principally through regression analyses at the industry level. The authors concluded that production theory could not form the basis of innovation theory, as it was a process theory that could not deal adequately with contextual complexity and the inherent uncertainty of innovation. Nelson and Winter (1977) outlined a general innovation model as a preliminary sketch towards a future innovation theory, which included the creation of innovation and a selection environment; with the later built from specifying the worth for the firms, how sector rules and public preferences influence what is profitable, and the investment and imitation processes involved.

Mytelka and Smith (2002) argue that the development of more heterodox thinking around innovation theory was made possible from the economic crisis of the 1970s, allowing evolutionary ideas (pioneered by Nelson and Winter) and theories of the innovation process (pioneered by Rosenberg) to influence 1990s innovation policy ideas. Key to these ideas was that innovation is “shaped by crisis-driven search programmes by firms. As existing procedures falter in the face of shifting economic or technological conditions, firms began the search for alternatives, in experimental learning processes” (Mytelka & Smith, 2002, p. 1467). These authors claim this learning occurs in specific but dynamic sectoral contexts shaped by legal, regulatory and political culture.

In summary, there have been some alternative contributions for 50 years to innovation theory beyond rational-technical approaches to the economy, whether at the systemic or more micro-levels. However, these contributions have remained predominantly outside the dominant mainstream literature where the rational-technical process models of innovation persist, if not continue to strengthen.

2.2.3 Innovation strategy of firms in practice

Authors have highlighted the emerging gap between innovation theory and practice (Crossan & Apaydin, 2010; Pfothenhauer & Jasanoff, 2017). Hence, while the firm has been a longstanding consideration in innovation theory, it is worth briefly touching on practice literature at the firm level of analysis before proceeding to focus on service innovation by small groups. Innovation practice at an even larger scale, such as national systems of innovation and innovation policy, has been addressed elsewhere (Acs et al., 2017; Meissner et al., 2017) and are at a level of analysis not relevant to this research. Thus the focus here is on the meso level of organisations or firms, where frequent claims are that innovation failure is about lack of innovation strategy as much as the failure of implementation (Pisano, 2015). In business terms, innovation strategy refers to a firm’s plan to progress through innovation, with an innovation system and trade-off decisions made within the firm about which

projects to undertake, and what resources to allocate (Pisano, 2015). Through the implementation of an intentional solution, progress for the firm includes increased profit or greater market share. The solution can be any innovation, from product or process improvement through to disruptive innovation.

Innovation strategies have been classed as proactive, active, reactive and passive (Dodgson, Gann, & Salter, 2008). Innovation strategy is suggested as essential to align with corporate strategy, addressing questions such as how innovation will create value for potential customers, how will the firm capture some of that value, which innovations will create and capture value, and what resources to allocate to the innovation (Pisano, 2015). Certain firm behaviours may be associated with particular innovation strategies (Queensland Government, 2019) (Figure 1). Further, innovation strategy is recommended to align with the firm’s innovation ecosystem; “the collaborative arrangements through which firms combine their individual offerings into a coherent, customer-facing solution” (Adner, 2006, p. 3).

Figure 1: Innovation strategies associated with firm behaviour

<p>Proactive Firms with strong research orientation and first-mover advantage, a market leader. Access knowledge from a broad range of sources and take big bets/high risks.</p>	<p>Active Firms defend existing technologies and markets while prepared to respond quickly once markets and technologies are proven. Access knowledge from a broad range of sources and medium to low risk/tend to hedge bets.</p>
<p>Reactive Firms which are followers, focus on operations, take a wait-and-see approach, look for low-risk opportunities. They copy proven innovation and use entirely incremental innovators.</p>	<p>Passive Companies with passive innovation strategies wait until customers demand a change in their products or services.</p>

Note: Figure content from Queensland Government (2019) with concepts derived from Dodgson, Gann, and Salter (2008, p. 104-105).

The question remains how, if at all, is this firm-based practice literature relevant to public services operating between agencies. For the public sector, whether one or multiple agencies, there may not be that same impetus to capture value for the agency (although arguably health systems orient

towards this value capture). Hence, the elements of a robust innovation strategy for the public sector may include: choosing the kind of value innovation will create; and maintaining that course to ensure the development of appropriate capabilities (i.e. what achievements are required, not just how they will be achieved) (Pisano, 2015).

2.2.4 Service innovation and delivery, entrepreneurs and teams

This section starts to focus more on the idea of service innovation at a scale smaller than that of the firm. Much of the early economic innovation literature was grounded in physical technologies, in the agriculture and manufacturing industries (Ferraz & de Melo Santos, 2016). Discussion of service innovation is complicated through various interpretations of technological and so-called 'non-technological' innovations. For Nelson and Winter (1977), all innovation is technological, in the sense of the application of new, or new to the specific context, knowledge, processes, or products. In microeconomic terms, innovation shifts the technological frontier.

Service innovation is also often complicated to understand in production terms. Among other features distinct from physical goods, the intangible nature of services, inability to store, the simultaneous production, delivery and consumption (perhaps hence the frequency of the term 'service delivery') has made this a conceptually complex topic (Ferraz & de Melo Santos, 2016). The commingled nature of the production factors and lack of a physical end product has also contributed to valuing service productivity in monetary terms. In addition, the high recipient (i.e. service user or consumer) involvement creates a co-production environment. In this case, the service user may help design, establish purpose, value, and even deliver the service (such as in self-service).

From an evolutionary standpoint, Gallouj and Savona (2009) argue that two approaches in service innovation research either assimilate with or differentiate from the traditional manufacturing perspective on innovation. These authors believe the basis for the approach is around a kind of inertia of

concepts around services, particularly the concepts of the output or product, which has underestimated service innovation in the past (Ferraz & de Melo Santos, 2016). Gallouj (2002) proposes that service innovation is present but been underestimated due to a series of myths, including; services as the unproductive residual sector of the economy; services having low capital requirements and hence low productivity; services requiring a de-skilled workforce; the complexity of product conceptualisation including service delivery interface but also longer term impacts; the difficulty distinguishing between product and process; and impacts of informational asymmetries. Authors argue that much of the plethora of service innovation research remains hampered by a “fundamentally technical perspective” (Ferraz & de Melo Santos, 2016, p. 252).

Of note is that ‘service delivery’ alone is not an adequate conception for service innovation. As well as service delivery systems, den Hertog (2000) refers to three additional dimensions to consider in service innovation as; the service concept; the client interface; and technological options. Service innovation occurs through practices at micro levels such as actor interactions at the service delivery interface, at meso levels of organisation which may be either ‘back office’ or customer-facing, as well as into sectors and industries (Fuglsang, 2018). Exploration of innovation as multilevel occurred at some length in a special edition of *Organization Science* (A. K. Gupta, Tesluk, & Taylor, 2007). Despite these and other efforts to expand innovation theory across levels, the literature in this space has remained fragmented (Sears & Baba, 2011).

While there have been efforts such as those above to explore service innovation across multiple levels, additional strands in recent literature on innovation have looked at more micro theory, including financial theories, entrepreneurial theories, and innovation through groups including innovation teams and collaborative innovation. For example, the heroic role of the entrepreneur has been central to innovation research from Schumpeter to today (Lounsbury, Gehman, & Ann Glynn, 2019), with much focus on a rational technical perspective at the nexus between opportunities and

individuals (Shane & Venkataraman, 2000) rather than socio-cultural influences. Lounsbury et al. (2019) provide an overview of contemporary approaches to understanding culture, arguing their potential relationship to innovation research. In these approaches, culture is more a 'tool kit' that actors can use in social interactions to achieve goals, as much as an exogenous set of constraining norms. This tool kit view brings culture into the innovation process and conceptualises "entrepreneurs and innovators as 'skilled cultural operators' who creatively leverage varied cultural resources to advance an entrepreneurial agenda" (Lounsbury et al., 2019, p. 3).

Autio et al. (2014) argue that most innovation literature focuses on the influence of institutions rather than the agency of the individual entrepreneur. This position is consistent with Schumpeter's shift from the haphazard and chaotic processes of entrepreneurs to a more structured view of innovation, particularly through corporate research and development units. Entrepreneurship and innovation have strong theoretical connections, to such an extent that they are confounded or used synonymously by policy-makers (Autio et al., 2014). Baumol (2002) argued that entrepreneurial innovation was a major source of national growth in capital societies. Hence, governments adopt policy postures to stimulate innovation by entrepreneurial firms, when most entrepreneurial activity produces products not new to the market (Autio et al., 2014). As an illustration of the interest in entrepreneurship and innovation, the articles of a 2014 *Research Policy* special issue individually and collectively contributed to innovation theory. These articles address shaping of entrepreneurial activity by factors such as; the organisational sources of their knowledge, the roles of employee entrepreneurs within the hierarchy of firms, the firm's characteristics such as mission, and the social networks of the entrepreneur (Autio et al., 2014). However, the theoretical development remains largely attuned to the entrepreneurial performance or success rather than the consequences of innovation. While remaining an interesting contribution to the connection of the entrepreneur and innovation, to some extent entrepreneurial innovation literature has been more recently co-opted by literature on entrepreneurial

ecosystems and entrepreneurial institutions and firms, reducing its potential to contribute to more general innovation theory outside a firm-centric logic.

Which leads from entrepreneurial innovation to consideration of the role of small groups or teams in innovation. Three relatively distinct literature areas relate work teams with innovation, in the form of dedicated innovation teams, the innovation by teams, and the idea of organisational innovation through 'teaming'. In the first literature, investigation of team innovation has often been structural in orientation, assuming the creation of an 'innovation team' to address a problem or take advantage of an opportunity (see Thayer et al. (2018)). This team then undertakes social processes to generate ideas, choose, and then implement.

Separately to the study of dedicated innovation teams, there is consideration of the conditions under which work teams may be innovative. For example, in a study of health care teams, Schippers, West, and Dawson (2015) found that teams were more innovative when under high work demands and highly reflexive. Petrich et al. (2013) similarly proposed that rural and remote health service teams under resource constraints may tend to be more innovative. In general practice, the team climate for innovation may be one mechanism for improved patient outcomes (Proudfoot et al., 2007).

A recent third addition is the concept of 'teaming', a process by which firms innovate through deliberately formed team structures intended for that purpose (Edmondson, 2012). Teaming has been explored primarily as a process within firms, although some work across both unit and organisational knowledge boundaries has extended theory through the development of an integrated model connecting cross-boundary teaming with team effectiveness (Edmondson & Harvey, 2018). While this model provides some foundation for a broader connection with innovation consequences, this connection is not made explicit, with the model firmly rooted in the process literature aiming to explain team effectiveness (see Ilgen, Hollenbeck, Johnson, and Jundt (2005) for team effectiveness models). There is also consideration of knowledge boundary spanning, but primarily as a model for team

effectiveness research, with practical contribution focused on constructing suitable project teams (Edmondson & Harvey, 2018).

All three fields connecting innovation and teams remain principally committed to assessing performance in terms of the objectives or goals of the organisation or firm. Hence, firm-centric logic dominates in these contributions to service innovation, entrepreneurship and teams.

2.2.5 Innovation beyond the firm – social, public and collaborative or open, but still firm-centric

There are substantial efforts to develop innovation theory that is not dependent upon a firm-centric logic, as either a private for-profit business concept or a form of legal entity or organisation. This ‘outside the firm’ literature is in some ways reflective of the earlier twentieth century views on innovation as contributing social change and includes social, public, collaborative, and (possibly) open innovation. Rather than attempt to review in-depth these different yet associated ideas, particular emphasis is placed on relevance to public sector health and human services.

Social innovation can be thought of principally as related to “social in their means and social in their ends” (Mulgan, 2012, p. 35). This view signifies not only the intent to have an impact on members of the community but also a predilection to be democratic and participatory, as well as crossing institutional boundaries. Social innovation is not a particularly new idea that considers crossing disciplines and organisations as well as working with the community (Taylor, 1970). Farmer et al. (2018, p. 18) suggest that social innovation provides a more appropriate perspective for “analysing grassroots innovation than common health services research approaches considering top-down, technical innovations.” These authors found that social innovation theory was relevant and useful to understand the stages of innovation development, namely growing the idea, developing the innovation, and sustainability and diffusion. However, the focus was on the process of innovation through participatory co-design, not on the value of the innovation.

Some authors have criticised social innovation as a fad without great substance (Grisolia & Farragina, 2015); however, there is a persistent interest in the concept as providing something of a counterpoint to business innovation (Pol & Ville, 2009). There are concerns that social innovation may be something of a wolf in sheep's clothes, hiding the need for structural change to the welfare state (including health services) while continuing to advance a neoliberal agenda despite rising inequity (Grisolia & Farragina, 2015). There is much about social innovation that seems to preference process over structure, but arguably it is this very structural "fuzziness" which enables reimagining or reconstituting of wicked problems (Bock, 2012, p. 57).

In Australia, health services are a public sector topic at least as much as a clinical or business discourse. The growth trajectory of publicly financed health services in Australia is generally accepted as unsustainable, with constraints including cost and workforce requiring different models of service delivery as well as the cessation of ineffective health treatments (Sustainable Health Review, 2019). However, the specific idea of innovation in public administration is still relatively emergent compared with interest in private for-profit business innovation (Ansell & Torfing, 2014), with different areas of focus. For example, there is some public management literature recognising that public innovation in practice can be more of a bricolage, constructed at a local scale through small steps from what is available, rather than always a grand design process (Fuglsang & Sørensen, 2011). There are also scholars interested in different governance arrangements within the public sector (Torfing & Triantafillou, 2016), including social enterprises, public-private partnerships, as well as less formal organisations and networks. This interest has led to the coining of the term collaborative innovation in relation to the public sector. Rather than focusing on a heroic individual entrepreneur, or the systemic use of incentives and performance measurement, the idea of collaborative innovation suggests that public and private actors can, and are motivated to, contribute to production of public value (Hartley, Sørensen, & Torfing, 2013; Torfing, 2019). The broad inclusion of "relevant and affected actors" (Torfing, 2019, p. 5) is a key strength of collaborative innovation,

challenged by the need to engage these actors from across and beyond bureaucratic silos. Torfing (2019) also suggests a tension between collaboration and innovation, with the former improved by actor similarity, whereas differing actor perspectives may stimulate innovation.

Collaborative innovation, and related ideas of co-production and co-creation, are recognised as extending public concerns beyond the public sector to the citizenry as active participants in the design and delivery of services (Wegrich, 2019). However, there is criticism of the assumption in the collaborative innovation literature “that the organizational biases and behaviours typically limiting collaboration between public organizations and other external stakeholders are simply bureaucratic weaknesses that organizational leaders can overcome if they only make an effort” (Wegrich, 2019, p. 13). In essence, the social/public/collaborative innovation edifice may face a fundamental problem in trying to provide a counterpoint to traditional public administration or business innovation; it still addresses issues through an organisational lens. As a contrast to neoliberal market-based models and classic bureaucratic decision-making, Wegrich (2019) notes that collaborative innovation provides more of a process heuristic than a theory.

While some authors continue to contend that innovation is more socially constructed than technology-dependent, and hence necessarily reliant on upon context (O’Gorman & Donnelly, 2019), there are other approaches to innovation beyond the firm that still tend to use an organisational lens. These include ideas such as innovation cooperation between firms (De Faria, Lima, & Santos, 2010), interorganisational collaboration and open innovation (Del Giudice, G. Carayannis, Palacios-Marqués, Soto-Acosta, & Meissner, 2018). Services are an under-researched area of open innovation (J. West, Salter, Vanhaverbeke, & Chesbrough, 2014). Open innovation may initially appear a close relative to the above public forms of innovation but remains primarily as describing a mechanism whereby firms obtain advantage from research and development from external sources (Chesbrough, 2006). Rather than a continued emphasis on firm-level characteristics contributing to open

innovation, emerging ideas include exploring individual characteristics, such as their diversity and their networks (Bogers et al., 2017). The human aspect of open innovation and interorganisational collaboration explores actor involvement from human resources of firms to innovation users (Del Giudice et al., 2018). Seminal authors have emphasised emerging themes, including progress on measuring open innovation, to better integrate the open innovation strand with management and economic theory. Open innovation has always been linked to institutional economics/management firm-based theories such as the resource-based, resource dependency and dynamic capabilities, and has an emerging connection with strategy and governance theory (J. West et al., 2014). In addition, there is a clear drive to progress from the traditional dyadic two-firm model comprising either inbound or outbound innovation, to coupled and broader interpretations of open innovation in networks, ecosystems, and communities (J. West et al., 2014).

As a collaborative effort by open innovation scholars, Bogers et al. (2017) expand on these ideas, recommending further study on open innovation at different levels of analysis. These levels include micro to macro-scale from individuals and small groups to firms, industries, regions and societies. However, these levels also consider different actors and institutions, including within firms, between firms, and external to firms altogether, such as stakeholder groups and individual actors. Viewing open innovation as a field of research around a phenomenon rather than a theory, Bogers et al. (2017) express concern with the potential for internal fragmentation and loss of coherence. They propose that theory development should be a central aim of further literature, as well as work in specific areas beyond firms and profitability. Authors consider the application of open innovation to not-for-profit and government sectors, including health services (see (Chesbrough & Di Minin, 2014; J. West et al., 2014)), and Vanhaverbeke (2017) states that research demonstrates value in applying open innovation to a range of contexts, including low tech settings. Finally, Piller and West (2014) compare and contrast open innovation and user innovation. As acknowledged by J. West et al. (2014), open innovation is a firm-centric concept with primacy to

benefits for the firm, whereas user innovation may be more concerned with issues such as societal welfare.

2.2.6 Health service innovation – in hospital and community

The term innovation may be “the buzzword in health care literature” (Buttigieg & Gauci, 2015, p. 47). Health service innovation has been considered at all levels, from global and national systems through to specific care settings. Noting the paucity of international research on successful innovations, Buttigieg and Gauci (2015) argue that successful innovations cannot be considered in isolation from their specific health system context. However, in comparing the health systems of the US, UK and Germany, these authors emphasise innovation capacity and innovation transfer rather than the consequences (i.e. the actual value of the successful innovations).

This section outlines innovation in the health arena broadly and at the policy level, and the issues suggested with technical innovation and inequity, before noting some of the organisational (i.e. hospital) type literature focused on performance. These topics are dominated by, although not exclusive to, the US context. Rather than reiterating the diffusion of innovation and health service sustainability literature previously mentioned in this chapter, this section also highlights literature from Australia to provide further contextualised consideration of innovation, particularly from the health system margins such as non-hospital and rural settings.

Innovation in the form of vaccines and medicines have contributed significantly to the major role of knowledge technology (such as public health and epidemiology) in the unparalleled lengthening of life expectancy over the past 100 years. However, innovation and health services have had a more uneasy relationship in recent decades. New health technologies that have emerged since the 1970s have contributed considerable cost and complexity to the health system that seems unsustainable as a longer-term trajectory. Information, communication and physical technology appear to have added to the cost, with variable or uncertain impact on quality or effectiveness. A

Canadian study noted the competing objectives of the competitive external environment for technology commercialisation with the deliberate and measured approach of health technology assessment (Sebastianski et al., 2015). In essence, a slow-moving risk-averse health system aiming to provide cost-effective health care against a backdrop of rapid business-driven innovation.

Some authors have explored system-level innovation using policy levers. For example, a case study of the application of the UK 'Productive Ward: Releasing Time to Care' program to a Dutch hospital argued that the health system's multiple competing "institutional logics" (or belief systems and associated practices) affected innovation implementation (van den Broek, Boselie, & Paauwe, 2014, p. 2). This program formed a hybrid business (productive) and nursing profession (releasing time to care) institutional logic, using the appeal to nursing for economic efficiency purposes. "The core assumption of the programme is that nursing staff organizes their own ward and improve processes themselves" (van den Broek et al., 2014, p. 7).

From a US perspective, Herzlinger (2006) proposed three key types of health service innovation as comprising; changing the way consumers buy and use health care; technology to improve products and services; and new business models. These three types of innovation are affected by six forces of competing interests; funding innovation development and paying for the ongoing service; government policy; timing investment in technology; informed consumers; and pressures for accountability. Once again from the US, arguably indicating that nation's dominance of business and management literature on innovation, Hwang and Christensen (2008) proposed that disruptive innovation requires the selection of the correct innovative business models (from amongst solution shops, value-adding process business, and facilitated user networks) to deliver the innovation's value proposition. This article is also one of the few highly cited papers on innovation in health services identified in this review that considered innovation as something other than inherently good.

There have been subsequent arguments for more rational, balanced and systemic approaches to health care innovation that move away from assuming innovation is inherently a good thing. For example, C. A. Gardner, Acharya, and Yach (2007) argued for a paradigm shift to unify social and technological solutions in health care. Emphasising a global health perspective, although focused on low- and middle-income countries, these authors suggested policy-makers should consider technological innovations that provide more cost-effective solutions than currently available, social innovation as access to essential health care, and adaptive innovation through translation to the local context.

Dixon-Woods et al. (2011) claim there are three paradoxes of innovation in health services that are labelled here as fashion, group interests, and evaluation. The first fashion paradox is that 'dubious', fad-like or marketable innovations can diffuse rapidly through the system with risks to patients as well as increasing system costs, while tedious, 'low glamour' or low-profit innovations such as hand hygiene may struggle despite substantial evidence. The second paradox is that a "social movements approach" (Dixon-Woods et al., 2011, p. i48) with participatory community-based governance by self-directed, self-organising networks may offer much promise, but the interests of bureaucracies and professionals may provide barriers and create conflict limiting the innovation's potential. The third paradox is that the dominant approaches to evaluation promote strong internal validity of efficacy such as randomised clinical trials, yet the constantly changing turbulent health service environment also requires social science approaches for contextualised implementation.

A review of common international health system challenges to equity and sustainability identified access as a major issue in high-income countries, providing "a strong signal for those who develop frugal innovations of community-based solutions" (Lehoux et al., 2019, p. 71). These authors found inadequate access for vulnerable population cohorts exacerbated from an overemphasis on technology and specialisation. Other key recommendations included innovation which reorganised services, required

less training, considered high-value screening/diagnostics, as well as system-level economic incentives, infrastructure and distribution systems (Lehoux et al., 2019).

Considerable literature explores the determinants of hospital innovation, principally in large scale organisations and US settings. The below paragraphs outline this historical work thematically, noting the emphasis on determinants of innovation adoption, or innovativeness, rather than its impact on hospital performance. The relatively extensive empirical literature on hospital performance, though not explored here, often does not include innovation, but it continues to present many of the same equivocal or narrow findings based on simple cause-effect propositions around hospital characteristics.

Innovation processes and predictors of innovation, rather than the value of innovation itself, have been the principal focus in the seminal studies of hospital innovation. Innovation processes have been rational staged approaches, including a creation or adoption stage, followed by implementation. Predictors or determinants of innovation have centred principally on hospital factors such as size, ownership, the scope of services, and geographical setting. For example, considerable attention has been paid to larger hospital size and scale as a predictor of innovation (Goes & Park, 1997). Kimberly and Evanisko (1981) found that hospital size and other organisation-level variables were the best predictors of innovation adoption. These authors were amongst the first to suggest a difference between administrative innovations and technological innovations, with individual, organisational and contextual variables found to be much better predictors of the latter (Kimberly & Evanisko, 1981).

Subsequent research is more ambivalent about hospital-level predictors of innovation adoption. Highlighting the inconclusive evidence for determinants of organisational innovation, Goes and Park (1997) proposed that interorganisational links between competing hospitals could better help explain each hospital's service innovation capability and adoption. A range of

economic, institutional and political based theoretical models necessitate these interorganisational links. These models include resource dependence of firms (Pfeffer & Salancik, 2003), an intermediate form of governance to mitigate inefficiencies of market transaction cost or hierarchical organising costs, the benefits of synergy and combined market power to exert political influence and establish legitimacy (Goes & Park, 1997). Across 388 Californian hospital service innovations, structural links through affiliation in multi-hospital systems showed 20% higher innovation rates. Institutional and resource links had positive effects, particularly during turbulent periods. Administrative links such as contract management showed a negative relationship with innovation.

Goes and Park (1997) emphasised service innovation as distinct from the technological/administrative dichotomy of Kimberly and Evanisko (1981). Service innovations incorporated “changes in the technology, design, or delivery of a particular service or bundle of services” (Goes & Park, 1997, p. 674). These authors saw innovation as a diffusion process through the hospital industry, acknowledging the emphasis of existing innovation diffusion research on the industry or network level.

This review identified limited subsequent theoretical development in the hospital innovation literature. Many more recent papers seemed cross-sectional statistical exercises using panel data on hospital characteristics and financial performance. From a literature review of innovation determinants, Fleuren, Wiefferink, and Paulussen (2004) identified 50 determinants categorised as related to; the socio-political context; the organisation; individual actors such as the user or health professional; the innovation itself; or resources required to implement the innovation. Fleuren et al. (2004) speculated that none of the identified innovation studies in their review had systematic design because “implementation research in health care is still in its infancy and there are few innovation theories” (Fleuren et al., 2004, p. 120). These authors asserted this because implementation case studies identified in their review required pre-determined theoretical models of

change attached to a rational sequentially staged innovation process of dissemination, adoption, implementation and continuation.

There is somewhat increasing attention paid to innovation in non-hospital settings. A bibliometric analysis of primary health care service innovation showed that the literature had grown substantially at around 12% per year from 2001 to 2012 (Nodari, Olea, Dorion, Neto, & Ganzer, 2015). These authors found the identified studies generally had difficulty distinguishing between product and process, which is a recognised issue with a production approach to services. General themes comprised; a broad perspective on technology change, suitable organisational structures, the importance of professionals with strong social networks, the role of government, and service user participation (Nodari et al., 2015). These authors found that the research was dispersed across numerous journals that may compromise impact and influence without a unified agenda.

The influence of organisations and actor groups in non-hospital settings have been explored. A Washington State study of patient-centred care innovations, including the patient-centred medical home, found that firms select these innovations primarily for organisational purposes including quality improvement, cost containment and firm survival (Reed, Conrad, Hernandez, Watts, & Marcus-Smith, 2012). Studies in the UK tracing eight innovations suggest that cognitive and cultural barriers between professions contribute to the 'nonspread' of innovations in multidisciplinary firms (Ferlie, Fitzgerald, Wood, & Hawkins, 2005).

Rational systemic approaches to health care innovation are not new but are complicated by different perspectives and interests. Detailing one example from Australia here shows the politically laden socio-cultural context of health care systems and potential innovation. Naccarella et al. (2007) aimed to synthesise evidence from a narrative review of primary health care delivery in North America, UK, Canada, New Zealand and the Netherlands. The synthesis was to identify barriers and facilitators to innovation as well as feasible and practical options Australian primary care delivery reform. These

authors explicitly highlighted both structural and socio-cultural aspects. Structurally, they acknowledged continual reference in both literature and by policy-makers to the term 'model'. When comparing these innovative models across health systems, they argued the model was not necessarily transferrable. One or more of the underlying complex set of 'mechanisms' that altered the interactions between system actors could be evaluated for potential transfer between systems. However, the context was also historic, placed at a point in time. The "organisation and funding of primary care develops in differing cultural and historical contexts. What appears as a specific 'model' in one point in time has actually evolved over time from earlier reforms" (Naccarella et al., 2007, p. 39). Politics were evident in the acknowledged "debate about the conceptualisations of the terms primary health care, primary care, and general practice" (Naccarella et al., 2006, p. 6). This project explicitly defined its focus as "specifically on 'primary care' or general practice, (plus nurses and allied health professionals) component of the broader primary health care system" (Naccarella et al., 2006, p. 6), hence excluding other community health services and community health programs. They proposed five dimensions of contextual factors influencing primary care reform as health system factors; primary care profession and organisation; government action; reform history, and public feedback and consultation.

A key theme across the compared systems was growth in MDTs to provide the aims of primary health services; prevention, curative care, and chronic disease management (Naccarella et al., 2006). Different structures and organisations offered the potential MDT benefits, including different family practice models in Canada, and the Chronic Care Model across North America. These authors identified MDT member role pre-specification, with professional tensions around flexibility versus control, and issues of workforce substitution or supplementation, as well as funding arrangements. Whether GP or MDT, a key role for primary care was the cost-effective gatekeeper function, 'filtering out' the 'worried well' from unnecessary specialised care (Naccarella et al., 2006). Less recognised was the gatekeeper role of 'filtering in', promoting further health services when needed.

This above review is only one of a number in Australia considering innovative primary health care (PHC) models. In specific relation to rural and remote settings, Wakerman (2009) argued that systematic evaluations of primary care innovations were required to inform policy-makers of the best models for any given context. Factors recommended for model evaluation included funding models, worker skill mix, supports for team-based practice, and appropriate community participation mechanisms. Claiming a strong PHC innovation history in Australia, Wakerman and Humphreys (2011) provided a synthesis of rural and remote PHC innovation. To be able to supply “difficult-to-service communities” (Wakerman & Humphreys, 2011, p. 118), models needed contextualisation to local circumstances and systemic issues addressed such as funding and workforce. While the authors suggested there were lessons for global health reforms; this analysis was based more on a geographical view of community than specific disadvantaged or vulnerable population cohorts within a community. Emphasising an evaluation function, the collaborative contribution of researchers is not as evident. This research role has been argued as important for rural and remote health in localised problem-solving (Bourke, Humphreys, Wakerman, & Taylor, 2010), and co-producing local knowledge (Kosteniuk, Morgan, Bracken, & Kessler, 2014).

2.2.7 Service innovation theory emergent across boundaries, actors and interests

In summary, there are different and fragmented fields that contribute theoretical insights to innovation outside business firms. There are theoretical contributions at all levels and frames of interest; including societal, regional, industry or sectoral, organisation, project, team, and individual. Particular areas of practical development include national systems of innovation and innovation strategy at the societal and firm-level. The theory in these areas largely conforms to rational-technical models of innovation as some process, with most limited to ‘innovativeness’ as the principal objective. These particular areas of development focus on policy and strategy settings in

which for-profit business firms can successfully innovate, rather than the effects of the innovation itself. Notably, the limited theoretical contribution at the more micro level within small groups has focused on innovation teams established as tools for firms to innovate, or the small business entrepreneur, emphasising business-like objectives including profit and return on investment. Other goals suited to public sector health services receive limited consideration.

Innovation theory concerning services, public services, and health services remains relatively emergent compared with efforts focused on new physical technology implemented in goods manufacturing, principally through structured research and development. There remains contention as to which, if any, of the models and frameworks developed through these manufacturing sector efforts are reliably applicable in the service sectors. Authors aligned with fields such as evolutionary economics and economic sociology tend to emphasise services as requiring new and different theoretical frames. As the field titles themselves allude, these authors emphasise innovation situated in time and context, and inclusive of actor agency and relations. However, the consequences of innovation remain little considered in this space as well, with continued emphasis on 'innovativeness' as the solution rather than as the means to an end.

A key element emerging from the more recent theoretical contributions especially evident in open, social and collaborative innovation, is the notion of cross-boundary work. This notion crosses one or more of firm, industrial and sectoral boundaries. However, rather than emphasising some temporal process of idea diffusion, this cross-boundary work is current and situated. When noting that innovation is not the same as creation and invention through research and development, this work explores implementing products and services in new ways or new settings. This innovation theory considers the new application of known ideas or techniques, often utilising multiple stakeholders and multiple perspectives to identify and select these ideas.

The issue of cross-boundary work, as well as the increased use of multiple actor perspectives (and hence multiple interests) selecting ideas, seem particularly relevant to public sector health services. Relating these two concepts to innovation consequences seems to require the reimagining of existing theory. In the next sections, this reimagining considers production and productivity, and their potential to contribute to innovation theory.

2.3 Problematising production to extend innovation theory to include consequences

In general, the theory on innovation outside business firms appears disjointed, comprising diverse and disconnected tendrils proposing different conceptions of innovation without evident connection to innovation consequences. This chapter has already highlighted the lack of a literature corpus addressing innovation consequences. Given the assortment of nascent innovation types potentially applicable to public sector health services, all seemingly without a theoretical basis for considering consequences, it seems appropriate to consider another path. Productivity and production theory provides a possible alternative approach.

The justification for exploring production theory's potential contribution to innovation theory through reimagining is simple. In production theory, the consequence of innovation is increased productivity (Goodwin, Nelson, Ackerman, & Weisskopf, 2009). Hence, production theory already builds in an innovation consequence component.

However, a narrow interpretation of production theory for econometric purposes is dominant. As outlined by S. G. Winter (2001, p. 1):

Production theory as it has developed in that tradition is strong on abstract generality and treats production in a way that is convenient for the neoclassical analyst. Mainstream production theory is partly for answering questions about production and its place in economic organization, but it is at least equally concerned with sealing off questions that are not considered fruitful for

economists. It places a boundary marker that serves to identify the limits of the specifically economic concern with production, beyond which lie areas of concern to engineers, managers and technologists.

This dominant approach to production theory has particular implications when discussing innovation. In particular, the shift from classical interest in marginal productivity (how much more produced from an extra unit of input) to the production frontiers (how much optimally produced from a given set of inputs) of neoclassical econometrics. This shift emphasised the idea of technical knowledge limitations setting the frontier, and technical change (innovation) as extending that frontier (S. G. Winter, 2001). Importantly, S. G. Winter (2001) highlights that the economic theory of production has diverged from the managerial practice of introducing technical change into an uncertain world, a practice based upon pragmatic and context-dependent knowledge, or of 'seeming' to work across space and time.

Literature addressing production and productivity is extensive across economic, general management, and health services research. Rather than attempting to survey this panorama, the critical management studies (CMS) approach taken here is to problematise the dominant concepts, questioning taken for granted assumptions (Alvesson & Willmott, 1992). This problematisation commences from a counter standpoint suggesting a reimagining of production theory rather than discarding outright its potential contribution to innovation theory. This position is justified, as production is arguably the major contemporary theory explicitly addressing the consequences of innovation, through increased productivity.

A brief overview of the dominant theory starts with a textbook style description of the neoclassical microeconomic theory of production, and its associated concepts of productivity, efficiency and innovation. Outlining issues with production theory as applied to health services, the section contrasts the dominant model with other perspectives on production theory that are more sociological and historically situated.

The sole innovation consequence of mainstream production theory is productivity. However, this theory narrowly conceives productivity as positive and unproblematic. Hence, the subsequent section overviews the breadth of productivity meaning in literature and general vernacular, in appreciation of the existence of numerous possible innovation consequences as outlined at the start of this chapter.

2.3.1 Mainstream neoclassical theory of production

The dominant interpretation of production theory resides within the neoclassical economic synthesis. A textbook definition of production is the process of transforming inputs into valued outputs within technical constraints (Goodwin et al., 2009). In this textbook version, increased productivity occurs as a consequence of increased efficiency or through innovation (Goodwin et al., 2009).

This interpretation sets productivity as the absolute ratio of outputs to inputs within a production process. The inputs are traditionally categorised as land, labour and capital, while the output or product is the created goods or services. Productive or technical efficiency, more commonly simply termed efficiency, is the comparison of actual productivity in a production process to an optimal level (or production frontier), usually approximated by comparison with equivalent production systems (Coelli, Rao, O'Donnell, & Battese, 2005). In the long run, technical change (or innovation) refers to increases in productivity over time due to reduction in technical constraints, which has the effect of extending the production frontier outward (Coelli et al., 2005). This innovation can include the use of new machinery or techniques (Goodwin et al., 2009). In its economic textbook sense, productivity is about physical quantities rather than costs and profits (Coelli et al., 2005; Goodwin et al., 2009), although this is not always the case in applied studies.

As previously outlined, Nelson and Winter (1977) concluded that production theory could not form the basis of innovation theory, as it was a process

theory that could not deal adequately with contextual complexity and the inherent uncertainty of innovation. Nonetheless, production theory has continued to be a substantial foundation of services research (Grönroos & Ojasalo, 2004). Indeed, both Winter and Nelson have made more recent contributions (Dosi & Nelson, 2010; S. G. Winter, 2001) that continue to connect the ideas of production and innovation. There are also indications of some convergence between production theory and innovation consequences. Perhaps primarily due to ecological concerns, some more recent literature has expanded production theory to include unintended impacts or 'bad outputs' of production and other criteria to influence decision-making (Dyckhoff, 2018).

Despite the substantial overlap between economics and management literature, each field uses productivity and production at different levels of analysis for different purposes. Economists are commonly interested in policy, examining the nation, industry or organisation as a production unit while treating the internal organisational processes as a 'black box' (Hollingsworth & Peacock, 2008). In contrast, management literature views productivity as an objective of managerial techniques and production as a concrete physical process of product creation (Wren, 2005). In general, production in management is more like an assembly line than an aggregated abstraction as in economics. However, this physical perspective may not hold for the organisation and management of services.

2.3.2 Problems with production theory in health services

There are both conceptual and practical problems with applying productivity and production to health services. The conceptual issues are associated with the theoretical transfer of production to services, including public sector services. The theoretical application has been mathematical, with sometimes complex assumptions about a simple causal relationship between studied variables (Coelli et al., 2005), with limited relevance to influence practice.

Some authors argue that the basis for the application of productivity and production in health services is not clear. The historical development of productivity, production and management are closely associated with the industrialisation of manufacturing and agriculture. The transference of productivity and production concepts to services reportedly occurred during the 1970s, associated with the rising service industry proportion of developed economies and the ease of computer-aided statistical analysis (Gadrey & Gallouj, 2002).

Authors have argued that production theory fails in health services due to conceptual complexity and the profession-based workforce (Hellström, Lifvergren, & Quist, 2010). Health services result in intangible outputs that unlike goods cannot be stored, characterised as non-standardised, heterogeneous and difficult to value, and converted or transformed using profession-based craft technologies (Daft, Murphy, & Willmott, 2010). Newhouse (1994) argued in particular that health services output heterogeneity and multidimensionality preclude production comparisons. Service outputs run counter to the assembly line image of mass production, with standardisation of the output good and warehousing of excess for future sale. In many health services (particularly public services and outpatient care), this intangible output has resulted in a meaningless 'output equals input' convention. This approach suggests that input increases are the only means to increase output, cannot demonstrate productivity improvement, and actually presents innovation as a productivity loss (P. C. Smith & Street, 2007). A common example is an outpatient visit where the health provider's time may be notionally both the output and input.

Proxy measures for output of production (such as activity-based measures) are poorly developed for non-hospital (such as community-based) health services, arguably due to these conceptual problems. Microeconomic models view production, distribution and consumption as separate stages (Goodwin et al., 2009). These stages are often simultaneous in services with the consumer intimately involved in co-creation of the service. The lack of a concrete and temporal production process in health services has also

arguably limited the relevance of management techniques developed in manufacturing (Gadrey & Gallouj, 2002). Despite these conceptual problems, this review did not identify any health services research examining the theory of the entire production phenomenon.

The concept of efficient production is typically situated in the neoclassical microeconomics discourse. Since the seminal work of Farrell (1957), efficiency has been quantified as the relative productivity between comparable production systems, whether work units, organisations, industries or economies. Efficiency measurement compares a unit to other seemingly comparable units in a cross-sectional analysis, while less commonly measured are changes in productivity in the same unit over time. There is an extensive body of literature providing empirical measures of efficiency in health services, particularly in hospitals. Efficiency measurement tools have shifted from dependence upon economic evaluations of different interventions to frontier analysis techniques (Worthington, 2004). This literature undertakes efficiency measurement using mathematical modelling techniques consistent with the neoclassical economic theory of production. There are systematic reviews of the international literature in this area (Hollingsworth, 2003, 2008; Hollingsworth, Dawson, & Maniadakis, 1999; Hollingsworth & Peacock, 2008) and comparisons between efficiency measures in literature and practice in the US (McGlynn et al., 2008).

Literature measuring or explicating health service productivity generally uses the neoclassical economic theory of production. The primary use of productivity research has been to provide policy and management guidance through mathematical modelling of relative productivity (or efficiency) between hospitals using production frontiers (Hollingsworth & Peacock, 2008). Despite the proliferation of these studies, review evidence from health economists states a range of problems with the purpose, methodologies, results and conclusions of this research (Hollingsworth, 2003, 2008; Hussey et al., 2009; McGlynn et al., 2008). Earlier raised by Newhouse (1994), serious concerns with the application of these approaches to influence policy, funding and reimbursement decisions have continued. When used to inform

and guide funding and other policy decisions, these aggregated measures may have serious adverse consequences (Hollingsworth, 2008).

Hollingsworth and Peacock (2008, p. 101) argued for using “disaggregated observational data and concentrate on homogenous and small segments of the health-care system. In this case, the input-output number decreases and inputs as well as outputs are better defined and more accurately measured.”

McGlynn et al. (2008) identified different perspectives, input and output specification, with substantial variation in efficiency definition and measurement. Hussey et al. (2009) feared unintended consequences from the pressure to use efficiency measures without better understanding their properties. Arguing the availability of data and mathematical techniques was driving literature proliferation, Hollingsworth and Peacock (2008) recommended careful interpretation of findings and cautious application, perhaps only in identifying trends. Due to limitations of current technical definitions, multiple techniques might be more useful than single efficiency estimation, with efficiency only a partial measure of productivity to be considered along with other social goals (Hollingsworth, 2008). Finally, in a US review that included industry practice, McGlynn et al. (2008) identified the limited relationship between efficiency measures and methodologies used in practice (based on average costs) and peer-reviewed literature (based on production frontier), also suggesting measures in both groups had a lack of evaluation or validation.

Productivity measurement in health services has thus far proved inconclusive with ambivalent empirical findings despite numerous studies, yet it continues to be used to argue for different work methods, organisational structures and size, and patterns of ownership and funding. In highlighting a range of problems, some health economists have concluded that the productivity field is suffering from a ‘have data will analyse’ syndrome (Hollingsworth & Peacock, 2008). Hollingsworth (2016) continues efforts to assist in making these analyses more meaningful, yet there remains a significant discrepancy between the studies undertaken and the needs of the people who could use

these sorts of studies to influence practice. Put another way, further consideration of appropriate and useful forms of translational research.

There seem three positions in health services production. Firstly, a position that the econometric approach to production provides valid and credible insights into factors influencing productivity between different firms (especially hospitals). Authors such as Hollingsworth seem to contend that the problem is primarily one of ensuring data relevance, such as through the use of variables of interest to, and within the capacity to influence of, policy-makers and managers. Secondly, a position more consistent with Winter and colleagues that the dominant economic model of production does not attempt to provide a model of real-world practice, but may still be useful as a tool as long as constraints and externalities are well understood (McPake, Normand, & Smith, 2013). This position seems reasonable on the surface; however, the increasing ease of undertaking the mathematical analysis may be contributing to less conscious considerations of limits. Thirdly, a contrarian view suggesting that production as currently framed has limited value for public health services, their research and management. This third approach contends that service production needs other perspectives, frameworks or models.

2.3.3 Alternative models of production – social and historical

There are alternative theories of production that to date have failed to challenge the dominant neoclassical microeconomic model, with two outlined here. The first minor strand of inquiry considers the social construction of production, predominantly from the discipline of economic sociology. A second strand considers production and innovation from the heterodox economic fields, including evolutionary economics. Both question the mechanistic, rational-technical process model, looking for greater connection with practice.

A social construction of production has been provided as a reconsidering of the neoclassical model of production (focused on mathematics, and

mechanical or technical process) to consider production as a complex and inherently social process, inclusive of historical, cultural, and structural (institutional) factors (Zafirovski, 2002). “An alternative path from economic sociology is treating the production function as consisting of a complex social process rather than a chemical-like or technological one” (Zafirovski, 2002, p. 148). This social model is about agency and relations, realising the active role of humans in shaping production, including people making decisions in complex social settings (Zafirovski, 2002). Production frontiers have been reimagined using this perspective (Storbeck, 2008). However, this literature strand has not made substantial inroads into mainstream theory.

Evolutionary economics emerged in response to neoclassical theories that had strong inherent theoretical and mathematical structure but were removed from reality by being static, overly simplistic and approaching concepts such as technological change awkwardly (Duysters, 1996; Foster, 1997; Verspagen & Clausen, 2012). This diverse literature continues to attempt to develop conceptual frameworks more closely linked with practice and emergent from empirical research (Von Tunzelmann, Malerba, Nightingale, & Metcalfe, 2008). The heterodox economics literature has built from concepts such as Schumpeter’s ‘creative destruction’ due to competition between firms, Simon’s bounded rationality, Lancaster’s product characteristics model, and Barras’ product and process innovation, and adaptation of service production processes to include knowledge transfer (Glückler, 2017; Windrum, 2013). Some of these models have to a greater or lesser extent become accepted in the neoclassical paradigm, but overall the mechanistic process model has prevailed, with alternative theorists uncertain whether to complement or compete with this understanding. In relation to evolutionary production theory, “the overall objective is to develop an economic understanding of production that is deeply grounded in the engineering and managerial realities of the phenomenon” (S. G. Winter, 2001, p. 42). This objective is achieved through the use of sector-specific and historically relevant heuristics, as well as exploring ‘induced innovation’ caused by incentives extending from costs to climate change.

Beyond the decisions of managers based on pragmatic knowledge, S. G. Winter (2001, p. 17) highlighted elements contributing to real-world uncertainty not adequately captured by economic production theory. These elements include; the involvement of people in production as heterogeneous inputs of knowledge and skill as well as the customers or “the ultimate arbiters of productive achievement”; the “hazy frontier” when operating in the fringe areas of knowledge of what works; and that productive knowledge distributed among members of workgroups requires coordination to execute in complementary fashion (S. G. Winter, 2001, p. 18). Importantly, S. G. Winter (2001) also flagged the inadequate consideration of production externalities (such as undesirable consequences) in existing production theory, and the masking of potential variation in actual production by taken-for-granted axioms and unrecognised, unknown, or implicit knowledge. “To extend the use of existing knowledge in time and space is not at all the trivial matter it is often made out to be” (S. G. Winter, 2001, p. 39).

2.3.4 Theoretical possibilities with production and innovation

The conceptual challenge of applying the phenomenon of production to intangible services is extended given longstanding recognition that the demand is for health rather than the health service (Grossman, 1972). There are three key themes identified from the production theory literature. First and foremost, the dominant neoclassical microeconomic application of production theory is alive and strong. This review is not aiming to refute or challenge this use when appropriate, but rather recognise other possibilities and potentials; production may have more to offer in health services research. Particularly when applied to innovation, as production theory includes innovation as a principal variable in increasing productivity over time.

Secondly, there is some early momentum to considering production in theory more closely approximated to practice and contemporary issues such as climate change (Dyckhoff, 2018). This practical approach would potentially include factors that are considered externalities or not conventionally considered the province of neoclassical economics. These approaches

present as something of a socio-historical turn evident in some literature. The social emphasises human agency and relations in production; production is not manifestly mechanically so, but instead formed in situated contexts of messy and complex human interactions. The historical turn aims to situate production in space and time.

Finally, externalities could include other consequences of production (or innovation) that are undesirable or unanticipated (Dyckhoff, 2018). A richer understanding of productivity may be required to incorporate some of these elements not traditionally considered within production theory.

2.4 Problematising productivity meaning and discourse

Productivity as the consequence of health service innovation aligns with the dominant theory of production. However, there are also conceptual and practical issues with definition, operationalisation, and measurement of productivity. Exploring the consequences of innovation using production theory may require a reimagining of productivity as a concept beyond or different than applied in neoclassical economics (Dyckhoff, 2018).

Productivity is a term in ordinary use, evident in general vernacular, media stories, policy and management discourse, as well as in scientific research. Hence it is both a word in everyday language and a concept (Tangen, 2005). The term permeates society and has implications for many areas of practice. However, there appear to be differences in how this productivity term is applied, including its meaning and purpose (Tangen, 2005). Given the substantial role productivity claims can make to policy decisions, management initiatives, and worker lives, this situation seems problematic.

As outlined previously, a technical microeconomic definition of productivity is a measure of the productive efficiency of a production process (Goodwin et al., 2009). In the production process, or the transformation of inputs (resources) into output (products, i.e. goods or services), the level of productivity is the volume of the outputs produced from a volume of inputs, expressed as a ratio. When output increases relative to inputs, there is a

productivity increase. These productivity increases occur through mechanisms such as more efficient production (e.g. reduced waste), technological change (innovation), or economies of scope or scale (Goodwin et al., 2009).

However, in many situations, it is unclear whether this is the intended meaning; conflation with efficiency is particularly common. This section outlines this conflation, before noting some of the different approaches to productivity in the extant literature, drawing on health services research where possible, but also considering alternative sources when necessary. These alternative approaches to productivity consider both word meaning and productivity discourse.

2.4.1 Productivity conflated with efficiency

Productivity is often conflated with or used synonymously with efficiency, which itself has varied interpretations across general management (Callender, 2009), public administration (Australian Public Sector Commission, 2016), and health services research (Arakelian, Gunningberg, & Larsson, 2010; Nugus & Braithwaite, 2010). Productivity is frequently confused with efficiency in general vernacular and academic writing (Coelli et al., 2005), including within mainstream economics, management, and health services research. Despite the distinction between efficiency and productivity in economic production theory, these concepts are presented differently in comparative microeconomic analyses on firm performance (Coelli et al., 2005). Productivity is considered an absolute measure whereas efficiency is more often a relative concept, even when not applied to this particular mathematical application, despite longstanding acknowledgement of this problem (T. F. Burgess, 1990).

This conflation of productivity differences with relative efficiency in production has been criticised within a neoclassical economic framework as enabling a prescriptive or normative perspective suggesting what should be done without full account for possible costs in making things different (Saraydar,

1989). There is no “a priori implication that a particular set of constraints should be eliminated or changed because of ‘inferior efficiency’” (Saraydar, 1989, p. 59), as well as suggesting authors likely have bias relating to their particular ideology and culture.

While no explicit ‘ideology of productivity’ could be identified from the literature, the above criticism is consistent with arguments that the ideology of efficiency lacks coherence and consistency within the economic discourse, and that economists are not justified in offering up normative recommendations to policy-makers (Bromley, 1990). This author also criticises means-end separation and separation of production and consumption.

2.4.2 Alternative approaches to the meaning of productivity

Alternative approaches to the meaning of productivity are somewhat consistent with different academic discipline conventions and their theoretical bases (Tangen, 2005). Rather than attempting to be exhaustive here, this section will consider a few different examples. One factor to consider is the ways the meaning of words may be conveyed in language (Cruse, 2000). Reviewed dictionaries essentially provided two historical and contemporary definitions of productivity, one related to productive activity and one related to economic discourse (Table 1).

As is often the case with English words (Eddington & Tokowicz, 2015), it appears clear that productivity has multiple meanings, While there are many shared aspects of the word meanings (Tangen, 2005), an effort to conceptually aggregate these may lose utility in different circumstances (Risjord, 2009). WordNet is an English lexical database providing groupings of nouns “into sets of cognitive synonyms (synsets), with each expressing a distinct concept” (Princeton University, 2010). These synsets are arranged hierarchically by hypernym. This lexical system provides two distinct hierarchies for the word productivity.

Table 1: Productivity origins and definitions

Source	Productiveness	Productivity (noun)	
		Economics	Other
Etymonline (2019)	1809. "quality of being productive" from productive-ity. An earlier word for this was productiveness (from 1727)	1899. Economic sense of 'rate of output per unit'	
Merriam-Webster (2015)	The quality or state of being productive		Ecology: The rate per unit area or per unit volume at which biomass consumable as food by other organisms is made by producers
Oxford University Press (2019)	The state or quality of being productive, = productiveness	The effectiveness of productive effort, especially in industry, as measured in terms of the rate of output (of goods, products, etc.) per unit of input (of labour, materials, equipment, etc.). Also in extended use	Ecology: The rate of production of new biomass by an individual, population, or community; the fertility or capacity of a given habitat or area
Dictionary.com (2019)	The quality, state, or fact of being able to generate, create, enhance, or bring forth goods and services	The rate at which goods and services having exchange value are brought forth or produced	Grammar: The ability to form new words using established patterns and discrete linguistic elements, as the derivational affixes -ness and -ity
Collins English Dictionary (2019)	The state of being productive	The output of an industrial concern in relation to the materials, labour, etc, it employs	

Note: Compiled from the five dictionary sources cited in the left-hand column.

Using the above-structured approach to the English lexicon and etymology presents two distinct meanings and histories of the word productivity, both consistent with dictionary definitions. The first meaning is productivity as a relational noun, consistent with the prevailing economic theory of production.

The second meaning is productivity as an attribute of an entity to be productive.

Hence, arguably the word productivity constitutes at least two distinct concepts; one concept of productivity as a measure of relative magnitude and the other concept as a quality of causing growth. This concept/word distinction appears lost in some studies. As an example directly related to health services, a formal concept analysis of nursing productivity concluded that productivity was the ratio of outputs to inputs (Holcomb, Hoffart, & Fox, 2002). This nursing productivity definition was conceptually isolated, as not explicitly connected to any theory (such as the theory of production), and from the article contents relevant only to hospital nursing in US Department of Veteran Affairs hospital settings. In contrast, some studies have suggested there are qualitative as well as quantitative dimensions to nurse productivity (Dehghan Nayeri, Nazari, Salsali, Ahmadi, & Adib Hajbaghery, 2006).

2.4.3 Productivity discourse

Along with word meaning, understanding of productivity may be in terms of ideology (J. B. Thompson, 2001), narrative, agenda, story, and discourse. Bromley (1990, p. 87) contrasts ideology as an emotional or propagandistic position, with being “socialized into the paradigm” of shared beliefs and interpretations.

Although discussions of a ‘productivity discourse’ or ‘discourse of productivity’ in the public sector, education, and national policy seem somewhat more frequent in the literature, explicit article reference to productivity discourse in the health arena appears rare. In one example, Bhargava and Mishra (2014, p. 2544) “...suggest that the nature of interactions physicians have with EMRs [electronic medical records - description added] can potentially play an important role in the performance and productivity discourse”. This reference to a singular discourse, with the statement situated within the article’s introduction, where filling a literature gap and discussion of a national policy consensus on EMR necessity are

included, give clues to this meaning. The performance and productivity discourse appear, in this case, to refer to an objectivist ontological position, with an 'out there' scientific knowledge nexus between policy, research and practice domains.

Other health and health services literature referring to a productivity discourse present a sociological perspective, with responsibility one recurring theme. In a discourse analysis of a UK newspaper's men's health series, Lyons and Willott (1999, p. 297) noted a distinction between a 'men as infants' pattern with requisite mothering, and an accepted 'productivity discourse' used by men of higher social class to permit discussion of health and healthy behaviours. The authors identified this second discourse permitted public discussion around health by and for executive men as long as it was linked to work and business success, whereas the former framed health as the responsibility of women. Moffatt, Martin, and Timmons (2014) used Foucauldian governmentality as a framework to explore productivity in UK National Health Service policy documents between 2006 and 2012 using discourse analysis. In their analysis, Moffatt et al. (2014) argue that the use of the productivity discourse was to appeal to the individual and collective responsibility of health professionals to increase health services productivity.

While not specific to health services, Ball (1997) argued that the UK public sector had transformed from an old to new managerialism through a fundamental restructuring from the Keynesian Welfare State with Fordist discourse of productivity and planning to a Schumpeterian Workfare State with a market ideology of "post-Fordist rhetoric of flexibility and entrepreneurialism" (Ball, 1997, p. 258). It is not only a structural change but also a cultural one aligning the public sector with for-profit business values. This public sector management change is viewed as part of a broader neoliberal narrative since the early 1980s with person-centric rhetoric, distrust of bureaucratic forms, and a focus on quality, quality improvement, and innovation (Ball, 1997). This author has influentially continued this thread regarding privatisation of public sector education (Ball, 2012). There is also Australian organisational innovation literature critical of the productivity

discourse, arguing there are three production paradigms (mass production, lean production and sociotechnical production systems), which “together, these canons of efficiency have come to dominate the discourse of productivity” (Mathews, 1995, p. 75), despite limited evidence of their applicability to public services.

Chan (2008) extends historical economic accounts of productive activity to Asian countries, unlike many authors distinguishing between productivity and efficiency. Arguing that the superiority of the Asian welfare model is a myth based on fallacious assumptions, including productivism, Chan (2008) relates the productivity discourse to notions of productive and unproductive human activity. This author questions what is counted as productive or indeed economic activity, comparing paid service work and to unpaid and other activity:

To challenge the productivist ethos, we must deconstruct the discourse of productivity. What is productive? What is unproductive? The term ‘productive’ usually refers to the achievement of a high profit or rapid economic growth with given resources. However, in policy studies, it is always problematic to decide what is productive and what is not. According to conventional economic measures, a worker with a full-time job is productive, whereas a mother taking care of her children at home is not. A cook who works in a restaurant is productive, whereas a homemaker who cooks at home is not. Ironically, financial and housing market speculations are regarded as productive, but any other work outside the labour market, such as voluntary work and housework, are regarded as unproductive. These attitudes towards productivity are evident in debates concerning the underclass and welfare dependency. Lone parents on social security are labelled welfare-dependent and regarded as unproductive, even though they are caring for their young children. (Chan, 2008, p. 310)

In Australia, there has been some focus on a productivity discourse on ageing. Aberdeen and Bye (2011, p. 3) critique the lack of Australian ageing research into the dominant neoliberal discourse of 'positive ageing', as "governments at all levels since the 1990s have pursued policies of ageing that tends to subordinate the social needs of older Australians to the nation's economic needs." These authors cite Asquith (2009) in arguing that a neoliberal responsabilisation discourse is shifting state concerns to individual responsibilities. In common with Chan (2008), there is concern around making value judgements based solely on paid work.

2.5 On productivity and production for innovation theory

In summary, this review suggests there is a lack of a corpus of literature directly related to innovation consequences. Some fields make explicit reference to the topic, including the work of diffusion of innovation scholars. There are also academic disciplines such as evaluation and organisational theory that may be associated, often indirectly or implicitly, with innovation consequences. However, each discipline has its foci and organising principles that are different from innovation theory.

Innovation theory outside business firms appears to be relatively emergent and principally focused on classifying various types of innovation and innovation processes, with little evidence of a connection to innovation consequences. There does not seem a ready or clear path to incorporate innovation consequences in some extension or synthesis of this literature.

Production was the one theory identified providing an explicit connection between innovation and consequence (in the form of productivity). Production and productivity provide a possible basis for the development of innovation theory relevant to community-based health and human services. Albeit narrowly conceived in their dominant form, from existing diverse perspectives, there seems an opportunity to reimagine or explore production and productivity to develop innovation theory.

CHAPTER 3

Methodology

This chapter introduces the overall research design. It commences with an introduction to the qualitative tradition, explaining how this research choice occurred. Recognising the limited prescription associated with qualitative multiple case study, a description of two prominent frameworks for research design (Creswell, 2003; Crotty, 1998) leads to the framework synthesis used in this research. The research framework comprised; pragmatist worldview; critical theoretical perspective with an open systems tether; multiple case study design; use of minimally structured interviews, observations and documents; analysis formed using the sociological imagination; and interpretation using individual case narratives and cross-case analysis of research objectives.

After the introduction to the research design, the next section situates the researcher and the role of the extant literature in the research. Each of the framework elements is described in turn in the subsequent five sections, finishing with the approach to ensure the rigour of the research. An audit of decisions emergent throughout the research and ethical approval follow before a summary of the chapter.

3.1 Qualitative research design

This health services research design is located in the qualitative tradition or approach (Creswell & Poth, 2018), where attempts are made to make sense of phenomena through the “meanings people bring to them” in their natural settings (Denzin & Lincoln, 2011, p. 3). Applying a qualitative approach was not an easy decision. Hypothesis testing through quantitative inquiry engulfed the researcher’s education and training to the extent that the quantitative tradition was the totality of the scientific method. Previous experience of the researcher with quantitative research, principally with structured survey methods, often answered questions of what or how much but were disappointing as to the deeper, and potentially more interesting, questions

that emerged during the research of how or why. Open questions or comment fields as token and unfulfilling efforts to capture these emergent questions in these surveys further emphasised the need for deeper, richer forms of inquiry. Reading extensively in organisation and management literature drew attention to the prominent use of case study. A highlight was discerning organisations as both bounded and open systems, described and understood as a social structure situated in a specific context, as analogous to a case study. While mixed methods was a growing tradition of its own (Creswell, 2003), the qualitative case study and its parallels with organisation and systems felt a better fit and still allowed for a variety of data collection as appropriate to the research question. The case as an organised instance of innovation was consistent with the desired unit of analysis for this health services research of micro-level productivity and production.

The research design refers to the entire process or sequence from conceptualisation of a problem through to conclusions and reporting (Creswell & Poth, 2018; Yin, 2009). Design is the totality from broad philosophical positions through to specific techniques of data, analysis and presentation (Creswell & Poth, 2018). However, the development of research design is not necessarily so clear cut, and nor does it generally move in this broad to narrow sequence (Creswell, 2014). Development often starts with the selection of the research methodology or methods that may answer the research question and are preferred by the researcher (Crotty, 1998). It is subsequently, and perhaps only in methodology and traditions without assumed philosophical positions that questions about theoretical and philosophical perspectives become evident. This position had certainly been the researcher's previous experience in the quantitative tradition, where some form of positivism and objective reality to the subject were never discussed, but in hindsight were always assumed. Considering a problem that seemed best suited to research from the qualitative tradition, and a form of case study methodology, opened up a smorgasbord of philosophical considerations.

For a new qualitative researcher, this almost bewildering array required a framework to organise and structure thinking about social research design. Two options rose to the fore, those of Crotty (1998) and Creswell (2003, 2014). A brief description of these options precedes describing the adapted framework used in this research.

Offering a framework for social research primarily grounded in qualitative traditions, Crotty (1998) suggests research design commences from the two questions of; what research methodology to use; and how to justify the choice. The justification is based on a design suited to answering the research question, but also how one chooses to answer the question, and what answer a person will find satisfactory. That is, the justification is grounded at least in part in assumptions about the world (theoretical perspective), and what kind of knowledge the researcher expects to produce (Crotty, 1998). According to Crotty (1998), this results in four framework elements of:

1. Methods: techniques and procedures to gather and analyse data about the research question.
2. Methodology: the design behind the method choices.
3. Theoretical perspective or philosophical stance; “our view of the human world and social life within that world” (Crotty, 1998, p. 7).
4. Epistemology: or theory of knowledge inherent or embedded in the theoretical perspective, and therefore in the methodology chosen.

Also from social and human research, Creswell (2014) provides a research design framework commencing with selecting between quantitative, qualitative, or mixed methods approaches, from which follows an intersection between philosophy, designs and methods (Figure 2). For (Creswell, 2014, p. 4), the qualitative tradition:

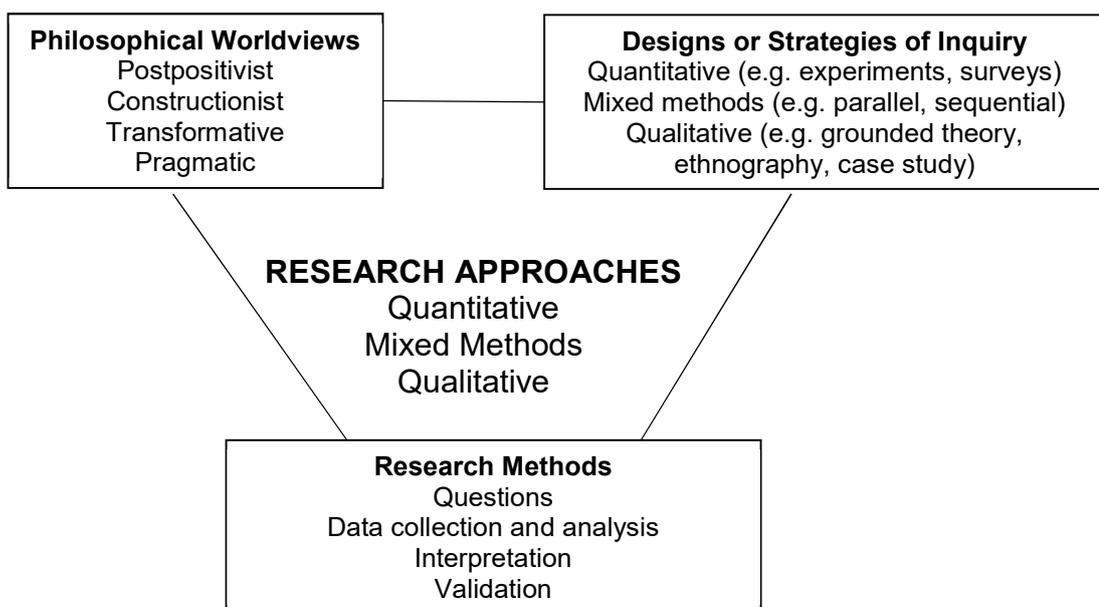
is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. The process of research involves emerging questions and procedures, data typically collected in the participant’s setting, data analysis inductively building from particulars to general themes, and the

researcher making interpretations of the meaning of the data. The final written report has a flexible structure.

This above definition approximates the qualitative tradition employed in this research.

Of particular note to the design of this research, Crotty (1998) places critical inquiry as a theoretical perspective but includes case study as a method along with interview and focus group. In contrast, Creswell (2014) considers case study one form of qualitative research design that has associated methods. Creswell (2014) includes critical theorists in the transformative philosophical position, with political emphasis on social change to reduce discrimination and oppression of marginalised groups. Notably, Creswell (2014) directly associates pragmatism as a major, although not exclusive, philosophical basis for mixed methods design. This research is situated in an arguably milder critical theoretical perspective aligned with a pragmatic worldview.

Figure 2: An interconnected research design framework



Adapted from *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed, p. 5), by J. W. Creswell, 2014, Thousand Oaks, California: SAGE Publications Inc. Copyright 2014 by SAGE Publishing. Adapted with permission.

Drawing on these two frameworks, and reflecting on both the research questions and the researcher’s experience and preferences, led to a multiple case study research design for this health services research located in the qualitative tradition (Creswell, 2003). The research methodology is synthesised from the above two frameworks for research design (Creswell, 2003, 2014; Crotty, 1998), and comprises; knowledge claims, theoretical perspective, research method, and techniques for data collection, analysis and presentation (Table 2). The remainder of this chapter describes each of these framework elements in sequence, building a logical and coherent picture justifying the overall research design.

Table 2: The research design framework

Framework Element	The type used in this research
Epistemology, knowledge claims or worldview	Classical pragmatism
Theoretical perspective	Critical management studies as a suitable form of critical theory
Research method	Qualitative multiple case study
Techniques	
<ul style="list-style-type: none"> • Data collection 	Minimally structured interviews, observations, documents
<ul style="list-style-type: none"> • Analysis 	Sociological imagination template initial coding individual cases Cross-case matrix using research objectives/production theory
<ul style="list-style-type: none"> • Interpretation and presentation 	This thesis comprising: <ul style="list-style-type: none"> • Individual case study findings – narrative and analysis • Cross case analysis • Discussion

Before proceeding to describe the elements in some detail, an initial outline introduces each of these elements, demonstrating their connection to this research. Different authors understand pragmatism as a philosophical position or a social theoretical perspective, in part, as it does not conform to some of the almost binary categorisation prominent in the philosophy of research. Denying artificial dichotomies or dualisms such as object/subject, mind/body, or knowledge/practice, pragmatism also collapses ontology (the ideas of being, existence or reality) into epistemology (the theory of

knowledge) to create a particular worldview (Dewey, 1977). Pragmatism bypasses philosophical questions around what is reality and how does one know, to focus on situated knowledge valued through its relevance to practice. Considered by some a relatively old position, classical pragmatism has experienced a revitalisation and resurgence, particularly in organisation and management studies (Evans, 2000). As a practice-oriented position, pragmatism has clear applicability as a worldview to applied research, such as health services research.

Numerous authors draw alignment between particular worldviews (i.e. certain ontological and epistemological combinations) and certain theoretical perspectives (Gray, 2014). While by no means exclusive (e.g. see Crotty (1998) above), pragmatism has been aligned with critical theory as a theoretical perspective. Viewed broadly, a critical theoretical perspective:

questions currently held values and assumptions and challenges conventional social structures. It invites both researchers and participants to discard what they term 'false consciousness' in order to develop new ways of understanding as a guide to effective action, confronting unjust social systems. (Gray, 2014, p. 27)

As an action towards democracy over the privileged and powerful, critical theoretical perspectives critique mainstream ideas and practices as representing the self-interests and ideology of the dominant elite (Gray, 2014). Of the array of critical theory, critical management studies (CMS) was the theoretical perspective in this research. Consistent with critical theory in other fields of inquiry (Patton, 2002), CMS espouses a more radical critique which aided the questioning of assumptions in this research, including those within innovation and production theory. This questioning of assumptions occurred through problematisation, that is making a problem of taken-for-granted knowledge, including through a process termed defamiliarisation. A subsequent section on theoretical perspectives expands these ideas. However, it is important to note that this questioning of assumptions is not just a technical exercise, with the contestation of some core and dominant

ideas embedded within social structures and values (Spicer, Alvesson, & Kärreman, 2009).

The research method was multiple case study research of small groups as micro-level units of organisation. Groups, and in particular teams, are heralded as important organisation structures which, through processes of teamwork or interprofessional collaboration, are believed to improve a multitude of objectives including health outcomes from health care, quality and clinical effectiveness of health services, as well as patient and worker satisfaction. The research provided a more critical perspective of innovative service production by teams through multiple case study analysis from a classical pragmatist worldview. The intention of this critical perspective was to facilitate critiquing taken-for-granted assumptions in the dominant mainstream theory of production by innovative teams. The pragmatist worldview conceived knowledge contributions, including those towards understanding innovation, as valuable in their proximity and potential contribution to practice.

The techniques for data collection in each case comprised some combination of minimally structured interviews, non-participant observations, and documents. The analysis of the data commenced with the use of the sociological imagination template. This template provided four distinct, alternative and yet potentially complementary viewpoints to consider items of interest from each case, with particular focus on the phenomenon of productivity. Challenging or problematising the dominant technical view of production through these alternative historical, cultural, structural and critical viewpoints, the template provided an initial coding framework that defamiliarised the data. These codes were then reviewed along with the data in an iterative fashion to form individual case findings in the form of narrative and analysis. A cross-case matrix aligned with the research objectives combined with these single case data and findings to explore productivity and production in these innovations.

3.2 Role of the researcher and extant literature

As final points before expanding further on the elements of the research design, it is important to make an initial note of the role of the literature and the researcher in this research. Firstly, the research was from a pragmatic worldview, situating the researcher within the research in a manner consistent with many qualitative traditions (Merriam, 2002). The researcher was the principal analytical tool; filtering, deconstructing and reconstructing information to generate theory. This positioning required critical reflexivity on the part of the researcher; questioning how and what one knows, critically reflecting on values and assumptions and exploring alternative paradigms (Alvesson & Deetz, 2000). The researcher's previous work as a physiotherapist in MDTs for almost 20 years facilitated access to, and likely greater acceptance by, the groups in this research. The researcher was also familiar with the language in these settings, including clinical acronyms and jargon. Group members possibly had greater trust in the intentions of a researcher with whom they identified. These and other factors likely aided participants to behave in a more honest or usual manner and to be frank in their disclosure. However, the researcher had to reflect on both identifying with the case context and issues to ensure there was no detriment to the study credibility or validity, and remain respectful of a relatively powerful position (i.e. researching management ideas using worker perspectives). Worker micro-emancipation is one objective of a CMS theoretical position to carefully consider when exploring organisation and management theory in this fashion.

Secondly, the broad extant literature was an initial and iterative part of the research as both an information source and a tool for analysis. This diverse literature provided possible description and explanation of findings, data and theoretical comparisons with equivalent areas of study, and a substantial source of counter explanation to theory emerging from the research. The original discomfiture felt by the researcher, the sense of theoretical disconnect with lived experience, was further confirmed if not fully illuminated by an initial reading of innovation literature, as well as both classical and

contemporary organisation and management research, from within and outside health services. There seemed problems with the lack of theoretical relationship between innovation and the broader management and organisation literature, including around the previously introduced idea that innovation was innately good. The conceptual connection between organisation and management thought and innovation through the economic theory of production seemed to have received limited attention. Hence, there appeared value in exploratory and critical research, in relation to innovation benefits, through an approach focussed on the phenomena of productivity and health services production in innovative settings.

As introduced in an earlier chapter, the idea that there may be a theoretical benefit in claims made from the resource-constrained system periphery informed case selection. Additional points emphasised in the next sections include the selection of the unit of analysis, and hence the choice of multiple case study rather than embedded case study design, and issues of power. The role of production theory, with its connection to managerial control of workers, shaped the design of the analysis and reporting of the cases. The below expands these two points.

The researcher recognised the position of Nelson and Winter (1977) amongst others arguing the limitations of production to expand innovation theory, as well as acknowledging the oft-reported conceptual problems with applying production theory to intangible services that are simultaneously produced, distributed and consumed (Gallouj & Savona, 2009). However, some evolutionary economics scholars contend that production theory still has something to offer (Von Tunzelmann et al., 2008; Windrum, 2014; S. G. Winter, 2001). This pragmatic research design was to be grounded in practice with as little abstraction as possible. To facilitate this grounding, health service production was explored at the original conceptual level of analysis for management and organisation theory, the primary micro-level of integration or organisation of specialised work in a single production process. This is the micro-level at which seminal historical case studies such as Adam Smith's pin factory specialisation and division of labour, Frederick Taylor's

analysis of shovelhead size, and Gilbreths' time and motion analyses informed goods production and efficiency management (Janoski & Lepadatu, 2013). The equivalent primary level of integration of modern health service work is the MDT. Thus, the research design was delimited to multiple cases of that micro-level of analysis, rather than considering an embedded case study design with different levels of analysis (Yin, 2009).

Protagonists against production as a model for services and innovation may argue that using production theory feeds into the dominance of the neoclassical economics paradigm. However, in addition to the works of evolutionary economic scholars (Von Tunzelmann et al., 2008; Windrum, 2014; S. G. Winter, 2001), countervailing arguments were supporting using production theory. Pragmatically, modification or adaptation of innovation to include facets of production theory seemed more likely to influence government sector policy and practice (Productivity Commission, 2009; The Treasury, 2017). If this exploratory research did not support some combination of the production theory, then this research could provide one further refutation of the theory's application to innovation. Moreover, researcher reflexivity countered concerns that production theory is overly mechanistic, and contributes to the dominance of workers.

Further, the use of the sociological imagination template as a critical lens through which to explore production and associated concepts within each case's context provided a foil or counterpoint to the dominant mechanistic perspective. This sociological approach is pluralistic, crosses the individual relationships of organisational psychology team research, the structural models of neoclassical economics, while providing a historical perspective. The sociological imagination together with open systems thinking as a conceptual tether aided a critical but bounded framework for a relatively inexperienced researcher to explore conceptually complex phenomena within a doctorate program.

3.3 Epistemology - classical pragmatist knowledge claims

This research was situated in the classical or American pragmatist worldview. Classical pragmatists view knowledge as an abstraction with permeable concepts rather than rigid dichotomies or categories (Dewey, 1977). Pragmatism “as a worldview arises out of actions, situations and consequences” with a concern with what works (Creswell, 2014, p. 10) (see Table 3).

Table 3: Key elements of a pragmatist worldview

Pragmatism is not committed to any one system of philosophy and reality
Individual researchers have freedom of choice. In this way, researchers are free to choose methods, techniques, and procedures of research that best suit their needs and purposes
Pragmatists agree that research always occurs in social, historical, political, and other contexts

(adapted from (Creswell, 2014, p. 11)

Pragmatism connotes a sense of fluid approximation between ‘knowing’ and ‘doing’ (Evans, 2000). This statement suggests three interconnected elements of approximation, dynamism, and problematisation. The approximation to practice supports the idea that knowledge is valuable in as much as it is relevant for the primary experience. Concepts and theory help make sense of what one is doing, and hence must remain of practical value, helping to guide and make sense of the ‘doing’. Pragmatism positions knowledge as dynamic, challenging fixed boundaries between concepts and action. Theory must have utility to practice and hence is always open to change, to improve but never finalise (Cooper & Law, 2016). Pragmatism, as a social model of knowledge, seeks respect for all rather than elite interests (Kelemen & Rumens, 2008). The group or community of practice find a practical solution to a problematic situation using scientific tools of theory and method while upholding democratic values (Evans, 2000). Finally, pragmatists view knowledge as both situational and problematic, created within groups with common or similar experiences, through discussion and reflection (Kelemen & Rumens, 2008). Knowledge develops through and is

relevant to the practical issues faced by the group. Consistent with this pragmatist perspective, problematisation underpinned the research, a critical thinking process that poses taken-for-granted knowledge as a problem, allowing different perspectives to emerge (Dey & Steyaert, 2012a, 2012b).

This problematisation was indispensable to the research design as, in exploring productivity and production in new ways, the research was reconsidering long established concepts with a view to enriching innovation theory. This research was not a gap-filling exercise, but a re-reading of existing theory informed from empirical evidence. Rather than accepting the knowledge as fact or given, the knowledge was 'defamiliarised', that is made unfamiliar or strange (Alvesson, Kärreman, & Ybema, 2017). Instead of assuming the concepts of production and productivity as given, they are reconsidered in different ways. For Crotty (1998), this defamiliarisation could occur through abandoning the focalised viewpoint, drawing back to examine other possibilities, leading to the positive development of contextualised knowledge. This defamiliarisation is akin to looking at items from different angles and different distances. To do this required a 'stripping' away of the concepts from their conceptual frame, facilitated by the sociological imagination template as outlined later in this chapter. As this defamiliarisation process occurred in each case, these concepts combined with new ideas that emerged from the case to form a series of themes that formed a rich narrative of the case commencing from innovation, productivity, and production inquiry. Consistent with a multiple case study research design (Stake, 2006), these themes in narrative form were the individual case findings. The results in relation to each objective were then analysed across the cases to form the multiple case results, with the key findings from the cross-case comparison of these results and the individual case themes forming the multiple case analysis.

3.4 Theoretical perspective – critical with open systems tether

This health services research explored potentially new connections between the well-established theories of production and innovation, in a

transdisciplinary manner drawing on scholarship largely from the margins of mainstream economics and management/organisation studies. Particular conceptual and theoretical contributions included from scholars within economic sociology, heterodox (notably evolutionary) economics, organisational studies and public sector management. The research design applied a critical theoretical perspective from the CMS field of research to aid this transdisciplinary approach to problematising the dominant theory of production. Maintaining coherence was aided through open systems thinking as a conceptual tether for exploring production, teams and teamwork, as well as innovation, within health services.

CMS provided a more critical perspective to help problematise the dominant ideas evident in this research. In brief, production theory is heavily used and influential, yet assumes increased productivity is the sole desired objective of production processes. Production theory does not explicitly include concern for the welfare of people involved, or the impacts or consequences of negative 'externalities'. A narrow and technical perspective dominates the significant and persuasive organisation and management literature, where managers act on workers to achieve corporate goals (Alvesson & Willmott, 1992).

CMS is a field that developed to question the unexamined assumptions underlying technical knowledge in management theory (Fournier & Grey, 2000; Spicer et al., 2009). CMS scholars challenge this dominance by advocating for a more radical critique of management knowledge (Adler, Forbes, & Willmott, 2007), and aim to positively and constructively alter the power relations between workers and managers (Spicer et al., 2009). This research problematised productivity as a technical measure and managerial objective while also aiming to include worker perspectives in the management discourse. Critically, the technical/rational fundamentals of teams, based on productivity or efficiency measurement, are proposed as hidden in contemporary work team discourses that often market or persuade on the natural 'goodness' of teams.

It should be noted that this approach to the research limited the ability to explore the perspectives of service users. This lack of user perspective was an acknowledged limitation of the design to address related concepts such as co-production.

Systems theory also helped frame this research that was intended to challenge but also to contribute to and advance mainstream theory. This research was not intended to be embedded in the 'dark side' of organisation studies (Linstead, Maréchal, & Griffin, 2014) (for examples, see personality characteristics related to innovation (Zibarras, Port, & Woods, 2008), teams (Cruz, 2011), and co-production (Oliver, Kothari, & Mays, 2019)). This research approach was not a deconstruction, but a repurposing or reimagining, contributing theory more relevant to and situated in practice. An anchor, or perhaps better conceived as a tether, was seen as beneficial to help the researcher keep to the positive and creative task of reimagining (Alvesson et al., 2017). This intent led to the use of open systems as a conceptual tether.

The open systems approach was pragmatically both conceptual, that is a theoretical perspective (Katz & Kahn, 1978; Von Bertalanffy, 1950), and more literal, as a way of understanding the generally acknowledged 'health system' and its peripheral overlap with other social institutions and sectors, including human services. Open systems provide a relatively consistent framework to connect transdisciplinary fields and concepts relevant to health services research on innovation. There are some broad conceptual similarities across scholarly fields in health around clinical effectiveness, quality, productivity and efficiency, and teams themselves. Across the scholarly fields, these similar elements include; some process (e.g. intervention, production, teamwork); hopefully transforming inputs (e.g. labour, knowledge, skills) into some beneficial outputs or outcomes (e.g. improved health, more services, team performance). In addition, most recognise some context (e.g. setting, technological frontier, team context) and feedback mechanism to inform elements of the system. This loosely organised open systems approach provided a broader but bounded frame from which to explore the economic

theory of production in team innovation. Open systems thinking provided some regulation, which combined with the critique capability of the sociological imagination template (outlined in the data analysis section of this chapter), to help ensure the research remained grounded in practice while contributing to theory.

3.5 Multiple case study research method

In this research, a multiple case study research method used three cases of innovation to explore the phenomenon of health services production. Selection of case studies was purposeful as both accessible and marginal (i.e. at the periphery of the health system). The multiple case study design was instrumental (Stake, 1995), aiming for an understanding of productivity and production phenomena within the cases of innovative groups. However, while each case was studied in relation to these phenomena of interest, individual cases were analysed and described based on a rich descriptive account or narrative built from the dominant themes arising from the specific case, maintaining their individual importance.

Theory building from case study research is an “increasingly popular and relevant research strategy that forms the basis of a disproportionately large number of influential studies” (Eisenhardt & Graebner, 2007, p. 30). Case study has an extensive history in social sciences as an instructional or educational tool, to support, refute or generate hypotheses, and as original qualitative research (Merriam, 1988; Stake, 1995). Case study research is a common design in health care research, and in organisation and management research (Gibbert & Ruigrok, 2010; Tsang, 2017), and has played a primary role in the development of modern management knowledge. Productivity, efficiency and innovation are modern economic and management concepts derived from seminal production case studies; notable examples include Adam Smith’s exemplar pin factory as efficient division of labour, Taylor’s engineering approach to efficient work design, Mayo’s experimental case study of productivity at Hawthorne Works, and Deming’s model based on productivity case study at Toyota (Wren, 2005).

Case study refers to research approaches where the case is the primary unit of analysis. Many management case studies used cases at the single production process, or micro-level of analysis, to generate more widely accepted approaches to work. This study followed this case study tradition, using the first level of work organisation, namely the small group or team, to explore the phenomenon of innovative health service production.

There is logical cohesion between classical pragmatism and case study research. A case study is an appropriate research approach when studying how or why questions about complex contemporary social phenomena with limited researcher control (Yin, 2009), and when the phenomenon of interest and context are not readily separated (Stake, 1995) or boundaries are not clear (Yin, 2009). Classical pragmatism promotes locally situated knowledge, closely approximated to the practice experience, which aligns with arguments that case study research is appropriate when the case is best understood within the specific context. A case study is also appropriate when the phenomenon of interest has multiple, unknown or poorly specified variables (Yin, 2009). Critically, a case study is suggested when knowledge of the case is as significant as the phenomenon (Stake, 1995), a position which is central to both pragmatist knowledge claims and CMS focus on micro emancipation of the workers.

Comparative or multiple case study research resides between the particularisation emphasis of the single case study and the generalisation of statistical sampling methods to populations (Stake, 2006). Yin (2009) argues that multiple case study research provides literal or theoretical replication logic rather than statistical replication logic. The singular importance of each case is acknowledged while accepting that knowledge from collective experiences may be beneficial to practice. The multiple case study analysis aims to expand themes and concepts, to explore patterns of both consistency and variation across the cases (Merriam, 1988; Stake, 2006), developing and delimiting theoretical frameworks (Yin, 2009).

As well as contributing to management theory through seminal cases previously mentioned, case study research has been used extensively by contemporary organisation and management scholars to contribute to theory (Dooley, 2002; Eisenhardt, 1989; Okhuysen & Bonardi, 2011; Ridder, 2016). Ridder (2017, p. 281) proposes that there “is a portfolio of case study research designs”, with three phases of building, developing and testing theory along a theory continuum. Focusing on the theory-building potential, Eisenhardt and Graebner (2007) identify that multiple case study research can produce more parsimonious, robust and generalisable theory than single case study designs. Ridder (2017) argues that multiple case study research can further contribute to theory creation by building ideas within each single case study context, and theory development through comparing similarities and differences across cases. This research followed this approach, through individual case study narratives and analysis to build concepts and possible relationships, followed by cross-case analysis to develop innovation and related theory further.

3.5.1 Case selection

Multidisciplinary teams (MDTs) were operationalised as groups of workers from two or more occupations, also called cross-professional or cross-functional teams in management literature. The principal inclusion criterion was that the group or team was working towards the provision of substantially more services than goods. Material goods and intangible services are effectively a continuum of outputs, with many products a mix. A prime example is a hospital, where patients receive goods such as sustenance and medications along with many services. As mentioned previously, this research focused primarily on the productivity and production of innovation in ‘low tech’ intangible services.

As outlined by Stake (2006), three cases were purposefully selected to maximise knowledge construction and synthesis from numerous potential cases of MDTs opportunistically available (Suri, 2011). Cases were selected, drawing from homogenous, criterion, and critical case sampling (Patton,

2002). These sampling strategies were collectively employed to develop a deep and robust analysis from the health system periphery, facilitating logical generalisations (Suri, 2011). This sampling could also be considered a literal replication strategy, with cases sharing common characteristics of interest (Yin, 2009), such as being situated within the one project, across sectors, at the margins of the health system. The literal replication aided drawing deeper conclusions within the cases, with theoretical or analytical generalisation (Yin, 2009) beyond the cases in part based on the premise that the resource-constrained periphery of the system may analytically and practically inform the centre.

The cases were drawn from a four year government funded collaboration (henceforth called the Initiative) between a Vocational Education and Training (VET) provider, a university, and the Health Department, with investigation occurring over the period September 2014 to January 2016. Managed by a Steering Committee from across the agencies and firms involved, the Initiative had three main clinical and teaching services proposed; Wellness Clinics, population health checks, and nurse practitioner (NP)-led primary health care (PHC) clinics. Members of the Initiative were also investigating collaborations with organisations such as tertiary and specialist hospitals, partially driven by a need for sustainability beyond the initial project funding until 2016.

As briefly introduced at the commencement of this chapter, one key decision in this research with major implications for the approach to data analysis was whether to focus on the Initiative as a single program or the multiple cases within it (Stake, 2006; Yin, 2009). The former programmatic approach would result in a single qualitative case study design with multiple embedded 'mini-cases'. This approach provides multiple levels of analysis and potentially a single rich product. However, the research would then be about exploring innovation in the instance of a program. "Each mini-case then will be constrained by its representation of or relationship to the program" (Stake, 2006, p. 6).

Progressing with a true multiple case study research method was decided to retain the intended focus on micro-level analysis, understanding productivity and production in small group innovation. That the cases could be drawn from a single program was both convenient and informative:

But if the study is designed as a qualitative multicase study, then the individual cases should be studied to learn about their self-centering, complexity and situational uniqueness. Thus, each case is to be understood in depth, giving little attention to the quintain... A multicase study of a program is not so much as study of the quintain as it is a study of cases for what they tell us about the quintain. (Stake, 2006, pp. 6-7)

While naming the Initiative could aid methodological rigour and credibility (Gibbert & Ruigrok, 2010), it is referred to as the Initiative to help preserve anonymity. This program anonymity along with presentation of individual case narratives and analysis also helps to provide more focus to the individual cases as the primary units of analysis.

3.6 Instruments of data collection and analysis

This section describes the major data collection and analysis instruments. The data collection techniques were direct non-participant observations in 12 locations, minimally structured interviews with 18 participants, and collection of project and public documents. Team, context and production phenomenon information was collected from sources internal and external to each case and the overall Initiative (Table 4).

In each case, the researcher was an overt observer, not participating in service delivery. However, as outlined previously, the researcher was in a 'close' position, relatively immersed in the culture (Bryman, 2016). This position of trust was afforded the researcher as a health professional familiar with these work settings and with some team members. Observations were detailed in an observation journal and were both descriptive and instrumental. The description included the general context, including the

physical environment and evidence of the organisational climate.

Instrumental data recorded observations seen as pertinent to the phenomena of production and innovation.

Table 4: Key data sources for each case study

Case Study	Observation	Participant codes	Documents
1	- Stakeholder workshop - Clinic facility	- Crisis Accommodation - C1 - Government Finance - F1	- Commissioned NP reports
2	Member settings - VET facility - University - Department of Health Community Health - Shopping centre - Organisation setting	- Government Policy - G1,2 - Local Government - LG1,2 - Nurse Practitioners - NP1-3 - Project Managers - PM1,2 - Residential Facility - R1,2 - Registered Nurse (RN) - N1 - University - U1	- Conference proceedings - Initiative minutes, agenda and associated documents - Public websites and documents related to the specific human service settings and organisations
3	Facilities in: - Crisis accommodation - Local government - Residential care - Social housing - Youth accommodation	- VET Managers– V1,2 - Youth Worker - YW	

Observation in case study 1 was limited to a workshop and the physical setting proposed for the clinic. The proposed NP-led PHC clinic did not commence, being replaced with a community-based outpatient clinic model. Case study 2 observations included the work environments of Steering Committee members, as well as being informed from Initiative locations. Case study 3 observations were of the Wellness Clinic settings and the work environments of the Wellness Clinic stakeholders.

Eighteen people were interviewed once by the researcher in the 18 months following the first two years of implementation. Each of the 18 people was a group member in at least one of the three cases, and also acted as a key informant to the overall context of the Initiative and the involved firms and agencies. This case overlap resulted in seven or eight people being interviewed as group members for each of the three cases from within the 18 participants. The interviews were minimally structured following an initial guide (Appendix 1), and subsequently followed themes identified within the interview in an exploratory manner. The interviews, between 54 and 92

minutes in duration, were audio-recorded and transcribed by the researcher. The initial transcription and multiple subsequent reviews of the audio-recordings and transcripts contributed to the deep immersion of the researcher in the data and facilitated ongoing comparative analysis between the different data sources, as well as the emergent individual case narratives and analyses.

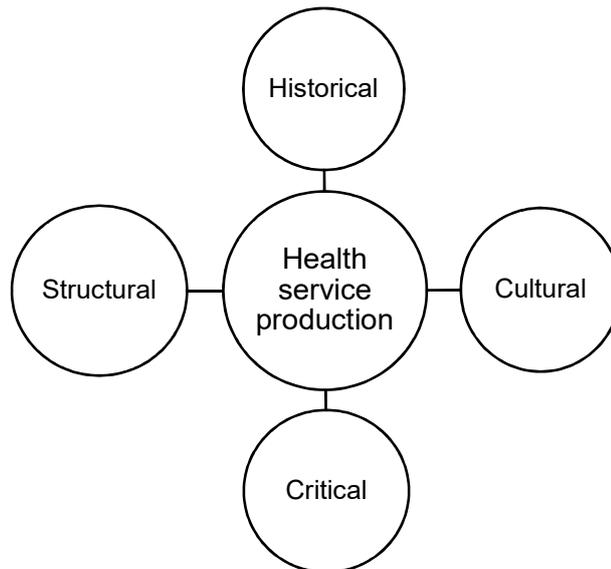
Organisational documents exist in hard and soft copy in public and private domains (Bryman, 2016). The owning agency provided initiative Steering Committee agenda, minutes and associated documents (presented to the researcher as attachments to the agenda or minutes). Government policy participants provided copies of commissioned reports analysing the nurse practitioner role. Publicly available documents such as website material on the organisation and case were also collected, together with any hardcopy or mass media documents such as pamphlets. The quality of each collected document was assessed against the four criteria of authenticity, credibility, representativeness and meaning (Bryman, 2016; Scott, 1990).

3.6.1 Data analysis

In qualitative research, knowledge and theory emerges from the data collection and analysis in inductive fashion (Bryman, 2016). The researcher is acknowledged as the primary instrument in analysis and interpretation of the data collected from interviews and documented observations and reflections. Utilising the multiple perspectives and sources of information, a reasoned narrative account was constructed for each case (Liamputtong, 2009; Stake, 2006), describing and explaining the key information themes in a triangulating fashion (Yin, 2009).

To facilitate viewing production through alternatives to the dominant technical lens, a conceptual framework of C. Wright Mills' sociological imagination was used to provide an initial coding framework to help problematise and defamiliarise the technical theory of production (Figure 3).

Figure 3: Sociological imagination template



Adapted from “Imagining health problems as social issues,” by J. Germov, in J. Germov (Ed.), *Second opinion: An introduction to health sociology* (4th ed., pp. 3-24). South Melbourne, Victoria: Oxford University Press. Copyright 2009 by Oxford University Press. Adapted with permission.

This sociological imagination template has been used in other health care workforce research as a framework of four lenses or perspectives that collectively provide alternative but potentially complementary understandings of social processes (Williams & Lawlis, 2014).

A critical lens means being reflexive or sceptical of the naturalised way or order of things, engaging in systematic doubt about accounts, bringing forth alternative explanations, and demystifying through empirical judgement and presentation of alternatives (Germov, 2009; Willis, 1999). As outlined above in section 3.4, a critical perspective was essential to this research to problematise the dominant technical position on production theory, to aid with deconstruction and reimagining of alternative possibilities and connections.

The relative influence of social structure and individual behaviour provided a social dimension to the research (Germov, 2009). While social interaction has emerged as a relatively recent thread in innovation and entrepreneurship literature, it remains largely absent in production theory. In addition, a historical lens considers patterns and change over time rather than a rigid deterministic theoretical position.

Historical and cultural lenses help to counter criticism of generic management being focused on industrial and Western settings (Wren, 2005). This study was situated in the Western culture but within marginalised and service-oriented settings. Culture as values, beliefs and traditions enables cultural sensitivity and awareness of diversity within and across cultures (Willis, 1999). Culture in this study included intra-societal subcultures of worker types, organisations, health and human services sectors, and the practice of public policy and management. Again, these views provide a counterpoint to prevailing beliefs that production theory is universal and transcends both cultural differences and change over time.

3.6.2 Individual case and cross-case analyses

Analysis of data commenced with individual case studies, followed by combined analysis of the multiple cases. As the research design had an explicit conceptual framework and research questions, a pre-structured individual case outline was developed prior to data collection to provide a shell for data and as a template for case summaries (Miles & Huberman, 1994).

Information from each case was sorted into the descriptive background, contextual information, general team information, and initial categories utilising the sociological imagination template (see Appendices 2-4 for initial categories for each case). Content analysis of each of these initial codes identified themes within each case. These themes were analysed within and across these initial codes to form subsequent codes, which were analysed for connection to form a coherent, reasoned and reasonable narrative account.

A cross-case matrix enables analysis of commonalities and differences between the three cases (Miles & Huberman, 1994). Chapter 7 presents in a series of tables the summarised contents of this cross-case matrix. From each case, data collected from observations, interviews and documents, and the subsequent case findings in narrative and analysis, were scrutinised for material relevant to the initial matrix codes, formed from the production

concepts as presented in the research objectives. This scrutiny was iterative, with data collection from each case study modifying, extending and enriching the initial analysis (Bryman, 2016). Themes and associated concepts retained contextual specificity by noting any boundaries or variation identified from the research or the broader literature. Concept definitions and models were limited to each case, except where aggregation provided clarity without substantial loss of specificity. Further generalisation was in the form of hypothesised theory.

3.6.3 Rigour – credibility, validity and reliability

Case study research as a design offers flexibility, but this comes with additional responsibility for the research methodology to be both credible and rigorous. Case study research has limited codified method and may provide less of a template or recipe that has been tested and critiqued by scholars. Eisenhardt and Graebner (2007) suggest mitigating this challenge through efforts, including detailed and thoughtful research design and rich presentation of findings. Consistent with this suggestion, the preceding sections of this chapter have outlined the research design and justified the presentation of individual case narratives and analysis, as well as cross-case comparison. This section provides a brief introduction to the issue of methodological rigour in case study research, outlining the key actions within the research methodology aimed towards this rigour. The subsequent section outlines the logic behind key decisions made adapting from the original research plan to the emergent research design 'in use'.

Based on analysis of case study research reported in high impact management journals, Gibbert and Ruigrok (2010) concluded three strategies used by high rigour articles. Firstly, those articles extensively addressing rigour provided more examples of concrete actions rather than often token and unsubstantiated claims to have followed a particular tradition. Secondly, the emphasis was placed on confirming the relative strengths of case study research design, that is on construct and internal validity, rather than excessively (and sometimes solely) on external validity or

generalisation. Thirdly, rather than a sanitised methodology, articles report the emergent strategies employed during the dynamic research such as “setbacks and serendipities”, and the logic of decisions made (Gibbert & Ruigrok, 2010, p. 710). The preceding sections of this chapter have described actions concerning the first two of these strategies in a manner consistent with a pragmatist perspective, situating knowledge in action.

Case study research can adopt criteria from positivist and interpretivist traditions, but more rigorous research focusses the concrete actions taken towards ensuring methodological quality (Gibbert & Ruigrok, 2010). Groups of different criteria may address the quality of qualitative research. Guba and Lincoln (1994) proposed historical situatedness, erosion of ignorance, and stimulation to action for research from a critical paradigm. The criteria of authenticity and trustworthiness may assess constructivist research (Guba & Lincoln, 1994; Lincoln, Lynham, & Guba, 2011) with the latter criterion evidenced by strategies addressing key elements approximating quantitative criteria (Bryman, 2016; Liamputtong, 2010). Consistent with Bryman (2016), credibility in this research was enhanced through individual case summaries, confirmability and dependability through an auditing approach to the research process, and transferability by use of multiple cases. As per Gibbert and Ruigrok’s (2010) findings on the approaches taken by more rigorous case study research, this thesis describes more actions to ensure the construct and internal validity. Construct validity is strengthened in this study through the use of multiple data sources where possible (such as interview, documents, and direct observation) to triangulate and enrich the case study narrative, as well as detailing of research method and deviations from the planned process contributing to a chain of evidence (Gibbert & Ruigrok, 2010). Internal validity is reinforced through a clear research framework, matching empirical patterns with previous research, and theory triangulation via the use of multiple perspectives and scholarly fields to guide the research process and interpret findings (Gibbert & Ruigrok, 2010; Yin, 2009). In addition, enhancement of reliability occurs through transparency via documentation of the research process and a case study database; and

external validity or generalisability through the analytical generalisation of empirical findings to theory (Gibbert & Ruigrok, 2010; Yin, 2009).

3.7 Audit of key methodological decisions

As explained above, this section connects the intended methodology with what occurred in the research process. This section helps describe and explain the journey taken, and the key decisions made, leading to the mode of presentation in this thesis. The intention is also to avoid some possible artifice from constructing a seemingly perfectly structured presentation of the qualitative research process instead of exploring the messiness of practice. The section commences with the case selection, followed by the data analysis and subsequent presentation of information.

3.7.1 Intended and actual case selection

Examples of innovation were sought from the health system periphery, preliminarily conceived as the geographical margins, or rural and remote practice. Conceptually, this periphery was then extended to the system margins and interfaces with other sectors, such as aged care, disability services, and other human services. The intention was to explore a sufficient number of cases from the health system periphery to build on innovation theory. The anticipated number of cases was between 3-5 cases as being both congruent with verification/refutation of production to contribute theoretical development to innovation and being practical within a doctoral program.

The Initiative was initially identified as a single possible case. However, a detailed investigation of its suitability demonstrated that the single funding Initiative contained multiple cases within it. As outlined in previous sections, consideration of the Initiative as the research context required deliberation between multiple case study and single embedded case study design. This deliberation resulted in confirming the suitability of the multiple case study research design for answering the research question.

The three cases initially considered were the three different services within the Initiative: the NP-led clinic, the Wellness Clinics, and the population health checks. This focus on the more tangible service delivery seemed consistent with the micro-level analysis intent of the research. The early data collection focused on the first NP-led case study, which was experiencing facility refurbishment delays and impeded by problems with identifying service models. During the early research design, it became evident both that some time was required for the NP-led case study to 'play out', and that the selection of three cases of the service interface denied the valuable, and potentially different, insights from another team (or at least small group) based view; that of the overall Initiative Steering Committee.

While more removed from direct service delivery, conceptually the Steering Committee case was a strong and yet somewhat different illustration of innovation in small group settings. This case turned out to provide, in the researcher's opinion, a useful extension to the settings explored which aided conceptual clarification and theory development. The original third case of the population health checks remained as part of the context but not continued as a standalone case. The information from participants suggested that explicitly studying these population health checks as a fourth case would not provide substantial conceptual insights. The field notes from two observation sessions confirmed this position, while the population health checks still provided both contextual richness and verification of concepts and theory developed in the other three cases.

3.7.2 Data analysis and thesis presentation

Previous methodology sections have outlined the approach to data analysis and how this then informed the thesis presentation. The aim here is to indicate how the data analysis and thesis presentation changed throughout the research program. The thesis presentation starting point is to understand the evolving nature and intent of the research, including topic selection,

personal and professional ambitions of the researcher from the research, followed by the aims of the research.

The topic was the researcher's own, unfunded and without a clear connection to the research programs dominating the Australian health services landscape at the time. The initial plan was to develop the thesis as publications, as there seemed an increasing yet still implicit expectation within academia to present the thesis by publication rather than as a 'door-stop'. Several false starts on various draft articles to fulfil the publication expectation each time left the researcher dissatisfied. While the articles may have fulfilled the program requirements, there was a sense that they were bits 'nibbled' from the edge, lacking the essence of the research story that was unfolding. This sense combined with personal factors in the decision to not publish at stages through the research program, but to carry on the journey to a final whole.

The aim of the research was inherently pragmatic to inform innovative practice. The theoretical development to inform practice could only come from the whole, so the whole thesis was the starting point. It became increasingly clear that otherwise, this was not legitimate multiple case study research, but a sequential series of single case studies. Pieces of that story could be told, but only in hindsight following completion of the study. Further publication remains intended by the researcher from this research program to disseminate to others and inform theory and practice, just not from within it.

The researcher's emergent understanding of this qualitative multiple case study also influenced data sources and data analysis. The initial intention was to collect measures of productivity, through quantities and costs of outputs and inputs to the three cases. While quantitative data collection can undoubtedly contribute to case study design, it became rapidly apparent that any attention to productivity as a measurement was outside the focus and scope of the intended research, and potentially detrimental to attempts at innovation theory building. The realisation came that productivity has enough attention as a technical measure; attention that was not wholly consistent

with the practical intent of this research, which was to explore productivity and the theory of production to build innovation theory.

In relation to data analysis, the initial research plan was to analyse the data based primarily on the research objectives. The research worldview and theoretical perspective were the same at the beginning as at the end of the study, but arguably initially more parody-like. The researcher began to be immersed in the first NP-led case study, and recognise the conceptual complexity, and the value of the individual case story, with two distinct views emerging of the case purpose. The researcher was also clarifying their understanding of the multiple case study design, during which the position was fundamentally shifting from one more aligned with Yin to one more aligned with Stake. With that shift, a move from an objective post-positivist position 'play-acting' at another worldview, to better understanding the value of individual case narrative. With this methodological shift, the individual case findings grew in their contribution to the research interpretation relative to the multiple case analysis.

3.8 Ethical approval

Curtin University Human Research and Ethics Committee approval was obtained before the commencement of data collection (Approval SPH-54-2014), with approval from the vocational education and training (VET) agency that owned the Initiative. All interview participants were provided with an information sheet and signed a written informed consent form (Appendices 5 and 6). Participants were able to withdraw at any time. Observations were of the general work environment and worker interactions of settings related to the Initiative.

There was no collection of patient information in the research. No patient identifying details were divulged in interviews, present in the documentation, nor recorded in notations.

3.9 Summary of methodology

This chapter has detailed the methodology used in this qualitative health services research, with the researcher situated within the study as the primary analytical instrument. The multiple case study research design developed within a framework of knowledge claims, theoretical perspectives, research method, and techniques for data collection, analysis and knowledge dissemination. Each of these framework elements contributed to an overall coherent research design addressing the question of the meaning of productivity and production in small group innovation.

A classical pragmatist epistemology focused attention to 'doing', ensuring theory remained closely approximated to the workers and their setting and aimed at influencing practice. Critical management studies contributed a somewhat more radical critique to problematise the existing concepts such as productivity and dominant neoclassical theory of production. Open systems thinking helped 'tether' the researcher to constructive and practical theoretical development.

This chapter explained the key decision to commence and then continue to pursue a multiple case study design and juxtaposed with the option of undertaking an embedded case study design. Retaining the multiple case study method was crucial to maintaining the micro-level (group level) analysis target. The selection of cases was purposefully based on the premise of an innovation diffusion gradient from the periphery to the centre of the health system, and also potentially across to other human services systems.

The research objectives guided minimally structured interview questions and focused observations as well as readings of documents. Reasoned narrative and analysis of each case developed from using multiple data sources. The sociological imagination template provided orderly discipline to deconstructing data before reimagining through narrative account and analysis. This research was not intended as a negative critique dismantling theory; it was a critique with the purpose of building and developing

innovation theory. The original data, as well as these narratives and analyses as secondary data, were fused to form a cross-case analysis.

Strategies used to strengthen the credibility of the research were outlined, including an audit of key decision points that occurred during the research process. Noteworthy among these was the decision to produce the research findings within a traditional thesis. This dissemination strategy was both pragmatic and ensured the research remained true to the multiple case study design, rather than potentially forcing early closure of theoretical development through publication of partially conceived findings.

The next three chapters present the individual case study findings. Each chapter provides a narrative account of one case, followed by an analysis of the individual case findings based on the narrative, research aims and objectives, and with connection to extant literature.

CHAPTER 4

Case study 1: Nurse practitioner-led primary health care service

A failure to launch: Management and power in primary health care innovation

The findings for this case study commence with a basic contextual description, including an initial introduction to the project vision. Two distinct narratives formed from the two perspectives that emerged during the thematic analysis follow this introduction. These two distinctive accounts revealed the project group through different lenses as:

1. A rational project management team.
2. A coalition attempting to set the nurse practitioner role as an issue on the political agenda.

Superficially, the project description seemed relatively straightforward. A VET agency collaborating with the government health agency and a university to establish and implement a health practice, using time-limited funds for clinical training provided by the Australian Government's Health Workforce Australia. The project evolved as an opportunity to use government innovation funding for workforce training and development to provide a PHC service to people experiencing homelessness or at risk of homelessness in an inner-city, suburban area, who were assumed to have unmet health care needs. Illustrating the PHC service could lead to the development of successful models, with the prospect of student clinical placement and research within the innovative models.

4.1 A project team with a shared vision

The vision appeared clear and shared amongst the project team. Minutes from the initial team meeting referred to an NP-led multi-disciplinary health clinic aimed at meeting community needs, including cohorts that traditionally do not access GP networks or have no access to bulk-billed GP services, such as people who are homeless, younger and older people, and people

earning a low income. However, the service was also intended as a showcase to increase the public's confidence in NPs.

The targeting of services was central to the vision, filling service gaps for population cohorts with complex needs who were not accessing health services. These were services for “unattached people, or homeless people, in another way, and seeing if we could take health services to them” (U1). The vision was for services aimed towards “vulnerable people, really trying to focus on people who wouldn't access services... a community hub, where people came for health care. That was very accessible, kind of like a town square. You know, just people who are disenfranchised communities” (G1).

A collaborative and multidisciplinary PHC model was intended in the vision: a health community where physios [physiotherapists] would come along and we would be able to have dietitians and those who were studying to do it. So in a collaborative way. So you were more or less looking after the patient from the whole aspect. (G2)

This health service would be both a clinical training opportunity and a showcase of new PHC services, “providing training for roles that are in that primary care space, the new workforce roles, and also demonstrating to the community what other health professionals do” (G1).

While the three-year project started with this vision, rational and practical decisions influenced the project implementation as well as actors' interests and interpretations. Two lenses provide different perspectives on the production of health services in this case study; as the rational implementation of a PHC project, and as a political strategy by an NP coalition to promote and progress the NP role. Through the rational project management lens, the innovation could be considered outcome-oriented, focused on achieving project aims, including vision and objectives. Through the second political lens, it was the health service production input that was specified, namely the NP role itself. This chapter chronicles each of these

two perspectives in turn. Table 5 outlines the structure of the narrative for each perspective.

4.2 Rational project management team – an output approach

This section presents the health service production findings from a project management perspective, following the sequential stages of project planning, project implementation and project analysis.

4.2.1 Project planning

Early project preparation by the project team was comprehensive and extensively detailed in meeting minutes and associated documents. The planning was consistent with a traditional 'waterfall' approach to project management. At the second meeting of the team one month into the project, a project governance framework was reported as well as stakeholder analysis, a communication plan, and a project plan. Extensive consultation occurred early on with stakeholders, including government agency and community firms. This consultation included identifying marginalised populations that might be suited to the project.

An NP-led clinic was the starting point for the project; meanwhile, stakeholders were cautioning that it would be difficult to recruit NPs. Stakeholders proposed a multidisciplinary clinic model, and the clinic was to include a training model with allied health professionals and students working together conducting assessments, care and education. Stakeholders suggested models of care considered partially or wholly consistent with a PHC model.

Addressing financial sustainability beyond the three-year project period was an early identified priority for action. Divided opinions in this early planning phase included partnering with a hospital, with opposition by some as too closely aligning the clinic to the acute sector.

Table 5: Narrative structure of the two perspectives

Rational Project Management Team	Nurse Practitioner Coalition
Shared vision – multidisciplinary PHC clinic	Shared vision – community-based PHC NP role
<ul style="list-style-type: none"> • Output model – health service • Outcome model – project goal 	<ul style="list-style-type: none"> • Input agenda – health worker/resource
<i>Project planning</i>	<i>Drivers</i>
<ul style="list-style-type: none"> • Waterfall project management • Extensive consultation • Alternative service models • Early consideration of financial sustainability beyond project term • Extensive project risks identified, with no analysis or mitigation • Review of service models • An agreed feasible clinic model • Physical facility planning 	<ul style="list-style-type: none"> • Historical development of the NP role in Australia • Demonstrating NP role capability in PHC – a showcase • Introducing PHC into the NP education curriculum
	<i>Identity, power and control in the NP Coalition</i>
<i>Project implementation</i>	<i>Socio-cultural challenges to the NP agenda</i>
<ul style="list-style-type: none"> • Disconnected from original vision • Retained PHC illusion, not reality • No assessment needs/service gaps • Connection to hospital services • Finally a community-based physical facility for a hospital outpatient clinic • Late multidisciplinary considerations • Research potential compromised 	<ul style="list-style-type: none"> • Medical dominance • Medical task substitution rather than a unique contribution • NP role immaturity in WA incl limited PHC, issues scope of practice • Systemic power imbalance in NP/doctor relationships • Poor reward for entrepreneurship and risk • Relationships workers and patients key to the NP role • High stakeholder engagement increases complexity; introduce competing agendas requiring resolution • Complementary or hierarchical doctor relationships
<i>Project analysis</i>	Jungle of confused NP models – no common meaning
<ul style="list-style-type: none"> • Poor leadership, low action • Policy/system changes required • Uneven power, unable effect change • Health service owned by VET agency • Clinic survival over project value • Mimicry rather than genuine PHC • Showcasing innovation limited without embedding of a research plan 	<ul style="list-style-type: none"> • Medical model, teaching models, business models, sustainable finance models, employment models, corporate or clinical governance models, but particularly service delivery models • Need to embed in NP education, develop from international experience
	NP role potential

In this first month, the project planning activities undertaken included a desktop review of the literature associated with PHC reform, NP-led clinics, and inter-disciplinary approaches to care. There were investigation of other federal and state government initiatives and their grant funding, in-depth consultations with Steering Committee members and other key stakeholders, and other local student-training health clinics. A detailed list of considerations for setting up an NP-led clinic provided to the project team included: a PHC model of care; a legal entity accountable for clinical governance and Medicare Benefit Schedule (MBS) billing; the issue of clinic accreditation; and the recruitment of appropriate NPs specialising in PHC, with skills in chronic disease management and health promotion. Risks documented from stakeholders were extensive, but there was no evidence of risk analysis or planning for risk mitigation at this early stage.

Project team planning still looked to be comprehensive and seemed on track, with the planned next steps, including consultation with stakeholders on the proposed model, risk analysis, action plan, and implementation. By three months into the project, there was an agreed feasible model to implement the 'Chronic Disease Health Management Clinic'. One month later it was agreed to proceed as a hub with satellite centres, a name was agreed and marketing planned, with implementation to proceed under a group chaired by a GP.

Consideration of physical facility requirements was from the very beginning of the project, and in some documentation, one could be excused for thinking the physical clinic was the new model. There were reports within three months of project commencement of clinic completion delays due to asbestos removal. Nonetheless, the implementation plan and timelines for the forthcoming year were presented and discussed by the project team. The clinic was to proceed.

4.2.2 Implementation disconnected from the vision

Over the subsequent two years, project implementation became disconnected, firstly from the initial project vision, and then again from the

revised vision of quality health care services to those in need and supporting the development of our future nurses and health professionals. This disconnect was evident as any references to NP-led, multidisciplinary nature, and PHC were now absent in team documentation. The implementation retaining the illusion but not the reality of the initial vision. For example, project targeting appeared compromised with the limited assessment of needs and service gaps as follows: “The one thing that was never really done, during my involvement at least, was a needs analysis. A good needs analysis of the community” (NP2).

Two years into the project, there was agreement that the eventual long-term goal was to provide comprehensive family practice and chronic care for vulnerable clients. This long-term goal was inconsistent with the short-term project direction, however, as discussion included collaborating with specialist services such as the tertiary hospitals for mentoring and referral, but also to identify patient cohorts to divert from hospital services:

we’re just an offshoot of [hospital] when those clinics are on. So all the patient management happens through the records, gets entered into their database, they log on to [hospital] all there, the consultants come over, the immunology clinic they bring their nursing team. (PM1)

The period from year two to year three consolidated this move away from NP-led PHC to a community-based physical facility available for hospital outpatient services, to use with their hospital staff. Project clinical governance concerns also had the effect of changing both the input and output of the service; from autonomous NP delivered health care to a registered nurse (RN) providing a frontline connection to health services; as more of a navigation type service:

Recently, the service has moved from providing health services to providing a link between the clients and a health service. So it’s become more of a social model than a health model. (U1)

The original vision and planning for NP-led multidisciplinary service in implementation had already narrowed to focus on solely NP services. The service was now changed further to a hospital outpatient clinic delivered in the community by registered nursing and hospital staff. Curiously, despite the original vision and planning incorporating multidisciplinary service and interprofessional education, this third year saw the first evidence in the project of meaningful engagement with multidisciplinary options as adding significant value, including exploring the addition of allied health clinical services and teaching. Discussions were to commence with allied health policy staff of the government health agency regarding the inclusion of an allied health model. However, this project had already lost the intended enhanced role focus, “particularly around nurse practitioners but actually enhanced roles of all kind, allied health particularly” (G1).

Generating research evidence for innovative models was looking ever more distant with the university not provided with the project funds to undertake the research. However, there was still some hope of generating some health service of value that could be worth researching in the future:

They come in, they can use it, but they must participate in the multidisciplinary team, use the standard medical records... if you wanted to do research, we needed records of everyone who had been in there because how are we going to measure health outcomes and the impact of doing this model. (G1)

4.2.3 Project analysis – survival and mimicry

A range of social and cultural factors contributed to the project’s apparent lack of success, as defined by the limited achievement of the original project objectives. These factors included perceptions of project leadership, team dynamics, and the power of project team members to effect change. The leadership of the health clinic project was perceived as poor by one NP, clearly frustrated by choices of funding, presumably including expenditure on physical facilities rather than NPs: “Really poor leadership and poor communication” (NP1). This frustration extended to feeling that project

activity was not purposive, with many meetings and little evidence of action. Another NP also had concerns with inaction but attributed the issues to specific individuals as “players” (NP3).

While participants applauded individual and team endeavour at times, there was a sense that contextual factors such as policy or system change were necessary: “We were still trying to fit what was a different model into one that we have to do it this way. You have to move that boundary that way, up and down” (G2).

There was some frustration for project members on their ability to understand and affect change as “we weren’t real collaborators in one respect. We weren’t in the funding mix, we weren’t really in the agreement... our thoughts were heard but there was no power to make things happen” (G2). This frustration resonated with a consistent undercurrent amongst non-VET agency participants about the clinical training model. The reality of a health clinic providing student clinical placements was different from what participants imagined could have been essentially student-led clinics, led by NP candidates as well as registered nursing and allied health students.

Both governance and ownership of the health service remained difficult issues across the project, as while a student-led clinic was consistent with university administration of the project, a health clinic was not consistent with VET agency ownership. This issue was not fully explored within the project. An implementation working party was to develop the service model and a model of care, then transition to form the clinical governance board for the health clinic. It was two and a half years into the project before consideration of the feasibility of setting up a separate entity for future operational and funding opportunities. All members of the project team reportedly thought this option worth investigating and noted a need to look at clinical governance models, licensing and accrediting. However, this was not further pursued.

Clinic survival seemed increasing prioritised over an assessment of the project value. Without adequate analysis of needs and service gaps, the health service arguably:

became a solution in search of a problem. I'm not saying that what they do or what they set out to do was not worthwhile. I'm just saying that it was located in a very affluent suburb, GPs around, child health centre nearby. (NP2)

The time-limited project funding seemed to be driving health service choices as sustainability was more crucial than determining value. The introduction of an additional project manager allowed for review of the project scope. This additional manager identified some sustainable alternatives, including forming a separate not-for-profit legal entity for the longer term. However, the project team did not "want to go down that route so we palmed off that, then we started some discussion with [a hospital] and managed to get a few of the clinics started out through there, and then we started with some discussions with [another hospital]" (PM2).

There was suspicion amongst some participants about whether the project group were focussing on survival, rather than ensuring there was a service gap to fill, a perceived benefit or value from the service: "Who's looking at the patient's needs? I just keep thinking that, you know? Are we duplicating services?" (NP2).

It became clear that the physical service could mimic, without genuinely retaining, the PHC model. The health service production maintained an input structure of being nurse-, or potentially even allied health-led. However, the project ended up transforming the service production output from that of a PHC ideology to a community-based hospital outpatient clinic. The physical community-based clinic appearance of the service remained faithful to the vision, but the product, the service delivered, was fundamentally changed:

I mean, outpatient clinics are based in hospitals and from what I can gather the idea was to keep people away from hospitals, to

keep them out from that system. Did they really need to go back to an outpatients department? (G2)

Some aspects of the PHC model, including a whole-person perspective, remained visible. However, even these appeared an incidental by-product to providing expanded clinical training experiences, rather than a true health service purpose:

And that's why the diabetic clinic is so good. Because literally the patients come in for a retinopathy screen. When they go in to [hospital] all they get is their photo taken of their eye. Whereas what we've done is, we've incorporated this whole as part of the initial client interview, a whole health history, with a health screening, with their eye drops, with all of that. (PM1)

Any opportunities to generate research showcasing the value of the innovation also seemed lost. The inclusion of future research was insufficient in the initial project design and planning: "But what I was worried about and I think this has come to fruition, is we weren't collecting the right data from the beginning" (G1).

Ultimately, the health clinic was now a community-based hospital outpatient facility. If including students in the health service process, the project provided free physical facilities for hospital staff to deliver hospital outpatient services. The project, to deliver an NP-led multidisciplinary PHC service, had failed.

4.3 Nurse practitioner coalition – an input agenda

As an alternative lens to a rational project to implement a PHC service, this innovation can also be viewed as a strategic political endeavour to promote and progress the NP role. Unlike the project aiming for outputs or outcomes, this political perspective has a focus on specifying a production input (i.e. the human resource) but also highlights how political, social and cultural forces can influence health service production. With these forces enacted, in this

case, through the existence of an NP coalition. This section provides a background outlining how the NP role emerged yet failed to develop throughout the project, before proceeding to the main narrative themes. These themes comprise NP coalition drivers; identity, power and control within the NP coalition; socio-cultural challenges to the NP agenda, a jungle of models; and the NP role potential.

The NP role was initially fundamental to this entire Initiative, particularly for the university and government nursing policy workers. Advancing the NP role, through training options in PHC, demonstration and research evidence, certainly seemed the primary attraction for university involvement. As well as establishing the NP-led clinic, a crucial initial outcome was increasing public confidence in NPs.

By 10 months into the project, the emphasis had shifted from a new NP role to further understanding the complex issue of community-based NP designation. The NP clinic model was now a secondary project within the overall Initiative and proposed to emerge from feedback and data from the Wellness Clinics project. Project data sources suggest many reasons for this reduced attention to the NP role, including capital works delays to the physical facility, problems with GP collaboration attempts, and complexities associated with NP employment to provide health services through a VET agency.

The difficulties with NP models were evident in all of the written reports provided by government participants. However, ultimately for a coalition of project actors including the NPs themselves, the government nursing policy officers, and the university representative, the project was the NP role, to try and position “some NPs in the community, in primary care, let’s try and fill some of those gaps. And so that’s what we looked at. Some of these vulnerable, you know paediatrics, refugee, and that’s kind of where we were dabbling” (NP1).

'Model-defining' problems plagued the potential NP service throughout the project. In just one set of team minutes, reference was made to establishing an NP student model as part of the Initiative; integrating NP students into planning for models of care; and NP business models. At 18 months into the project, off-site NP clinics were commencing in partnering agencies while a suitable model still being developed. Collaborative arrangements with GPs and how to involve students in the service was a continuing issue. After more than two years there was still ongoing project discussion on how to progress the NP service model, but there were now discussions with hospitals about the possibility of as many as three specialty outreach clinics (i.e. hospital outpatient clinics located in the community), and opportunities to develop some aged care models on the original physical site.

The NP strategy undoubtedly lost contact with the original PHC mission of the NP clinic. However, this was relatively subsidiary for some of the NP coalition to the priority of progressing the NP role, as:

we could actually be doing lots more in terms of there are so many outpatients departments and so many hospitals that have been flooded, why don't we see what other opportunities there are and bring, offload, some of their work to us. So that's when we started to look at the nurse practitioner models... But it kind of didn't eventuate. It sort of all was put on hold. (NP1)

The NP role had not attained the political agenda through this project, for now.

4.3.1 Drivers for the NP coalition

The drivers for the NP coalition to be involved in this project included the historical development of the NP role in Australia, particularly within the public sector; an opportunity to showcase the NP role; and to introduce PHC into the NP education curriculum.

Government-commissioned Australian reports, including those in the public domain, shared by participants during the research stated similar findings. In relation to public sector NPs, there was typical action by individual nurses, their managers, as well as governments: “Typically, individual nurses make a decision that they want to become a nurse practitioner, obtain the necessary qualifications and experience, then start advocating for an organisation, usually their current employer, to create a nurse practitioner position for them” (Health agency internal report). It required individual and collective action to place the NP role on the agency or political agenda:

I meanwhile, was having the same issues with my nurse practitioner position at my hospital...and she was looking at new opportunities at [hospital] to look at different models of care because of the new hospital build and her role was community ambulatory services, things like that ...so she started to engage with [Initiative] and looked at opportunities for [hospital] to try out some different models there. So kind of had all these interlinking things going on. (NP3)

Further, initial project planning was to grow the NP role in the PHC space as a demonstration “to show what we were capable of in a PHC environment to get the community confidence” (G1). This opportunity could showcase the NP role as a genuine PHC alternative: “Despite all these glorious things about primary care and GPs being the only people that can provide it. They’re not providing it very well. Because it’s all a funding mechanism now. It’s not about knowing your patients that well” (G2).

Providing NP clinical training in PHC also had the potential to shift NP education curriculum towards a PHC philosophy, and hence help grow the future NP practice in the community sector:

providing them with a clinic that would give them a primary health care focus. While you can find a lot of placements for nurse practitioners in the acute sector, the movement has to be to primary health, looking after the chronic diseases and so forth. (U1)

4.3.2 Identity, power and control in the NP coalition

The low priority to this NP agenda from the funding agency hampered the NP role coalition. The funding agency “didn’t care whether we had nurse practitioner or not. We did” (G1), and health systems would already be funding them “if nurse practitioners were in an integral part of the health care of the new millennium” (NP2). The lack of funding priority to the NP role innovation meant the broader project team felt pressure to provide an alternative service, rather than waste precious resource chasing a sustainable form for their:

original vision was to run nurse practitioners, with an income. When that wasn’t sourced, one of things I said, and some other people on the committee, you’ve got to get patients through this thing. We can’t have a clinic sitting here without, a multimillion-dollar investment from the Australian Government, without any patients coming through, (U1)

The nursing profession remained the ‘home team’ for NPs irrespective of employment by VET, university teaching or research, human service settings, or traditional health services. Productivity was understood by NPs as through an increased number of patient service events, or nursing-sensitive outcomes, and never discussed in relation to teaching, research, or broader outcomes of human service firms such as education, housing or employment. Quality remained a theme, but more concerning the scope of practice than the health service outcome.

An NP coalition coalesced formed from members of the nursing ‘home team’. ‘Once a nurse, always a nurse’, all participants with a nursing background presented with a strong nursing identity; these were not people wishing to be ‘mini-doctors’. As found with NPs in other parts of Australia, what “also stood out was their strong identification with the nursing profession – these are not health professionals who desire to be doctors or see themselves as working in that way” (Health agency internal report). However, the nursing home team was also pragmatic, collegial and respectful of other colleagues, particularly

medical practitioners. While there was close involvement initially, in what was a form of supervision, this often changed over time: “Most nurse practitioners reported that as their working relationships developed over time and trust was established this became less necessary” (Health agency internal report).

The NP coalition formed from the nursing ‘home team’, and so were its key networks. The health policy staff saw this nursing networking as critical their policy work, providing contacts to people and information: “Yeah so policies and links to nurse practitioners who were providing, could provide the clinical experience that they were wanting to set up” (G2). These networks included nursing academia. Two years into the project, discussions recognised a need to progress the notion of an academic practice for NPs, requiring NPs within the service to be university associates, the possibility of some scholarships to support development of a professional doctorate for NPs, and support for the engagement of an academic to develop the teaching and research agenda.

For some participants, there was a perceived lack of a coalition leader to unify the nursing team: “I don’t think there was one person really in charge with a clear vision and I think this is why it has fallen over. Or not yet reached, achieved, its potential despite having a lot of financial input” (NP1).

4.3.3 Socio-cultural challenges to the NP agenda

There were social and cultural challenges to the NP agenda. Medical dominance, a poor reward for entrepreneurship and risk, and cultural incompatibility between firms, agencies and sectors, presented as key cultural challenges to the NP coalition. Participant experience suggested that industriousness, innovation and risk were not encouraged or as well rewarded as in other parts of Australia or internationally. Cultural incompatibility between sectors (such as health service, human service, VET and university education) was emphasised, including; a focus on student throughput; and the social welfare model in non-government firms versus the health care model.

Medical dominance was a persistent health service theme, with nurses as a handmaiden to medical practitioners: “The big problem for nursing is its still ingrained that we’re subservient to medicine. As a result of that, they will all see themselves as an employee of medicine practice, not as partners” (G1). The medical dominance theme also resonated with task substitution, and a limited preparedness to take on reasonable risk:

I found the nursing culture to be very subservient and still very much like ‘oh I don’t do this’, and you know, not as willing to be up skilled and not as willing to be a little bit more autonomous or, you know, try new things and stuff. Cos I could have taught every nurse there how to draw blood in about three minutes, its actually not difficult at all, but for some reason it had this mystique when it’s just technical skill. It doesn’t, you don’t have to like do advanced problem-solving. (NP2)

Australian reports provided by participants noted the need to shift the almost 50-year NP conversation from medical and task substitution to focus on its unique contributions: “It may be time to stop comparing doctors and nurses in this way” (Masso & Thompson, 2014, p. 42), and focus on outcomes that are more sensitive to the nurse practitioner role. For example, how nurse practitioners improve coordination and reduce fragmentation of care (Health agency internal report) (Masso & Thompson, 2014).

The NP role immaturity in WA was evident and repeatedly addressed through reference to technical limitations, issues with the scope of practice, as well as collaboration limitations. For example, the NP role had developed in WA as a specialised role in tertiary hospitals, so:

those people would not be able to go into the community and start looking in the ears and doing pap smears, and you know, all the other things that you do in the community. So there wasn’t a very good match between the skill set available among the NPs in the community and primary care. (NP2)

Rural and remote NPs were described as closest in terms of autonomy, “a jack of all trades because they have to be because they have whatever comes in the door” (NP2), but more focused on acute minor injury than population health:

I was worried about the level of nurse practitioner competence because I do think there’s an issue there. Not the day-to-day skills, but actually the fundamental biology, fundamental physiology, those skills. Now I’m being really harsh about my own profession, but I do think there’s a problem. (G1)

An NP trying to bridge that competence gap was sometimes ‘called out’ by NP peers as working outside ‘scope of practice’:

and then you have some NPs that kind of reinvent themselves, so they’ll say well I’m doing chronic disease even though they used to do haematology or intensive care. So there is some movement that is in scope of practice it is not always, safe, I guess. (NP2)

Efforts to form genuine collaboration or partnerships with medical practitioners without resorting to formalised medical leadership seemed to struggle, and:

it might be before its time to say nurse practitioners would be able to do it, I don’t think it’s ever without medicine, it’s a team-based environment. But I did think one would be able to reduce having a lead, I was trying to avoid the fact that having a doctor to lead the team... So I thought the nurse practitioners would have the maturity to do that. They don’t. As a part of what we are calling primary care/family practice/rural and remote nurse practitioner I thought that kind of model, because that’s what they are, generalists, I thought they might be able to do that, and the evolution of them is not where I thought it was. So I underestimated that. (G1)

So-called collaborative models attempted between NP and GP seemed to be supervisory more than peer-based learning, and collaboration expectations

unclear at a system level. There were substantial efforts to involve GPs directly through direct referral and more interconnected arrangements, but none succeeded: “We made so many phone calls about, you know to GPs, to see if there were a couple of GPs in the local area who would come on board and who would bulk bill for us but no one would” (NP1). The lack of GP support for the targeted NP role resulted in basic navigation arrangements providing informal referral advice to clients, where “I would write a letter to the GP and then give that letter, and then put it in an envelope and give it to the resident to take to the GP” (NP1). This lack of support limited full use of the NP capability, and limited growth in developing into a PHC role rather than a more restricted navigation model that underutilised the NP potential scope of practice.

How the NP role had evolved in WA created individual and system constraints to NP entrepreneurship, as they:

have only ever practised in, in that silo of a hospital. So they haven't actually stepped back and gone, ooh, if I did that and we did that we could make a different model of care. And so that's where [the Initiative] people I think will be going, they weren't entrepreneurial enough or they could just couldn't think outside, because they've only ever been doing the same way. (G2)

This risk was repeatedly reinforced: “And that's a big move for someone to go from a very secure income to taking the gamble. I mean, personally would I do it? Nup” (PM1). However, with perseverance or repeat attempts, the NP role could still succeed: “Its timing, so hopefully someone may try it again at some other time and it may just pick up and work” (G2).

Amongst social factors influencing the NP agenda, relationships with other workers as part of a well-functioning team, the community as well as patients, remained important; “through shared experiences of patient care...most nurse practitioners achieved this by working with a range of other government and non-government service providers and by being out and about in the community and visible” (Health agency internal report). Key

stakeholders and potential future partners were identified early on and shared their thoughts on the potential NP model. While high on engagement, this consultation also created a high level of complexity, including competing agendas between NPs and GPs, aged care facilities, and other partner firms. As well as the critical service relationships involving GP collaboration, and with other health professionals, key relationships were identified with academia as a source of power, and within the NP community itself, as well as other local service providers.

Participant experience of collaborative forms of NP service delivery varied, with different amounts of interaction, coordination around tasks, and sense of hierarchical power relations: “No, there’s no appointments. So the sessions I do it’s all based on walk-ins, so I mean sometimes it is kind of a skill-based thing” (NP2). Some experiences provided for daily, close and coordinated team-based delivery: “The doctor will do more continuing appointments, medication refills and more of the quick stuff and I’ll do more of the comprehensive assessments and I’ll see generally the new patients first, and then the GP might do some follow-up” (NP2). Others focused more on the collaborative relationship between GP and NP as a form of clinical peer supervision of an autonomous practitioner:

When you see that working, you will see the medical officer referring to the nurse practitioner within scope and the nurse practitioner referring the, the doctor. And of course, both of those professionals referring to allied health, because sometimes you don’t see that happening. We have examples of that in South Australia, and the ACT [Australian Capital Territory]. So it can be done, but its bloody hard work to make it happen. (U1)

There were also more hierarchical working relationships evident when the focus was on GP task substitution, because “you could easily take the view that having a nurse practitioner will take work away from me because there will be less of the patient to see” (U1).

4.3.4 Lost in the NP model jungle

There were substantial difficulties in understanding, agreeing, operationalising and communicating the potential NP role. Three months into the project, NP clinics were a major focus of activity planning and implementation. However, there was a postponement of discussion on generating NP income until after the establishment of both the model of care and business model. These models were never established. Flexible NP employment pools, registering with MBS, bulk billing processes, and certification requirements to use electronic records, were all planned for the second year of the project. This point seemed the high watermark for the NP role potential in this project, before becoming a secondary or absent concern for the Initiative.

Significantly there was a jungle of conflicted NP 'models' introduced and communicated throughout the project, without necessarily shared meaning. These models included the medical model, teaching models, business and finance models, and employment models. Most commonly, there was the perennial favourite of 'service delivery model'. The definition of service delivery model varied between a catch-all phrase for the health service production, down to very discreet and often technical aspects of the interaction between the NP and patient.

For example, there were confused, confusing and often pejorative interpretations of 'medical models' of service delivery. All NP participants highlighted the medical model, "cos at the moment we are still a real medical model for the nurse practitioner movement in WA" (NP1). These references seemed to fuse service output based on biomedical model of health (as focused on biological aspects of human illness, and practised through disease diagnosis and cure), with the service input design of doctor-led care; "totally medical driven, doctors only, you know, we put a few students through but it was a complete waste of time, it was a complete medical model" (NP3):

I think they were still thinking that about different models and how the different models would work, and I think there was a concern that the nurse practitioners that remain kind of a nursing driven thing and not be a medical thing or a GP replacement. (NP2)

There was a sense that the NP service delivery model had to develop 'on the fly'. This dynamic development was clinical practice and service delivery emerging as:

we basically just started a clinic, just as a bit of an ad hoc, let's just see what happens. We started it without, we got MBS and PBS [Pharmaceutical Benefits Scheme] approval, but there were so many things we didn't have. We couldn't run it properly, we couldn't work within our scope, we thought let's start this at a really low level, without prescribing, without pathology, we'll scope it out properly, so we did. (NP3)

The development included providing education on what an NP could do, as the NP attended to a facility or clinic "and said this is the service we provide. We're nurse practitioners and we can see and treat certain things and then if something's out of our scope we can refer you on to GP, hospital, whoever else" (NP1).

There was having the service delivery model evolve based on patient needs, as well as grow with rising demand from "just a walk-in service. Then we developed, had an appointment-based system as well as walk in so if someone was worried about their baby breathing fast or being febrile or whatever they were welcome to come in" (NP1). The NPs also had to manage the practical and technical misunderstandings of internal and external stakeholders about the NP role and service capacity, some "had a very distorted view of what a nurse practitioner was...He just thought rightly or wrongly that we could come in and do whatever we like, could prescribe whatever we wanted, could send people off for tests" (NP3).

Interestingly, no NP participant made detailed reference to service delivery through NP students (i.e. NP candidates) or nursing students. After one year, the project team was working to finalise the NP designation, 'collaboration model' with GPs, and clinical model. A proposal included a simple teaching model within the clinic model, of NP students undertaking a clinical placement with supervision on site by university's course coordinator. There was no teaching innovation such as a student-led clinic, or including inter-professional student-led service delivery.

The physical facility was not immune to the model jungle. In relation to the physical NP health clinic, the proposed service delivery model seemed clear on dimensions including input, targets, service types, quality standards and GP collaboration. Sources made reference to the collaborating GPs own innovative model of health care, but also the facility's clinical model, operational model and business model.

Corporate and clinical governance models also contributed to the model jungle. These governance models were confounding for project members across a number of dimensions, including ownership of the service and records. The corporate governance and ownership of the NP role and hence NP services were acknowledged issues, with VET agency ownership:

Was very difficult to, to get started. Well we didn't get it started. We had a nurse practitioner for, we employed a nurse practitioner for probably about 12-18 months I think. But it was about the ownership of the service and all of those sorts of things that were just a real struggle. And until someone was going to own it, and our [VET agency] core business is not delivery of services. (PM1)

In the third year, project members made efforts to resolve this issue with the governance model by proposing formal relationships with the university to provide NP services. This university-governed approach was to include the university providing clinical governance including ownership of the medical records, consultancy services and NP scholarship. However, the NP model

was collapsing even as efforts to progress the NP model within the facility further persisted:

you take a little bit of the lid off it was just way too much and too unsafe for myself alone to be trying to manage this when it's such a multidisciplinary thing. And you absolutely have to have clinical governance. And that's the problem there was no one medically who was overseeing it... it's important that we have mentorship programs. That's how you're going to build nurse practitioners. By having medical practitioners help train our nurse practitioners.

(NP1)

Confusion between the governance model and employment, business and funding models was also apparent. Reference in documents and interviews included NP employment models, with NPs needing to report through the VET agency for administrative purposes. NP job positions were created, and interviews of NPs for an employment pool occurred 18 months after project commencement. However, any alternative employment options for NPs were still dependent on the model of care. What seemed evident was that NP employment was the only recourse without identifiable and viable private business models and funding models:

tried to investigate quite a number of different models but just, it always came down to, who was going to own the patient record. At the end of the day, that was the crux of it, and unless we had private nurse practitioners, no one was prepared to take that on board. The problem with having a private nurse practitioner was that, they, it was the income generation and that guarantee of clients. (PM1)

Corporate and clinical governance were inter-related, often expressed as ownership of patient records, but trying to understand legal characteristics, including ownership of all aspects of the service, and consequent risk and liability. Discussions trying to finalise license agreements, liability and ownership of patient records occurred as early as three months into the project, involving government legal services. Ownership also affected

technical aspects of service delivery, as “clinical governance wasn’t in place...you just couldn’t function properly, or function autonomously as a nurse practitioner because the clinical governance, basically it was unsafe practice” (NP1), including physical locations, as “no one was happy because of where they would keep their, their notes, all of that sort of stuff” (G2). Governance alternatives illustrated through the middle year of the project included remote access to shared electronic medical records and telehealth models of service delivery. A functioning exemplar was available through a private company owned by two of the project stakeholders, with NPs operating as private practitioners, subsidised with clinical training funds. Further exploration of this governance example did not eventuate.

Additionally, participants expressed difficulty in identifying financial models and financially viable business models for the NP role. Reviews of publicly employed NPs note the “most significant barriers to implementation of the full scope of practice relate to prescribing and MBS access” (Health agency internal report). To the issue of MBS access, including access to ‘19.2 exemptions’ for health services in small towns and remote centres, was the level of MBS reimbursement generally:

Look at the Medicare items, there is no way, it’s not sustainable...we’ve known that we can’t really make a living without charging a gap. It’s widely known, any nurse practitioners who’s ever tried to do private practice will tell you that. (NP2)

Putting NP services on a sustainable financial footing was a major issue for the nursing coalition. A commissioned report for the jurisdiction also supported the notion that fully private NP business models were not viable through government reimbursement systems (MBS and PBS), particularly without “opening them up” (G2). Nursing coalition members could not fathom this systemic limitation nor identify any ways forward, to make the NP role independently financially viable. Either higher reimbursement or cross-subsidisation was essential, with financial guidance to individuals NPs necessary; “then if you’ve got no experience in setting this up yourself that’s kind of where they needed to guide some of these NPs” (NP1). Personal

experience of cross-subsidisation of NP roles outside the project, including in residential aged care, was “achieving good things but they can’t be remunerated in the way that supports those positions” (G2).

Participants could see aspects of the model jungle dilemma. One critical requirement from across the nursing ‘home team’ was for future NP education to include PHC as well as business models and practical financial skills, including specific practical education on being financed through the MBS: “I think if we had had nurse practitioners that are differently educated, they would have been more comfortable in doing primary care which is what they wanted” (G2). “Cos basically the NP program, the Masters [NP candidate education] program... it should have been talking to you about business cases” (NP1):

And until we can teach them that... We’ve been trying to get a clinical doctorate and part of that is they’re highly autonomous. It has to be embedded in their education. Because we’re only used to being employees... So to do that means they have to be autonomous and probably outside hospitals. So, we need them to know how to run the business of them... I mean, physios have done it fantastically. (G1)

As one potential way through the model jungle, there were unrealised plans for developing financial and practice skills from international experiences:

So that became very clear to us, that we needed to demonstrate this, and it’s only going to be by experience and education that we can do that... Adopting nursing practice from the US, we would send our graduates from the Master’s degree to the US to do their Doctor of Nursing Practice for 18 months, and come back and then educate our, a train the trainer, something like that. (U1)

4.3.5 NP role potential

Ultimately, the embryonic NP service remained little specified, and the NP perceived as a contested role in all settings. PHC remained an area where

NP could provide value: “I think also the care that we’re getting in primary care is five-minute medicine and by the time you’re in there often the doctors still looking at that form and writing a script” (G2). However, perceptions from non-NP participants were that some of the individual NPs struggled in the relatively unstructured PHC environment as compared with hospital settings: “They were very much of the mindset of being used to working within a very structured health environment where you didn’t have to think outside the square” (PM1).

Participants perceived strong NP leadership as a key to advancing the NP role, both within the project, and the wider health system. Despite extensive effort to identify a suitable individual; “look we needed someone, we needed a strong nurse practitioner who was going to be the lead and guide it. You needed someone to take ownership of it and say, yep I’m gonna make this work” (PM1).

A striking feature contributing to the belief in the potential of the NP role was the number of members of the NP coalition who relayed stories and vivid lived experience of other NP roles, including success in similar settings in Australia:

Lots of just goodwill among people and its very, it’s not hierarchical and it’s not like a pissing contest, oh you’re the doctor I’m the nurse, it’s about getting the patient needs met which is really good. So it, it is about the tone that the leadership sets, and the people, and having a common mission, and I think the values are really important. (NP2)

As well as:

most of our patients, young people, were using drugs, lots of them were on heroin, lots and lots of sex work, huge amount of homelessness. Very, lots and lots of mental health problems, just, yeah, poverty, you name it, pretty tragic really. But it is a really nice service which is now a nurse practitioner-led service. (NP3)

Despite this overall belief in the potential for the NP role to develop, there was cognitive dissonance exhibited by participants. This dissonance included contrasting expectation and importance attributed to different NP role features, including task competence and critical thinking. For example, the relative autonomy of the NP roles in the UK impressed some participants. However, the difference between the how and why (i.e. being able to perform a task successfully versus understanding why and when it may need to be administered, questioned, or altered), was perplexing for some; “and then I hear these clinics, and they’re doing everything. They’re doing everything, it’s amazing, and I thought bloody hell... Australia could learn a lot from it” (G1). Of particular note was the desire for a formal PHC NP role, with specialty based on PHC principles rather than disease or condition, such as the family practice model. One participant reported investigations of North American NP roles such as family practice or “primary care nurse practitioner” (G2), with certification across the life course or lifespan, “so you do your paediatric, adult, geriatric, or family, which is everything” (NP2). Some participants contrasted this other experience with the current WA NP roles largely based on condition-specific specialties, and the potential for different fit-for-purpose models:

So we realised that there needed to be other opportunities and that we were so narrow, they were all narrow, they were heart failure nurses, they were wound specialists. But the way most nurse practitioners in other countries have come from a community base and now moving into the strategic, into the hospital settings. So they could look after someone from birth to death, but our nurse practitioners were skilled only in this very narrow area. (G2)

For the NP role and service delivery, the NP coalition members generally held fast to traditional relationship norms with doctors and other professionals. Successful collaboration examples seemed available but were left unexplored within the project, such as; “a fantastic GP, but he is not the norm in that kind of relation, how he sees the role of nurse practitioner. He’s got a fantastic model that’s working really well now, partnership model between NPs and GPs” (G1). These issues included both rules and norms

around NP scope of practice; “so the health department didn’t give him a nurse practitioner role so in the health department he’s CNS [Clinical Nurse Specialist]...he’s doing primary health care...out there doing primary care, he’s outside of his scope of practice” (NP2).

In the view of the NP coalition, the interaction of the NP role with research and higher education was multidimensional. NP roles could be located in academia and undertaking research. However, NP roles also needed to have research and qualification standards embedded in their practice. There was also a need for research justifying the NP role, as well as about “what the role would need to support it in a financial model” (G2).

The interagency nature of the project combined with the NP clinic ownership by the VET agency contributed to an unequal distribution of power to effect change perceived amongst members of the NP coalition. For each failed attempt, the options seemed to be limited to either try again or withdraw project support, which seemed to narrow the capacity to conceive or implement alternative NP models: “So there was a big disconnect between what a nurse practitioner could deliver and what [VET agency] viewed as its role in establishing that clinic” (U1).

The project intention was phrased around creating nursing workforce opportunities as much as the potential benefit for patients and the health system. The NP role was almost considered an individual right due to additional study:

we had lots of endorsed nurses, nurse practitioners, but they weren’t getting opportunities to practice in the hospitals, because there were budgets. And we can’t, you know, we had a lot of very disgruntled nurses who are endorsed and they just believed that because they had studied they should’ve got a role, a position, a job. They had jobs in the hospital, yeah...but that was because it was about an individual pushing for a position. They just said, well I’ve studied, and I worked here for 30 years, you need to give me the job, and people don’t get that. (G2)

Unlike remote settings where advanced practice was virtually a workforce necessity, the historical narrative of the metropolitan NP as a specialist tertiary hospital worker perpetuated, with specialisation and skills not well suited to PHC. Sources described the metropolitan primary care NP model as filling niches and gaps, but ultimately the role was assessed against sustainability using universal payment systems such as MBS: “So it could self fund, and therefore build that. Clinical placements, if we started charging for clinical placements we could sustain that” (U1).

Frustrated over time and feeling disaffected and underutilised, NPs moved on from the project to return to public sector registered nursing roles, to be employed by hospitals in NP specialty or employed by doctors in general practice. One NP planned a private practice model combining special government funding with universal payment and a contribution from education sectors:

I think for some nurse practitioners, they haven't worked to that autonomous role, so they still were relying on having that.

Whereas I think over time, people use those mentors really a lot, but after a while you are managing the patients that you, in your scope, and you can deal with those, because you've learned a lot on the job. I mean, anyone who comes out as an endorsed nurse practitioner, they're beginning. They've never, you know. You can practice until the cows come home but when you're it, I think it's a different ballgame. And if they've only ever practiced where they've still got the fall back of consultants and senior registrars, it's hard to let go of those apron strings. (G2)

The NP coalition saw the project failure as possibly situation dependent, influenced by timing and context. Some saw the timing of the innovation project as critical; the PHC NP role may have been a good idea just a bit ahead of its time for the broader context and needing more political support within and outside the project:

there's not the structure out there for nurse practitioners at the moment you know. Well, that was my belief. The nurse practitioner model is very much embedded in the acute-care sector and I think it functions very well in there, but in the private sector I think unless, how the model we were looking at setting up, just it wasn't on the right model. It's got potential but it would have required a hell of a lot more funds than we, you know, than we had access to, to justify it. (PM1)

However, there was evidence of some inroads of the NP role into PHC outside the project, with people "working in primary care, and with GPs and stuff, in practices, the health service, like the public health service ones are here, the number of what we call designations in Western Australia has gone like that [participant indicating upwards]. In primary care" (G2).

In the view of the coalition, the future for the community-based PHC NP role was still rosy(ish) in WA, and worth pursuing, however "we don't have the model on how to do that" (U1), even though people "are seeing a real need and a real place for them in primary care around chronic disease" (G2):

we've got two problems with it. One is the clinical skills are not as broad and as deep as I would have liked. To be honest. For the kind of role we are asking them to do in that environment. Much more autonomous than a hospital environment. I'm not talking rural and remote NPs now, because I think they're the closest to what we want, you know? But, the nurse practitioners in a hospital, they're not autonomous. They've got so many resources, I'm talking about clinical resources around it. So there was that element. And also the maturity around being business owners and running a practice. They didn't have that at all. (G1)

This future included better managing the universal funding models such as MBS for targeting NP services, as "we've got to learn how to use the system better. It's what we've got" (U1), which was difficult when the national focus in PHC was principally on GP-centric health care homes.

The coalition saw NP leadership was critical to future role evolution, as well as support from the international NP network. The requirement was for leadership at different levels, both in the macro sense of a policy entrepreneur as well as at the level of individual services:

I think it'll work with the right leadership...And I don't know if we have a strong nurse practitioner leader...It needs to be someone who's really clinically credible and can see a vision of how that works...And so you need a nurse practitioner who is strong enough to be in a partnership model with that GP rather than in an employment relationship. (G1)

4.4 Case study 1 analysis

This qualitative case study aimed to explore productivity in team-based health service production. Production was to occur through the implementation of an innovative health service, which offered two distinct lenses for the study of health service production. The first lens was the output/outcome focus of a project management team and the second an emphasis on promoting a health service input/resource from an NP coalition.

This analysis section developed through an iterative process of reviewing the preceding narrative and re-reading the collected data in relation to the extant literature, to produce perspectives from the sociological imagination template. In addition to these template-based perspectives, four other themes emerged from the case findings. These themes comprised; the meaning of productivity was context-specific; productivity in innovations may require a strategic value proposition; the selection and adherence to project management methodologies to create value; and, productive efforts at agenda-setting.

4.4.1 Elements identified from the sociological imagination

This section highlights the key findings from historical, structural, cultural and critical perspectives. These findings comprised issues with linear

assumptions about needs assessment and service gaps, business models, clinical governance and ownership, autonomous practice in the face of medical dominance, and tensions between nursing work identity and professional identity.

Historically, the project evolved as an opportunity to use government innovation project funding for workforce development to provide a PHC service. This service was to target people experiencing homelessness or at risk of homelessness in an inner-city area, who were assumed to have unmet health care needs. The project aims included illustrating the PHC NP role towards developing successful models, including prospects for NP clinical placement and research.

The 'unmet need/service gap' premise of the project was based on perceived health service need of specific population groups, but this was not established or articulated during project development. Authors have questioned 'unmet needs' assumptions in various contexts. For example, (Richman & Barry, 1985, p. 164) argued that the "idea of massive unmet need for mental health services is a myth, generated and perpetuated by processes within the system which provides psychiatric care and within society", pointing to a range of influences including medicalisation, provider-induced demand, and lowering help-seeking thresholds. In one study of gerontology, a needs assessment process raised more questions than it answered about what perceived needs were, including the different interpretations of service gaps between service providers and older people (Chernesky & Gutheil, 2008). Identifying needs and service gaps may be as much art as science, and it seems that linear assumptions of need requiring a particular service response are sometimes questionable. Emphasis may need to shift from a narrow linear interpretation of a relationship between need and service gap to a broader focus perhaps on resourcing health and human services collectively in response to issues such as equity and social justice.

Unlike remote settings where advanced practice was a workforce necessity, the historical narrative of the metropolitan NP role in WA is as a specialist tertiary hospital worker. This NP role perpetuated in this case, with specialisation and skills not well suited to PHC. The metropolitan PHC NP model was to fill niches and gaps but ultimately assessed against sustainability using universal payment systems. Frustrated over time and feeling disaffected and underutilised, most NPs moved on to return to public sector RN roles, or be employed by hospitals in NP specialty, or employed by doctors in general practice. Only one NP planned to continue to pursue a private practice model. There are resources available specifically to aid US nurses with business management (see for example Buppert (2015) for NPs, Hamric, Hanson, Tracy, and O'Grady (2014) for advanced practice nurses). Incorporation of these types of business ideas into future nursing education seems essential for moving WA nurses (and specifically NPs) towards autonomous private practice.

Structurally, common concerns surrounding clinical governance dominated the development of the NP role, with disparate views on the roles of various group members within the project to provide solutions and the need for medical oversight. Clinical governance was connected with corporate governance and ownership, including whether these were issues to address through the health system, or the university, or development of a separate legal entity, or some other self-managed solution. Previous research identifying issues with ownership in PHC include UK bureaucratic not-for-profit (J. Smith & Goodwin, 2006), as well as for-profit firms, and implications for a 'community governance' approach in New Zealand PHC reforms (Crampton, 2005; Crampton et al., 2005) included unintended consequences (Gauld, 2008). Community governance seemed an ownership opportunity or option left untested in this case (Meads, Russell, & Lees, 2017).

Cultural tensions were evident from the system, sectoral and professional perspectives. For the state health system, excessive medical dominance was a persistent theme, nurses as subordinate or handmaiden to medical practitioners. The limited ability to practice independently and autonomously

in primary care was consistent with US evidence (Weiland, 2008), which points to the impact of fiscal sustainability as key. However, the growth of NP primary care models in the US has emerged from workforce shortages, particularly in underserved areas and with vulnerable cohorts (Poghosyan, Lucero, Rauch, & Berkowitz, 2012). For Australia and WA in particular, this approach may serve as a wedge to establish further NP role position in the primary health care landscape.

Participant experience suggested that there was a limited reward for industriousness, innovation and risk compared with some other parts of Australia or internationally. However, there are also recognised challenges internationally to establishing community-based private NP practice, including financial sustainability, but also with legislation (J Currie, Chiarella, & Buckley, 2013). In addition, traditional roles, regulation and reimbursement models also limit team-based PHC internationally (Freund et al., 2015). This limit is evident in findings in Australia (Jane Currie, Chiarella, & Buckley, 2019) that were consistent with participant views that MBS and PBS items remain inadequate for NPs to operate to the full extent of their role potential or service capability. Cultural incompatibility between the health service sector and education sector was emphasised, including; the education sector focus on student throughput; and a social welfare model in non-government firms versus the health care model.

Applying a critical lens, the profession of nursing remained the 'home team' irrespective of working in VET, university teaching or research, human service settings, or traditional health services. Outside of hospital or clinic, it seems "once a nurse, always a nurse" does hold (Fooladi, 2015, p. 329), but not just in public-facing service but also as a professional culture. This 'home team' seems a lasting result of socialisation to the professional identity, but as a profession more than as a technical job or role (Hentz & Gilmore, 2009). Many authors discuss nursing professional identity, with some questioning the clarity of their identity as nursing roles extend (Harmer, 2010), including potential movement away from the foundational, and arguably moral, concept of 'caring' (Lazenby, 2017). These discussions seem to focus on more of a

rational/technical rather than social/professional approach to the issue of nursing role (see Dreher and Uribe (2017, pp. 57-58) for discussion of roles in professions). This research suggests in response to these technical discussions that while the role/s may change, the culture membership norms are strong. Another study found nursing home nurses working at the health and human services interface felt their work identity threatened and uncertain (J. Thompson, Cook, & Duschinsky, 2018), suggesting attention is required to manage dissonance between professional group identity and work identity.

4.4.2 The meaning of productivity is context-specific

The idea that productivity means different things to different people seems well established in the literature (Johnston & Jones, 2004; Pickworth, 1987; Pritchard, 1995). However, the idea that productivity may mean different things to the same person depending on the setting or context has been less explored in the literature.

Technical definitions of productivity varied between the participants in the case study, in line with their self-selected level of interest (individual, firm or system) and sector (health, VET or university) that they focused on in interviews. For example, individual productivity changed from input-specified to outputs when moving from discussing life to address work specifically. In life, productivity was associated with good and effective use of one's time. However, when focused on work as an NP, productivity was more related to outputs as service activity and on effects on patients. Systemically, productivity was superficially associated with efficiency, quality and effectiveness in work, indicating a powerful position for this clinico-managerial language in contemporary health services. Lost productivity through unwarranted processes was identified, signalling inefficient practice as a specific concern of workers. More of a focus on structure and process was evident from case participants, with little discussion of social relationships between workers as an element of productivity.

Despite a clear awareness that this research was studying productivity in groups or teams, no participant discussed team productivity as either performance of teamwork or the outcomes of teams. Team identification for NP participants was repeatedly with their employing agency, yet discussion of productivity referred back to their profession as nurses rather than the primary activities of their employment sector, including activities of teaching or research. Their role identity was with health service practice, with doctors and other health professionals. Productivity was principally understood in the workplace by the NP coalition as nursing practice, through an increased number of patient service events, or nursing-sensitive outcomes. That is, productivity was mainly about clinical nursing practice, not education, research, or management. Quality remained a topic, but more about the scope of practice than the patient outcome.

One final comment on productivity from a technical standpoint. While not the only perspective on productivity, in economic terms, productivity is a measure of technical efficiency that is independent of money; quantities of inputs and outputs with monetary measures a convenient proxy. However, business and funding models dominated the NP primary care considerations in this project. Productivity was intertwined with money, business sustainability and service survival.

4.4.3 Productivity may require a strategic value proposition

The potential productivity of this innovative project was revealed as constrained through model conflict; whether this was service delivery, clinical, business, or funding model. For a discrete demonstration project such as this, there was a clear initial vision that did not persist into execution. In strategic management terms, the value proposition for customers (with customers conceived as the project-involved entities or the service users) did not translate into a service delivery model. Multiple identifications of the service could include as a health service, teaching and training service, research production service, and discrete demonstration service. The value propositions would then be framed based on the desired service type/s. This

service identification did not occur explicitly with the project team and only emerged over time.

The value proposition in this intersectoral project included teaching and training of nursing students. This training was for enrolled nursing students for the VET agency. For the university, this was RN students and nurse practitioner candidates. Only the VET agency, which owned the facility and held the funds, prevailed.

What was also interesting was the number of value propositions that were not explored within the project. These included across sectors, with value created from some combination of health service, education and research outputs. Alternatively, the value of reducing inequity, reducing hospital service dependence, the list goes on. The landed-upon value proposition for this project was finally limited to enrolled nursing clinical placement hours, through substitution for hospital outpatient services; in essence, a project yet again trapped in a hospital-based view.

4.4.4 Team health service production and innovation

Two production groups became evident in this case exploration. There was the project team aiming to create and implement an NP-led multidisciplinary PHC service. Within this project team, there was also an NP coalition aiming to promote the NP role. The NP agenda can be considered an input specified approach to the production of health services, driven by an NP coalition from the nursing home team.

From a production perspective, both groups failed. In production terms, the project team was specifying the output (or product) of the transformative process, namely the PHC service. The project met none of its three specifications; the resultant service was not NP-led, not multidisciplinary, and not PHC. Using production terminology, the NP coalition was specifying the input, the NP role. The final service did not utilise NPs. Both groups failed.

Despite these failings, or perhaps because of them, there are potential lessons about implementing innovative health services. These are considered here through the two group perspectives of rational project management and political agenda-setting.

4.4.5 Project management methodology and value creation

The project presented a traditional waterfall-style project management approach, highly specified with rigid sequential phases, culminating in a final outcome (Serrador & Pinto, 2015), which arguably typifies much health service project management. There was a clear vision, extensive early project planning and consultation to develop the project implementation. However, this is where genuine consistency with this waterfall style of project management ceased. The early planning work highlighted an extraordinarily broad set of potential service specifications that were never adequately narrowed into a practical scope. It seemed that ambitious and inclusive possibilities were to the detriment of operationalisation. In addition, stakeholder consultation identified an extensive and alarming list of risks that was little tested. There seemed limited insight to this, and certainly not a 'go-no-go' decision point instituted. Individual project managers did what was asked of them by the project team, initially setting up the project, and scoping the changes to project direction. Perhaps the project team was driven on by the need to expend project funding within specified timeframes. It may have been that a smaller-scale project with far greater work-up of specifications may have aided success. Numerous specifications were never fully established, but seemingly obvious examples include clarity about what defines a PHC service, the role that students would play in the service, and whether the service was mobile or in a dedicated physical facility.

The researcher's experience suggests that project teams producing 'low tech' health service innovations are not particularly disciplined in their use of project management methods. Perhaps this lack of discipline is contributed to by a rather superficial understanding of project management, the intangible nature of many services, inability or unwillingness to robustly evaluate,

passion and commitment to the select endeavour, or a need to succeed. However, the completed implementation of any service often seems to be favoured over critically examining progress and its consistency with desired objectives, and considering potentially disinvesting. This uncritical implementation certainly seemed the situation here. The fundamental shift in service direction showed a lack of health service valuation by the project team when the deriving of value is key to modern project management (Pool, Poole, Upjohn, & Hernandez, 2019). Indeed, the project seemingly became dominated by imperative to utilise perceived sunk capital in the form of a refurbished facility. Visiting the site, more potential uses for the facility seemed possible, including student learning as well as clinical simulation laboratories. None of these or other options seemingly were considered in the quest to provide a health service for student clinical placements. As a potential solution in search of a problem, the final service may even arguably accentuate the focus on acute hospital services that it was trying to change. Definitions around terms such as community-based, PHC, were likely not consistent amongst project team members, allowing space for this service direction shift to possibly even go unnoticed by some team members.

Perhaps a more iterative form of project management was better suited to this relatively high-risk, small scale and dynamic endeavour (Hakim, 2019; Pool et al., 2019). The surface appearance of traditional project management skills provided consistency with a formula likely familiar to most of the project team. However, the structure, process and documentation provided the project team with undeserved confidence about the project's management.

Recognising the distinction between the traditional project evaluation based on project objectives and projects as the exchange of resources to create value for the sponsor, Masad and Chew (2016) developed a framework to understand project value creation. Utilising this or similar value frameworks may have enabled value creation at stages in the project lifecycle, rather than an 'all or nothing' value exchange at the very end of the project.

Other factors critical to impeding the success of the project included poor output (i.e. service) specification throughout the project. For example, PHC is a concept understood in different ways; including an overall approach to health systems; a primary care 'first point of contact' part of the health system; and a particular ideological perspective on service delivery. The initial vision also called for multidisciplinary care, yet there was virtually no engagement with allied health professions until the project had already changed direction away from a multidisciplinary PHC approach. The project team could have further explored the difference between health care and social care designs through direct health service and care coordination or navigation. With hindsight, even the notion of the clinic was not necessarily shared, with no distinction between a physical facility and the service itself as an intangible interaction. This conflation is not uncommon in health systems and institutions, with hospital buildings often equated with the actual health services. This framing of health services as concrete and physical rather than social institutions is despite long-standing recognition that more health services have to move out of and away from the hospital. These factors led to a lack of shared service understanding that likely contributed to project team dissonance and eventual fracture.

Internally, there were difficulties with unequal power relations between project team members. This related to issues such as the VET agency administering (owning) the project, seemingly driving a focus on enrolled nursing student clinical placement hours. This specific project output, together with a new health service in which to provide these hours, ultimately seemed the only objectives that mattered. Even innovative student delivery models seemed secondary to the quantum of hours. These objectives of the VET agency seemed to trump both the vision of a new form of health service with innovative qualities and research on this new health service showcasing advanced roles and interactions. For a time, the other non-VET members of the project team carried on regardless, wanting to ensure some service from the investment, including of time and sunk capital. However, eventually, they moved on.

From a technical standpoint, clinical governance issues including ownership of patient records seemed insurmountable, with a VET agency as the owner of the health service, and no other part of the project team prepared to take responsibility. The VET agency eventually managed this by effectively 'renting out' the physical facility to a hospital service for the price of student access to the service.

4.4.6 Productive agenda-setting by the NP coalition

The project group superficially had a shared vision, yet the majority of the project team formed an NP coalition based on their mutual interest in NPs, but perhaps more importantly, their shared identity with the nursing profession or 'home team'. The idea of nursing coalitions forming to serve nursing interests in health reform agendas is not new (D. Gardner, 2009). Nursing identity is undoubtedly strong, forming a powerful collective that proudly differentiates itself from medicine. Despite this differentiation, the nursing home team seemingly struggles with their practice dominated by medicine and the need for medical relationships, often in hierarchical form. There is a structuralist-functionalist perspective present in much of the research on advanced nursing roles, frequently bogged down in studies of medical and task substitution. The nursing home team claim that their practice is different from medicine, yet struggle to provide a compelling and consistent narrative to support this position. Perhaps then, it is understandable that project team members and other stakeholders external to the NP coalition seem not to understand the NP role, nor ascribe any significant value to it, beyond at best a poor substitute for medical services.

Despite some criticisms (Rawat & Morris, 2016; V. Smith, 2018), Kingdon's 'three streams' model may provide a useful way to think about policy (Rawat & Morris, 2016), as a conceptual frame to explore the challenges for the NP coalition. The development of Kingdon's model was admittedly to explain how an issue gets on to the political agenda in the fragmented governance of the US. However, reasonable comparisons are possible with the Australian fragmentation of health service governance amongst national and

jurisdictional governments, including powerful doctor and other lobby groups, and a market of numerous private GP firms, within constitutional settings preventing civil conscription of doctors. Additionally, further analytical generalisation may be possible through the idea shared between Kingdon (1993) and case participants in this research on the importance of timing, given some policy ideas such as punctuated equilibrium theory posit that rapid change disrupt long periods of stability (True, Jones, & Baumgartner, 1999; Walt et al., 2008). Arguing against an overemphasis on incrementalism to explain the policy process, in punctuated equilibrium Baumgartner and Jones (1993) suggest that political actors both shape the *policy image* (including the framing of the problem) and manage the involvement of policy participants to control the *policy venue* (including where and by whom the policy propositions are discussed and heard) (Baumgartner & Jones, 1991).

In a similar vein, Kingdon (1993) suggests that a policy window (opportunity for policy change) occurs with the coming together of the three streams; the problem stream, the policy solution stream, and the political will stream (Rawat & Morris, 2016). In the case of the NP role, the problem continues to be constructed as limited access to GP services. In the policy solution narrative, NPs are a necessary substitute for GP care, a very claim the NP coalition do not want to emphasise if proposing a unique nursing contribution. Other potential solutions also compete for space with the NP role, including increasing GP supply and better-distributed GP services, either physically or via telehealth models, as well as practice nurses. Perhaps most significantly, the particular policy solution dominating the political landscape in this space is the Australian Government commitments to Primary Health Networks (a direct descendant of Divisions of GPs) and health care homes. Under the trappings of integrated care, these latter policy instruments give primacy to GP decisions and care (e.g. Agency for Clinical Innovation (2019b)).

The challenges confronting the NP coalition and their PHC NP role agenda appear extensive. In this conceptual frame, considering the NP role as a 'solution looking for a problem' is not entirely unfair. Indeed, it seems that success may require a better-constructed problem rather than that of a poor

cousin to medicine, and communicating the solution, or value proposition, of the NP role to the public with far better clarity and coherence than currently occurs. Lastly, developing the political will may be less of a rational argument and more about the development of individual relationships with key political agents and their identification with the nursing 'home team'.

Kingdon's model also highlights the importance of the individual policy entrepreneur to build acceptance for solutions (Rawat & Morris, 2016). To bring the NP role onto the political agenda, Kingdon's policy entrepreneur role may need to play a part in all three streams separately (i.e. articulating and communicating a problem statement, publicising the NP role and its strengths and benefits, and advocating with key political players), as well as collectively drawing the streams together. Identification, organising and supporting individuals willing and able to undertake this entrepreneurial policy role may be the more productive enterprise for senior members within the NP coalition. In addition to the political endeavours, a series of small-scale, discrete and very well described projects may help build the NP claim and help support those entrepreneurs.

Expanding the NP role, in this case, seemed to be primarily about a 'family practice' style NP working in the community, in PHC. This innovation was to be a demonstration of what NPs could do; to help grow community acceptance. The new role was also expanding a new market for NPs who, in this metropolitan setting at any rate, mostly held specialised acute hospital jobs. The clinical placement opportunities would also provide a new student experience that would further establish the NP role in PHC. There seems more work needed for any of these expansions to eventuate, but there are some early examples presented by participants' other experiences. These examples suggest slow progress, but progress nonetheless. Clarification of both PHC definitions and the whole-of-person family practice, and establishing them as recognised if not formally accepted NP practice in WA, seems essential. It is also important for nurses to allow NPs to build professional evidence of their competence in PHC without sniping around the

scope of practice from within the profession. Professionals need to build and grow their practice scope over time.

Medical dominance over nursing (and other professions), has been discussed extensively elsewhere (Willis, 1989, 2006). This case study also identified a pattern of hierarchical power relationships, with medical doctors often owning the NP service, purchasing the NP labour, providing clinical supervision, and controlling practice under the guise of collaboration. At least in part, the collaborative relationship legislatively required of WA NPs seemed to create 'loose ties that bind' nursing again to medicine.

Related to this medical dominance, what was interesting here was the NP relationship with ideas such as business, entrepreneurship and risk. Observation of an early workshop showed GPs consistently describing their service in terms of business models, whereas the NPs talked about employment and stability of salary. There is undoubtedly recommendation evident amongst the coalition for NP education to include business management to prepare candidates for broader practice possibilities, including independent private practice. However, perhaps this business education may unfairly set NP candidate expectations without further systemic change, including tests of viable funding models for PHC. It seems more attention to practical test cases of sustainable business may be required, rather than perpetuating demonstration projects utilising external project funding. More trailblazing for NP coalition entrepreneurs perhaps, and garnering business, accounting and microeconomic research expertise as much as clinical and policy advocates. Eliminating the necessity for, or at least the centrality of, the 'collaborative' medical supervision may also be beneficial or even essential to a high calibre PHC NP role.

These needs for business skills amongst NPs as well as proven business models for NP practice leads the discussion to the confused and confusing dialogues in this case around models, described here as a form of model mania. The phrase 'service delivery model' was, at times, either catch-all or a very simple and specific factor in the service interaction with patients. The

medical model referred to either or both the biomedical model or medically governed and led services. Corporate models, business models, funding models, operating models, employment models, clinic models, service models, clinical governance models, student models, the list goes on.

The model mania would matter less if there were some reasonable evidence of shared understanding. It seems there was both an extensive and narrow definition employed by individual participants in almost all of these concepts, with little in between. This lack of shared meaning may not be only a problem with this project, but an issue for wider health service innovation. It seems that much more precise understanding of these and related service concepts, and communicating what is meant in their use, really matters.

This lack of shared understanding brings the discussion back full circle to the NP role. The communication of the NP role, what is different about it, and what value it brings, was undoubtedly poor. In one observation, a senior officer in a partnering organisation defined an NP as someone who has worked a long time as a nurse and is skilled enough to supervise students. Another senior manager thought the NP was an alternative GP who could refer for tests, diagnose and prescribe, in whatever manner they saw fit. Many people in the broader community are unlikely even to know there is such an idea as the NP role. For those who do, these different role definitions may cause conflict between expectation and experience with a visit to a PHC NP. Unless of course, the NP PHC role really is just a version of a practice nurse at the GP clinic.

4.5 Concluding remarks – case study 1

This case study explored health service production in a three-year project to implement an NP-led multidisciplinary PHC service with a student clinical placement component. A range of issues for implementing such a service became evident from the case, including linear assumptions about needs assessment and service gaps, business models, clinical governance and

ownership, autonomous practice in the face of medical dominance, and tensions between nursing work identity and professional identity.

Among several work teams noted during data collection, highlighting the membership of multiple teams for many study participants, there was a project team comprising government policy workers, university staff, VET agency project managers, and involved NPs employed at various times across a number of these organisations. Within this project team was a majority who were qualified nurses, identified with the nursing profession as their 'home team' if not their work team, and who focused on progressing the NP role. This group are referred to in this thesis as the NP coalition.

Designing and implementing innovative health service production can be viewed through a rational project management lens. Traditional approaches to project management assess the value, or productivity, of the project against objectives at the end of the project. It may be that evaluation of productivity in implementation of innovative health services requires clear shared understanding of vision and purpose amongst the team, including what are 'non-negotiables', incremental project management approaches allowing for value creation staged throughout the project, as well as operationalising concepts such as value proposition and value co-creation between project stakeholders.

Innovative health service production through an emerging advanced health professional role such as the NP essentially is 'input specified' service production. There are potential limits to service value and productivity assessments through this input specified approach, overcome with detailed and quality descriptions of the output, namely the service.

Several barriers and issues existed for the NP coalition promoting and advancing the NP role when viewed through a political agenda-setting lens. As a strategic endeavour, the NP coalition seemed disorganised on both planning and execution. Some suggestions are made for future endeavours to progress advanced scope roles, including providing clarity around role

differentiation. It seems time to expand research beyond evaluating NP value based on economic comparisons with GPs. Practically, coherent strategy and identification of potential policy entrepreneurs seem essential towards achieving productive political results.

CHAPTER 5

Case study 2: An intersectoral Steering Committee

Aiming for productive intersectoral innovation through network collaboration

The findings for this case study commence with a narrative formed from an iterative process of data review and initial coding using the sociological imagination template. The productivity and innovation narrative of the Initiative Steering Committee is explored within three themes consisting of; pre-existing conditions that contributed to the Steering Committee's creation and development; that interests and purpose drove the identification of 'innovation spaces'; and the enduring purpose of the Initiative (see Table 6). Each of these three themes comprises a section of the chapter.

An analysis section follows the case narrative. The analysis emphasises the outcome-orientation of productivity to participants in this case; different perspectives on small group organisations (e.g. teams and networks); the roles of socio-cultural entrepreneur and innovation owner; and intersectoral 'innovation spaces' oriented to a public sector mission.

The Initiative Steering Committee is a single case embedded within a multiple case study approach exploring features such as the meaning of MDT productivity in producing innovative health services. Three distinct innovative health services existed within the single funding Initiative. However, the Initiative Steering Committee was itself a team aiming to provide innovative health services containing opportunities for student clinical placements. Interviews with Steering Committee members and documents associated with Steering Committee meetings (agenda, minutes and attached reports) were the principal data sources.

Table 6: Case study 2 narrative themes

The ‘origin story’ and group development
<p>The ‘origin story’ of the Steering Committee</p> <ul style="list-style-type: none"> - Original vision of the health agency executive as the ‘visionary leader’ - Practical and political opportunity for health service delivery and clinical placements - Considerable pre-work to rough plan the potential collaboration
<p>Collaboration created from previous relationships</p> <ul style="list-style-type: none"> - Formal and informal pre-existing relationships - Within public sector, education and training of health services workforce - Overlapping work and interests, not just social relationships
<p>Rationale for Steering Committee membership</p> <ul style="list-style-type: none"> - Strategic role executive members, potential for ongoing operations of their agency - Potential for both macro disruptive and micro continuous innovations
<p>Steering Committee stages of development (Tuckman and Jensen 1977)</p> <ul style="list-style-type: none"> - Individual choice of executives to form with visionary leader as ‘interlock’ - Pre-existing relationships helped forming and storming stages
<ul style="list-style-type: none"> - Storming <ul style="list-style-type: none"> o Checking and influencing Initiative towards their agency interests o The broad vision kept members engaged even as starting to lose connection - Trying to norm <ul style="list-style-type: none"> o Difficulty with formalising interagency relationships o Previous connection contributed a ‘fast forward’, leaving operational people behind o Strong leadership seemed vital o For the VET agency component, the Steering Committee was performing - Group performance – productivity and productive outcome <ul style="list-style-type: none"> o Education agencies focused on education model and clinical placement productivity o Other stakeholders considering service delivery productivity o ‘Productive outcome’ – funder’s perspective, community benefits, students outcomes, efficiency - Adjourning, or even transforming, but perhaps not mourning? <ul style="list-style-type: none"> o Initiative changed from interagency to a VET agency vehicle for clinical placement
Interests and purpose drive innovation in individually identified ‘innovation spaces’
<p>Interests and purpose drive innovation</p> <ul style="list-style-type: none"> - Member’s innovation around individual, agency and sector purpose - Leader navigating course through different interests - Actively seek progress, to serve in the public’s interests
<p>Identifying potential ‘innovation spaces’</p> <ul style="list-style-type: none"> - VET agency example of pinch between schools and universities, and private providers - University example of tension between research, teaching and clinical placement outcomes
<p>Individual sense of obligations aligned with agency and public interests</p>
Collective Purpose – agency, team or sector
<p>Initiative’s innovative relationship to health services – service delivery, workforce training Enduring purpose of the Initiative – clinical placements but of what type and for whom Innovation to increase clinical placement hours PHC placements, for EN, RN and/or NP students Financing clinical placements Choice of innovation models – simulation or student-led clinics</p>

5.1 Steering Committee creation and development

5.1.1 The origin story: Steering Committee creation

The creation of this particular Steering Committee, including the membership of specific individuals and the agencies they represented, was not based on ongoing organisation as a team, but nor was it created merely to address a pre-determined Initiative. The Steering Committee was created through a tapestry of practical, historical and socio-cultural factors. Collectively, these factors form the 'origin story'; as an account provided by individual participants, interwoven with their commitment to some purpose, and ability to draw together ideas from multiple sources to connect with their personal purpose and their agency or firm's ongoing work. The Committee creation occurred from previous relationships, either formal or informal, that importantly had some understanding of the other peoples' work motivations and values.

The origin story related to this Initiative was shared, although coloured by individual perspective. Participants shared the view that the original vision was from the health agency executive, but provided differing strategic and practical standpoints. The identified 'visionary leader' provided a rich description of the generation of the concept, a trigger for the action, and a future vision:

I had a friend...and she started talking about this cohort of 250 to 300 people who couldn't get access to GPs. So, she agreed to come on board and try, and then we got [human service facility], so it grew...And I had an idea, so I just wrote, put the proposal down on paper, couple of pages, and submitted it, as you do... this is the formation of about 15 years of an idea, actually...I wanted to create a community hub, where people came for health care, but it was broader, well it was health and wellbeing, accessible within the community. Kind of like the idea of a town square, you know, so particularly for people who are disenfranchised, communities...But that kind of concept, and you can use

opportunistic education, teaching for patients, and then they can access services and ...I wanted to create that. And, this looked like one way of doing it. It's got a long way to go before it has that, but I had in my brain that one day it would be a health institute over there and that, so you bus in some people, the retirement village had a day out, and they learnt how to cook, or they cook something from their own culture in the kitchens over there. And teach local kids how to cook, you know? I love community participation stuff. (G1)

More than once, the university executive named the health agency executive as the "visionary leader" or the "transformational leader" (U1) and remarked both on the clarity of the vision and the will of the leader to drive the process. Both the university executive and a VET manager acknowledged a practical trigger, a funding opportunity, that contributed to initiating action; "there was some funding I think from, that the health department had access to" (V2). The funding manager was more critical of the vision; understanding the idea may be excellent but effectively was "a half-thought idea, a thought bubble" (F1). While critical of the rapid and incomplete idea development, the funding manager saw the team combination of individual skills and previous experience working together as "Champion's League" (F1). The government funding arrangements gave political impetus as well for the university involvement: "The other driver was political ...funding was tied to the training of registered nurse program... So the requirement politically was for [the university] to be involved" (U1).

The university executive somewhat condensed the picture drawn by the visionary leader to a more practical level: "A vision that if it had been implemented could make a dramatic change to, one, the delivery of primary health care by nurses, and two, the access to clinical placements in the community" (U1). The university executive also provided a more practical process account of the origin: "We were approached by the [health agency executive] to join a team which had [VET agency], [university] and the [health agency] to look at introducing nurse-led clinics with the view of establishing

nurse practitioner services out of those clinics” (U1). Other members recognised their contribution to the conceptualisation, that “have come from things that I’ve read about things that are happening and they spur, much to the annoyance of my colleagues” (V1). The VET executive drew together new roles and agency issues with obtaining clinical placements and brought these opportunities to the attention of the visionary leader:

I can remember reading an article about, um, a category of nursing, you know, that, that, the services of which would be eligible for Medicare ... there was always a concern that we had about our capacity to accommodate the demand for enrolled nursing in terms of finding placements, about the possibility of establishing something ... that might serve a number of purposes.
(V1)

There was a fair amount of prior work by the potential team to make a rough plan for the potential collaboration; “so the proposal was a three-way between [university executive], [health agency executive] and [VET agency]” (V2). This collaborative arrangement also included the health agency as the channel for government funding.

5.1.2 Collaboration created from previous relationships

As noted by the funding manager, pre-existing relationships were considered key to the development of the Initiative and the membership of the resulting Steering Committee: “Just relationships and people knowing each other...that has been the biggest single contributor to this” (V1). These pre-existing relationships were in various forms. Possibly the most obvious was a government nursing executive as a formal, direct interlock relationship, a member of the governing council of the VET agency, advisory group and board of the funding agency, as well as member of advisory committees for universities: “Handy. I had a finger in every pie, I went to every meeting and said I have a conflict of interest with everyone. But to some extent, I had no conflicts of interest” (G1).

However, pre-existing informal relationships also played a part. More than one team member noted that deeper understanding of the individual mattered, such as their values, motives, and innovation interests, what boundaries they were prepared to push: “Its informal relationships. People know each other, and know what people stand for... They’ve got to know me, and have got to know... what new boundary I would be interested in pushing” (V1).

These pre-existing relationships were generally narrowly confined to the sector and not across a broad spectrum of agencies or firms and their management. Many of the relationships related to the nursing profession, including its training and development. For example, one participant outlined long term relationships tending to fairly tightly coalesce around public/government sectors, education and training, with health services a specific industry into which they contributed workforce: “might appear as if there’s a very, very wide network of people but they’re people who’ve been associated in and around this sector” (V1).

These were not just social relationships; they were very much working relationships with a history of overlapping work and interests that would continue past the Initiative, which was also not occurring in isolation from other work. There were initially options of universities and VET agencies for the visionary leader to choose to involve in the Initiative. However, there was the three-way connection made through pre-existing relationships with the health agency representatives, and some assessment of their value to the Initiative, as well as the identified potential for the working relationships to grow both within and beyond the Initiative:

I mean it’s one of these things that are strategic. I knew it was useful for [university], because they had this facility they could play in, and it has a strong research base. I knew it was useful for [VET agency] because I was on their board. Because they are looking to expand further into higher education, have stronger links, and [university] were enthusiastic about it. So it was useful for them. On both sides it was useful for me. And also...there’s a strong

allied health cohort, and I knew we were going to need it as we expand. (G1)

5.1.3 Rationale for Steering Committee membership

Each of the three executive-level representatives from the different agencies justified their Steering Committee membership through their strategic role. The health agency executive identified a broad remit across health services, education of health workforces, as well as state nursing policy, describing their role as “to develop those strategic models I think for the future across all that spectrum, um and so the [health agency nursing policy] team got involved because I had an idea I think, little light bulb moment” (G1). The executive membership was also required to help shape the Initiative to align with agency interests and decide the extent of involvement at the “strategic level, scoping the project, setting the direction, was at my level... what is this project about, what is its position, what is it trying to achieve, does it align with the work of the school” (U1).

Steering Committee members could see the potential connection of the Initiative to their ongoing agency operations. This connection was illustrated by the VET executive, as “at each of our campuses, there is some example of us, some demonstrable example of this connection with community” (V1). In each of the VET campus examples, there was evidence of a pre-existing relationship between the manager and another party to form the ‘connection to community’. There was a shared understanding, a kind of back-story to the relationship that showed a work-linkage, to help understand both the manager and the sector.

This relationship of innovation to existing work and direction occurred at different levels, from the large-scale disruptions of the above campus branding and identity, through to logically described improvements to workflows. For example, in relation to enrolled nursing students:

they were really struggling with those sorts of concepts of, you know, and they would be introduced right into an illness model

before they'd actually gone into a wellness model. So we'd changed our course framework around probably a couple of years before [Initiative], and so when [Initiative] came along it was a great opportunity to sort of let's focus more on primary health care and integrate that across. (V2)

5.1.4 Steering Committee stages of development

The Steering Committee's development was consistent with Tuckman and Jensen's (1977) Stages of Group Development model comprising forming, storming, norming, performing and adjourning. The Steering Committee as an executive team formed through individual choices to participate rather than by a directive from their respective agencies. The prior relationship with the visionary leader as an interlock ensured the centrality of this leader and their leadership throughout, even as the visionary leader looked to step away from the leadership role. These prior relationships also meant that there were preconceived ideas of people's motivations and trustworthiness, which may or may not have been appropriately transposed from previous interactions to this new Initiative. There was also mismatch between the Initiative ownership and elements of the vision that became more evident over time.

The pre-existing relationships between all parties certainly facilitated the forming and storming stages of the team development process: "So that meant I didn't have to do the politics at the highest order... the negotiations at... my level were swirling. All enthusiastic but how do we work it out? Because there were a lot of issues" (G1). Manageable because; "you take the higher order. Everyone signs up to the principles... And then it plays out in different ways, with different groups" (G1). Consequently, as:

far as the Steering Committee goes, productivity, I think we dithered around for six months... Well, although I thought the vision was clear, probably all came from different perspectives. And in doing that you shift the chess pieces slightly to meet people's needs, things, and getting that shared vision probably took six months. (G1)

Participants recognised that the big and bold ideas of the original vision might need refinement. During the storming phase of the Steering Committee, participants were simultaneously sense-checking Initiative consistency with their agency core purpose, as well as shaping the Initiative towards their agency interests:

I needed to be sure at all times that what it is that we were doing ... was aligned to what it is, what our core purpose was. So whatever it was that we were doing had to have at its core training and skills for students. Everything else was ancillary, and if it didn't, if we didn't stick to that core purpose, then we were straying into areas that were not properly our province. (V1)

During the storming stage, the big scope of the vision that would serve a number of interests facilitated keeping some members invested in the Initiative even when their sense was they were losing connection, their purpose for involvement, particularly in the case of the university:

if you are going to establish a service which was different from anywhere else you needed a strong research evaluation arm...however the funding that was allocated to that went to [VET agency] ... No money coming to the university, and as you know, you can't do research without having money. Because nobody will pay you to do it. (U1)

As the Steering Committee seemed to be trying to enter a more norming stage, it became clear that getting the relationships right between the multiple agencies was difficult. There was a need for formal relationships between agencies of the same government, then again with separate public institutions. The existing memoranda of understanding also complicated matters, as "once they had the money and not wanting to give the money to [university]" (G1). Creating or maintaining any formal record of Initiative arrangements was difficult with the complicated, pre-existing agency relationships and agreements.

Interestingly, some members of the Steering Committee acknowledged that their prior relationships and consequent fast start to group development might have left the members of subsidiary working groups behind, contributing to a gap between the vision and development of practical implementation:

And that sort of forming time, conceptual time, I think not so much for [executives] but the next level down who had to implement it, they needed the time to shape it the way they wanted to. And we went in and said, right this is our vision, get on with it. And weren't necessarily totally on board as they hadn't had time to explore the ideas and didn't allow for that time. Lesson learnt. (G1)

Although the Steering Committee came together quickly, the structure remained mostly collegial and democratic, which was possibly not consistent with the dynamics around Initiative ownership and funding control: "Yeah, actually it was quite loose, which was unfortunate in retrospect" (G1).

This structure became problematic for the leadership of the Initiative. The visionary leader felt that they could not manage the Initiative from within their health agency policy unit and that management needed to follow ownership. There was also some thoughts of conflict, as "I was so entangled in it, personally and our office, I needed to make sure there was separation of some of the decisions so I was not influencing beyond what would be reasonable" (G1). The broad scope of the vision seemed more extensive than the visionary leader felt they could or should be able to influence and possibly required a more tightly structured Steering Committee, with more formality, not just on paper, but in practice. The visionary leader thought the Initiative needed; "a single leader of it, to pull the thread together... really needs a person overarching the whole thing. Without a doubt. To keep them on the track" (G1).

This leadership crisis was mainly relevant to the health agency and university interests that were principally associated with health service development and new workforce roles. These interests contrasted with those of the VET

agency. For the VET agency, the Initiative seemed to have already moved into performing, as:

the [university] role for instance, and even the [health agency's], have become clearer in that what we've now confined ourselves to is the [Initiative] per se, without some of those other considerations being as closely connected as perhaps we thought they could've been. (V1)

Over time, this Initiative was increasingly consistent with the VET executive's interests, such as a physical facility for VET student clinical placements. As another VET manager noted, this was addressing a critical facility capacity issue associated with the growth of their health workforce training portfolio in recent years. It, "was probably more a [VET agency] vision to start with... As you know, with health it's all about the labs and the facilities" (V2).

5.1.5 Group performance – productivity and productive outcome

Assessment of Steering Committee performance varied between the participants. This variation included different views on the level of productivity, as well as what productivity may mean to different agencies. As identified earlier, there was a sense that the Steering Committee formed quickly, and primarily developed based on previous relationships, but then struggled to perform internally due to a mismatch between the broad, diverse intersectoral vision and the structure, leadership choices, and perhaps over-dependence on transferring previous relationship experience to the current context. The funding manager particularly emphasised the need to make administrative changes. For some Steering Committee members, the group productivity was both their internal performance and teamwork, as well as related to the Initiative itself as a productive outcome, an achievement.

The visionary leader noted a series of productivity dilemmas, including with funding, between collective and individual perspectives, and between clinical placements and health services. In relation to funding, "the team who were the Steering Committee, I think productivity might have gotten muddled up

with the revenue stream... and then how do you spend it, rather than what are you trying to achieve” (G1). Whereas the collective may have been attending to the process of obtaining and using money, the health agency executive thought student clinical placement productivity was central for the VET agency and university. These individual member agencies:

have an education focus, recognising that we had a new way of providing clinical placement that was an adjunct to service already, I’m fairly sure they saw it as being an effective way. The productivity of getting student placements was useful. And also because you could put two or three students with one individual clinician when normally its one to one. So, there was a productivity related to that that they liked. And related to the fact that the supervision was funded in a different way. (G1)

For the Initiative structure as a whole, there was an apparent imbalance between internal Steering Committee and external stakeholder group interests. The student education (clinical placement) focus was dominant for the majority of individual Steering Committee members and two of the three involved agencies. This focus on student education contrasted with the health service focus for the broader stakeholder group of the Initiative. The health agency executive noted, unsurprisingly, that the two education-related agencies on the Steering Committee “are about the education model, and the benefits of that, rather than considering the service delivery model. Whereas the other [stakeholders]...they’re considering the service delivery productivity” (G1). The technical efficiency of student placements was meeting funding outcomes, and this drove health service choices:

to be able to deliver a service and meet the training outcomes they had to be able to take a certain number of students. Having one student alongside a nurse practitioner wouldn’t have been productive, because you would’ve been paying a nurse practitioner when in actual fact the money was for clinical training. (V2)

The Steering Committee performance was also assessed on the idea of the Initiative’s ‘productive outcome’. Application of this idea was from the funder’s

perspective, where funding provided for innovative clinical placement opportunities, and performance indicators were clinical placement hours: “It was purely based on activity but we over-delivered...we’ve got fairly tight indicators on clinical placement that we needed to meet... so long as we delivered on that we could pretty much do whatever we wanted with the other” (G1). The VET agency executive also attributed productive outcomes for this Initiative as benefits to the community, student employment, as well as efficient resource allocation. However, measuring or valuing this public benefit was not clear; “it is a plank in our strategic plan, our contribution to community, and we’re always struggling to come up with some kind of measure that enables us to assess whether we’ve achieved that outcome or not.” (V1). The funding manager also noted the limitations of Initiative’s outcomes in terms of both measurement and sustainability:

the point that needs to be reinforced here is that that funding led to a sizeable number of good outcomes across the system, many of which won’t have been measured. One of the real problems though, is they’re not sustainable outcomes. (F1)

There were additional ideas concerning the potential outcomes of the Initiative. The funding manager felt that the diversity of patients and settings provided potential outcomes and were missed opportunities for development. There was also some sense that the health agency was trying to bring the balance back their way, with health services as valuable, if not more so than clinical placements. There was also a push for clinical placements to be about registered nursing students as intended in the original funding remit, rather than primarily the enrolled nursing students of the VET agency.

5.1.6 Adjourning, or even transforming, but perhaps not mourning?

The university executive’s assessment was clear; the Steering Committee was over:

Where it became off-railed was when the transformational leader left and then the realities occurring that funding became not a guarantee from the [health agency]. And in fact, the [health

agency] now sees it as not their role in funding health service development, but more of a policy provider. So the disconnect began occurring there, and then what's involved with further funding coming, practitioner placement, and no student placements, then the role of [university] became advisory with the [health agency]. And the last meeting, an advisory meeting ...probably said that this is not the right Steering Committee to have drive [the Initiative], as its dis-commensurate with our objectives and our visions...is now basically an enrolled nurse placement, and an outpatient offshoot of the major hospitals. (U1)

The Initiative had changed from PHC to something else, and as the Initiative changed direction, for the university executive:

while the vision was becoming not clear, and disjointed, if you've got a leader whose very passionate about making it happen, whose got funding behind them, whose got the ability to mobilise policy and so forth, you can put Band-Aids over it...The reason we kept in there so long, was the carrot about here's some money for research which never came...Once that carrot was gone, then is there any reason to be in it. And the answer was no. (U1)

The Initiative seemed to have become particularly about a physical facility, one that fit with VET managers' views on growth in their health workforce training, and alignment with their campus identity as a health training institution. However, was there a fit with health services? It seemed not:

Because the visionary leader saw that campus becoming a health centre. Now, the question is, as when you've seen the redevelopment, is it fit for purpose. And probably not... If you had done that homework, would you have put that here or probably looked at another place. (U1)

5.2 Interests and purpose drive innovation

The theme of ‘purpose’ was evident in the case, with interaction existing between each Steering Committee member’s perceptions of individual, agency and sector purpose. These purpose interactions framed their sense of work self, and played out in how each individual justified their choices and crafted ‘innovation spaces’.

Each participant presented a clear purpose in their own way. For the VET executive, innovation occurred around the core purpose of the VET sector and the VET agency:

They’re not just thought bubbles...I know what the boundaries are, I know what the core purpose is, and so I’ll never stray, you know completely away from that core purpose. So, I’ve always got that core purpose in mind. (V1)

In the view of the visionary leader, the Steering Committee staying true to the Initiative vision was more important than the process, and this was achieved by ‘playing the game’, navigating a course through the different interests and funding pressures:

There’s been different ways that people have wanted to play the game, partly in stakeholder need, partly as the money has not flowed as well, and partly about individual’s interests...But I would hate to see the bigger picture get dissolved. (G1)

Part of the purpose for each Committee executive member was not standing still, needing to progress work through actively seeking new ideas, and not becoming satisfied with current work or achievements: “No, I couldn’t be satisfied with that and neither could the people that I work with on my executive be satisfied with that” (V1).

The personal purpose of most participants, and that of their agencies, was on some level related to the public interests. For example, the contribution to the community was a distinguishing feature for the VET executive between public

providers and private providers as “we have a contract to deliver training but there are other purposes I think as a public provider we serve” (V1). For this executive, the purpose was more than just student numbers and completion rates; it included other elements such as industry engagement and graduate outcomes. The university executive also saw clinical placements as an opportunity to serve the public interests through required health services:

Once we had started the concept and looking at the external environment and seeing where there was a gap, we identified there was a need to look at unattached people, or homeless people, in another way, and seeing if we could take health services to them. Then we quickly identified that there would be an opportunity for students to be placed, doing some clinical experience with those students. (U1)

5.2.1 Executives identifying potential ‘innovation spaces’

All executives felt that they undertook some form of pragmatic analysis of their agency situation, which led to identifying unalterable settings that bound consideration of issues and possibilities. This process was akin to an implicit SWOT (strengths, weaknesses, opportunities, threats) analysis. From their read of the current situation, each executive looked to potential future ‘innovation spaces’. The two participant examples of the VET executive and university executive are detailed in turn in the following paragraphs, demonstrating the similarity between their situation analysis processes. Notably, the different challenges and opportunities created different innovation responses. For the VET executive, it was innovation responding to the VET sector ‘pinch’ experienced between school and tertiary education. For the university executive, it was innovation and decisions balancing the triple outcomes of research, education, and clinical placement. However, both focused strategically on ‘product’ differentiation of services rather than process efficiency.

For example, the VET executive gave a clear analysis of the current situation for the VET sector. For this executive, VET was underplaying the “further

education aspects” (V1) of the sector, that universities had; greater flexibility, while the advent of “schools encroaching on our space is really a function of the increased school leaving age and the need to accommodate students with different abilities in schools. So that’s going to be inevitable, the growth of vocational education in schools” (V1). In addition, “the advantages of private providers is, that they can be a lot more nimble and responsive than a large institution like this can be to a particular employer’s needs... some things private providers can do that we can’t” (V1). Sector context for the VET agency executive was responding to a combination of heightened competition inside their market with private providers; a shrinking market scope with other sectors ‘pinching the space’, and greater student expectations of services within a tight funding environment. A big challenge for the VET agency was the sense of being ‘pinched’ as previously “clear boundaries between the education sectors, the schools, the [VET] and the university sectors are being blurred, while schools encroach on our space in delivering vocational training in schools, universities encroach on our space, in the sub-degree space” (V1).

The new relationships between the school, VET and higher education systems emerged from government changes requiring compulsory schooling to year 12. This government policy change supported the VET sector “getting into higher education, is to enable people who do aspire to that, to come here and be supported, much more closely supported than they otherwise would be” (V1). At the same time, the VET sector “strategy would be to work very, very closely with school sector, to deliver our programs in schools” (V1). In response to the ‘pinch’, the VET sector was expanding its scope into new offerings in higher education and improved pathways, “not with a view to competing with the university sector, but with a view to complementing the universities” (V1), and into closer and new relationships with schools, either delivering their services in schools or through third-party ‘auspicing’ arrangements allowing schools to deliver their products. The VET executive was aware that “there isn’t necessarily broad agreement about the extent to which our response to that is legitimate” (V1), including questions about why a VET agency was working into the higher education space “where once

those qualifications may well have been entry-level qualifications to certain occupations, whether those qualifications are being supplanted by undergraduate degrees” (V1).

There were also other contributing factors common to many public services driving innovation:

as with all sectors funding is tight, funding arrangements are, are difficult for us and in our sector of late, where student fees have increased substantially, student expectations of us have increased very markedly. ... those sorts of things that come from heightened competition. (V1)

Innovation was as much about changing product, their course and qualification offerings, as it was about process, with the discussion “around that middle qualification space. What, what level of qualification is most suited to the labour market now and into the future. So, we want to be in that space, it’s a sort of safety measure if you like” (V1).

In contrast to the ‘pinch’ context for the VET executive, the agency context driving productivity and innovation for the university executive was the three delivery pressures of research, teaching, and student clinical placement (or fieldwork). Productivity in university research was complex. On the one hand, the research output metrics were clear: “So the outcomes there would be publications, research grants, higher degree research students” (U1). Maintaining a research program was hard and could no longer be justified based on individual researcher interests. Even research programs that had historically built the university area could not be justified without the research output metrics, so there was: “So it’s coming down to saying, let’s pick three, maximum four, of what we can invest in. What you do well, what you produce” (U1).

As well as reducing waste through more focused research areas, there was a required balance of short- and long-term investment perspectives:

you've got to be a bit careful, as there's some of that blue horizon stuff, that visionary thinking, when do you invest in that, when don't you invest in that. To me you invest in things with a limited term. Okay, if it hasn't started to show promise in three or five years, it's time to get out. (U1)

In terms of teaching, the executive felt there was too much investment in technology when investment for the particular university could be on 'product' differentiation from other providers:

And I think we're in the dilemma of defining what productivity is in teaching at the moment. Because of all the innovation, the technology, the new ways of delivering teaching ... And increasingly with the pushback from our students, saying we want to sit in a lecture and see someone face to face. We want to interact with a student, not a machine. And to me, if you invest everything in online, well why ... wouldn't you go to Harvard, or Oxford, or something. What is it here? And I don't think we've got that defined within the school or within the university at the moment. What do we offer, that face to face that students want. (U1)

Student clinical placements were becoming increasingly expensive. Among the array of potential options, including student-led clinics, the major innovative response to the issue for this university executive was to improve student preparation for the placements to ensure the students were operating at the highest level possible while on placement: "you've got to prepare the students before they get into clinical practice. Because otherwise you put the students into the clinical environment, which is now becoming expensive, with an expensive clinician supervising them, which we increasingly pay for" (U1).

The value of the expensive clinical placement was maintained or enhanced through a preliminary action or intermediate product (i.e. student preparation), rather than changing the clinical placement model:

And so that's why we're investing in that simulation space... And I suppose the best example is the mental health area where you can prepare a student who's going to go into that mental health area and they've seen a patient behaving. They've seen the psychosis, they've seen them in an aggressive behaviour, seen them in that role play. So, when they get out there, they're not concerned about that. They can go into caring for that person, because they've had that learning up front. And you can translate that to acute services, where they've learnt their dressing techniques, they've learnt handwashing, and we're not teaching that at an expensive clinical place. (U1)

5.2.2 Individual purpose - the 'public' role of individual executives

Each of the executive members shared an individual sense of obligation that was consistent with their agency but arguably also extended the public dimensions into the community or health services in a way that went beyond simplistic statements of agency purpose. For example, the health agency executive identified with representing health services, the public hospital and health system, as well as roles with both education providers. The health agency executive was working hard to balance these roles: "So, I was representing them really, because I represented the service land, as well as education...How were we going to get our patient service out there, how were we going to get money for patients and access for patients" (G1).

To some extent, this health service representation was future-oriented, as the executive also noted that their agency team was "not so much about the service delivered, but actually about demonstrating that new models of workforce could be as effective and efficient... possibly seeing that it was an effective way to give clinical placements to students. Those two elements" (G1). Interestingly, despite the intention of the Initiative to provide health services, there seemed no direct health service representation on the Steering Committee.

There was discordance between some participant perceptions of the ‘others’ role and how that individual perceived their role. For example, the health agency executive’s perception that the VET interests in clinical placements dominated possibly under-acknowledged that the VET executive felt a personal, agency and sector obligation to the community, but was struggling within their agency and sector to have that recognised and accepted: “It is a personal thing...I said we want to be an institution of and for the city, not just an institution in it” (V1).

5.2.3 Collective purpose – agency, team or sector

The health agency executive had a wide-ranging vision for the Initiative that extended beyond potential narrow roles in nursing advocacy and workforce policy development:

I wanted to provide a service to people who do not normally receive a health care service....I wanted to create, for want of a better word, a sexy environment for health professionals to learn about community health services and primary health care, that was embedded in their education, rather than a bolt on...And the third part was around nurse practitioners but actually enhanced roles of all kind. Allied health particularly. (G1)

For the VET executive, health service delivery was clearly: “not our purpose ... But we couldn’t, our, our, our legislation would not allow us to deliver it, and I don’t think that that’s something that we would contemplate” (V1). It seems these margins to VET agency purpose were not clear to other members of the Steering Committee, perhaps until the end of the inter-agency participation in the Committee.

There was at times, some discordance between participant insights into each other’s purpose in health services generally, as well as within the Initiative. Whereas the VET executive saw university sector demonstrating change that was worth emulating, another VET manager saw the VET sector as the responsive one to industry change, as “we have to be able to be responsive

enough to implement that change whereas ... academia get very entrenched within what believe is right, don't like change very much" (V2). The VET agency executive was not surprised that the Initiative turned away from the university sector, and owning health service delivery, with concepts such as nurse practitioner-led service and research not commencing: "I found myself continually wanting to, to be clear about our involvement and what we were legitimately involved in ... it was always clear in my mind that there was not something we could have driven" (V1).

5.2.4 Initiative's innovative relationship to health services

Innovation was considered through different lenses, from a necessary response to change by an agency or sector, innovation at the health service interface, to innovation to address the growing importance of educating health workers to undertake their business. The VET executive saw impacts from a range of areas, including fee increases, perceptions of reduced future industry opportunity in mining and engineering, as well as greater university take-up in non-mandatory qualifications areas such as business, resulting in a growing importance of health service industry to their business. Health courses had become the "largest area of delivery here at [VET agency] ... our capacity to respond to that is something we've got to think about... the health area has been one where we've seen very strong growth... It's been a dramatic increase" (V1). The university executive looked at changing nursing practice through a measured evidence-informed approach:

always looking at innovation and why we're doing something. Do we need to do it... And you only learn that by experience, and there is a sense of, well it's the best evidence we have, but there's also intuition and we know things that work. (U1)

There were examples where the executives perceived their agency team's purpose as driving, shaping, and at times doing, the background work necessary to translate the Steering Committee's ideas and vision into shape to enable practical implementation. Rather than as a staged process of creativity and implementation, this innovation could be thought of as two-

tiered, with people steering the vision as an idea and making decisions on implementation, while rowers concurrently acted as 'way finders', translated concepts into practical options, to feed up to the Steering Committee. Thus:

they were very much facilitating getting things done, because there was so much bureaucracy in setting this up, that is unseen. It can be perceived that things are slow, it takes three years instead of six months. But they're trying to be the way finders for people. (G1)

5.3 Enduring purpose – clinical placements but of what type and for whom?

Student clinical placements remained the enduring purpose of the Initiative, although coloured and shaped differently by different Steering Committee members. There was the provision of new clinical placement locations. There was the number of student hours that could be provided, the practice standards for clinical placement, and the types of nursing students that would be allocated the places. However, there were also underlying tensions around financing, clinical placement models, innovation choices (such as choosing between simulation clinics or student-led clinics), and that it was clinical placement needs that were driving health service delivery.

For the university executive, the Initiative's fit with the university team was first and foremost about student clinical placement. However, it was about specific types of students; the provision of PHC placements to undergraduate nurses and nurse practitioner candidates: "So, it aligned with the vision of moving nurse practitioners away from the acute care and setting up a model that would be demonstrable" (U1).

There were numerous practical considerations for the university executive in ensuring the clinical placement was adequate. These included "whether the clinical service meets the requirements of the unit that's being taught. Whether the service unit has the necessary guidelines, practice standards in place, and then also provides supervision to the students while on placement" (U1).

The clinical placements became overwhelmingly, and eventually totally, allocated to VET enrolled nursing students rather than university (RN and NP) students. The university executive noted VET ownership of the Initiative and the physical facility as barriers to placing these latter student-types. However, the university executive also suggested that VET incorrectly perceived the university's focus on the nurse practitioner component, rather than the need for undergraduate RN placements. The exclusivity to placing enrolled nursing students was not fully consistent with funding agency focus on undergraduate registered nursing students as the key group but allowed inclusion of enrolled nurses (ENs) through a sort of extended pathway loophole: "And it was very much linked to the fact initially that the ENs that went on to the RN qualification" (V2).

5.3.1 Financing student clinical placements

Discussions abound in Australia about the need for more clinical placements for a range of health workforce students. However, it became abundantly clear in the Initiative that financing clinical placements was a large, growing and complex concern for both VET agency and university management; "you put the students into the clinical environment, which is now becoming expensive, with an expensive clinician supervising them, which we increasingly pay for" (U1). The VET executive was keeping abreast of different possibilities across Australia: "I know for a fact that there's a very large private provider ... in other jurisdictions particularly with enrolled, with international students enrolled in nursing, those placements, fees for those placements are charged to the student" (V1).

The funding manager discussed at depth the challenges of making changes to allow for transparent and appropriately funding of health professional training:

It is, the strange forked funding we see here for education and health, how money flows from Commonwealth to both sides. Weird distortions, that sort of worked historically, are very dangerous to

play with. The degree of cross-subsidisation that goes on obviously, particularly from international students. You know, full fee-paying students, how they prop up various courses ... That's why both sides have to do their finance reform. So, you can say this course is honestly sustainably funded on this basis, it's not being propped up by this weird tangle of money coming from there. (F1)

The VET agency utilised cross-subsidisation through employing all [the Initiative] nurses as lecturers: "Our lecturing team all have to undertake clinical facilitation, so when the students are in [Initiative] they're effectively a clinical facilitator. So that's where their salary comes from, so that's how we're able to justify the positions there" (V2).

Nevertheless, there remained concerns that block funding mechanisms without appropriate incentives were contributing to issues needing to be addressed in the modern health/education interface:

funding is nigh upon black magic ... Which means there are the traditional issues around unbundling. There's a sort of accepted logic that's a first principle through repeated efforts to unbundle this sort of stuff and that is that the outcomes of teaching, training and research cannot be metricised. Which is absolute bullshit. (F1)

5.3.2 Innovative choice - simulation or student-led clinics

The choices of innovation to address the clinical placement issues around type, access, and cost showed distinctive directions between university and VET agency. The distinctions were largely between simulation and 'real' clinics.

For the university executive, the principal option was "to prepare the students before they get into clinical practice" (U1). Examples included university-based preparation, use of simulation clinics with actors, or even university-located health and wellness centres. This preparation was essential;

otherwise, on clinical placement, the “student is still trying to come to terms with what they’re doing there” (U1).

In contrast, the VET agency management reported moving from simulated clinics into actual health service clinics. To some extent, this was justified based on vocational enrolled nursing training as a practical task set with more limited conceptual and clinical decision making than university education:

So what we’ve done now is we’ve actually implemented the practical assessment so instead of the actual students doing it in a simulated lab like we did before, and we used to set up and three lecturers going to the lab, we actually take the assessment so that it takes place in the actual ... clinic. And then the assessments are actually done as part of their placement so they’re doing their assessments on real people rather than us getting actors in and paying people to come in and do all of those of things. So that’s our model for sustainability going into the future, is really embedding that as much as we can into the assessment so we’re sort of actually looking at it being a clinical placement experience and also an assessment centre, if you like a practical assessment centre...and that’s then how we can do the hours. (V2)

These and some other cross-subsidisation choices presented as uncritical, with no exploration of the broader economics, and indeed the ethics, of having health services designed around clinical placement rather than patient needs and system gaps. For example, the health agency executive saw some potential issue with the VET agency: “really interested in giving enrolled nursing students a clinical placement, and that’s probably what they see the whole thing is about. And so the public health component they’re doing, the pop-up clinics, they’re going gangbusters” (G1).

However, there was more. The Initiative funding source, and their performance criteria, seemed to be driving a whole set of activities that were cloaked as health services but created around meeting clinical placement

requirements. The clinical placement numbers needed to be high, regardless of the health service value to justify the funding. Achieving this was primarily as follows:

we've incorporated this whole as part of the initial client interview, a whole health history, with a health screening, with their eyedrops, with all of that. So that the students are actually getting a really holistic experience. And clients don't care because their blood sugar level checked and their blood pressure checked and all that sort things. But we've added that on to the normal service would be. So that's why that's worked. (V2)

This approach enabled clinical placements that utilised the facility, but this still did not result in the required numbers of clinical placement hours. The "only way we can be able to do it is to go out and do, you know, the population screening, the pop health checks" (V2). While these services were occurring in community settings, it seemed the health service value was secondary to the clinical placement hours, the funding requirement.

There was some consideration of the university providing the health service to build a student-led model that was providing a health service of intrinsic value, "but we again couldn't manage to actually get that going and mostly because I think they viewed it as nursing coming to the rescue of what was the interdisciplinary learning environment" (PM2).

5.4 Case study 2 analysis

This qualitative case study aimed to explore productivity in team-based health service production. Production, in this case, was the steering of an Initiative, using government project funding intended to create innovative clinical placement opportunities, principally for registered nursing students.

This analysis section developed from using an iterative process of reviewing the preceding narrative and re-reading the collected data with the extant literature, to produce the following key themes. It seemed clear that the case

study provided an exploration of an MDT somewhat different from the commonly researched health service delivery 'coalface', and surfaced multiple perspectives on productivity and 'productive outcome'.

In this case, the team development followed stages consistent with group development theory. However, the 'origin story' could also be described as a story of two networks coming together as much as the formation of a new team. Considering these two alternative conceptions connects network ideas to innovation theory, and connects the idea of team leadership with entrepreneurship. A superficial read may suggest that Initiative ownership provided the VET agency with authority to provide direction to the work. However, a deeper read also signalled a collective of executives, with a committed sense of purpose, trying to identify 'innovation spaces' within which innovation work could occur. Finally, there are indications of potential dilemmas in creating health services primarily for clinical placement provision. Each of these themes is explored below in turn.

5.4.1 Team performance, productivity and productive outcome

Steering Committee members presented various perspectives on the Committee's performance, including differing views on productivity, as well as what productivity meant to different groups and agencies. Multiple members also introduced the associated idea of 'productive outcome'.

For some, the team performance of the Committee was the internal teamwork. VET agency managers rated this team's performance, and their individual performance, highly. The finance manager rated the team potential (based on a collection of 'star recruits') higher than the actual performance. Early performance appeared high from a team development perspective but possibly evolved from a 'running start' due to pre-existing relationships between the executives. Conversely, this same 'running start' may have reduced further team development, with assumptions not clarified. Over time, there seemed growing disparity in the relationship, development and

performance between the team's two levels of executives and operational managers.

For participants, the productivity of groups (including the Steering Committee) was not only their internal performance, their teamwork, but related to the Initiative itself as both a form of technical efficiency and a productive outcome, an achievement. The clinical placement model had to be technically efficient for education providers, whereas many Initiative stakeholders were reportedly more interested in service delivery productivity. This difference is not to say that a team cannot have multiple interests or multiple 'production lines', but some explicit and coherent picture connecting these multiple facets seemed important and yet absent from discussions with most members of the Steering Committee.

The visionary leader noted a series of productivity dilemmas, with productivity confused with funding streams, between collective and individual perspectives, and between clinical placements and health services as outputs. In the view of the visionary leader, the Steering Committee productivity should have been on the achievement of new clinical placement models within valuable health services but had become confused with obtaining and using the revenue.

Some participants introduced the idea of 'productive outcome'. Productive outcomes for the Initiative included; hours of clinical placements delivered by the innovation; new forms of health services; and benefits to the community, student employment, and efficient resource allocation. Productivity for participants was generally referred to in relation to one or more of these productive outcomes within this research, as it has been on occasion elsewhere. For example, in conceptualising nursing productivity, Curtin (1995) referred to productive outcomes as the yield from the nursing service production process. While there is considerable variation, much organisation literature tends to refer to team effectiveness as a by-product of teamwork. The effectiveness of this teamwork is either synonymous with productive outcomes (Leicher & Mulder, 2016), or generates productive outcomes. One

celebrated author in team literature goes as far as to refer to “team performance effectiveness” (Hackman, 2004, para. 11), as he challenges conventional input-process-output causal thinking about team performance, suggesting instead five general conditions that increase the likelihood of team success. These five conditions can be measured using the Team Diagnostic Survey (Wageman, Hackman, & Lehman, 2005), and comprise (Hackman, 2004):

1. A real team rather than just a group, with clear boundaries, interdependence among members, and at least moderate stability of membership over time.
2. A compelling direction, a purpose that is clear, challenging, and consequential - and that focusses on the ends to be achieved rather than the means the team must use in pursuing them.
3. A structure (task, composition, and core norms of conduct) that enables teamwork.
4. The team's social system context provides the resources and support to carry out collective work.
5. Competent coaching to address issues and opportunities provided at the right times in the team life cycle.

Continuing this idea of team performance effectiveness in relation to team coaching, Hackman and Wageman (2005) define team effectiveness using three dimensions; the productive output of the team meets client requirements; the team's social processes improve teamwork over time, and; the team experience positively affects individual members. These authors also contend that 'stage' models of team development may have limited generalisability. The next section suggests that a 'stages' view provided a useful analytic frame in this case, without suggesting a predictive or causative directionality to these stages of team development.

5.4.2 Case of a team and a new network?

This case study aimed to explore health service production by an MDT. This case study lightly stretched the conventional approach in MDT health

services research, with the team operating at some distance from the service delivery coalface, and different membership from most health service teams. In support of the former variation from convention, although predominantly using the mathematics of econometrics, health service production and productivity research studies a range of levels, from whole health systems to hospitals, and specific health services. In contrast, much health services research confines MDTs to the patient interface, the actual service delivery.

In the latter membership variation, much health services research defines multidisciplinary as two or more health professionals. This case study explored the Steering Committee as an MDT with membership from different disciplines of education, nursing, policy and management. These members represented three different agencies from three different sectors. Most of these team members were also health professionals, but not all. However, collectively they came together intending to produce health services, and hence are justified in being viewed as an MDT.

In this case, there appeared reasonable alignment with stage models of group development such as Tuckman and Jensen's (1977) theory involving forming, storming, norming, performing, and adjourning stages. The Steering Committee team development appeared to approximate these stages. The first three stages are elaborated further in the below paragraphs, but a particular note is given initially to the performing stage given the focus of this research on productivity and production. Identifying any performing stage in this case study was awkward, as the team was not performing from a teamwork view. The team as a whole did not move into a performing stage, which may be a fairly common event under-acknowledged in team stage models (Bonebright, 2010). However, the VET agency members saw the team performance as strong, signifying the successful meeting of their specific agency objectives. While these VET agency members saw success, there was no real progress toward the shared purpose of the intersectoral collective. The final team development stage was a break-up of the intersectoral team, as the powerful administering VET agency took over the Initiative and other members reduced their role to advisory capacity. For the

VET agency, this was a team transforming or reforming, for other members an adjourning.

Despite the consistency with a stages model, the forming stage was an origin story somewhat different from the mainstream organisational narrative of team development. The Steering Committee was instigated through the participation choice of individual executives and not by an agency directive as occurs with many work teams. The Steering Committee formed from a group of people with pre-existing work connections, with individual perceptions of the others' values and motivations from previous experience. This team was a connection of two different but overlapping pre-existing networks, one from public sector nursing practice and academia, the other from public sector nursing training and general education. Each of these networks appears to have robust connections between members, and from a social network theory perspective, have at least a degree of network closure. Superficially, there seems a high degree of homogeneity of information and ideas within each network, and at times membership of multiple teams within the network, especially by nurses.

Thus, an alternative approach could conceive the Steering Committee development as a network; and follow a development model such as Carswell, Manning, Long and Braithwaite's (2014) clinical network development stages of partner selection, network design, and network management. While the Committee was not a clinical advisory network as outlined by Carswell et al. (2014), the principles and the associated evaluation framework could have surfaced a more reflective approach if consciously considered by members during the development. Perhaps the dominance of team and team-related concepts for the Steering Committee members did not allow for consideration or instigation of other conceptual forms of organisation.

In viewing productivity from a network perspective, other factors could include governmentality (Ferlie, Mcgovern, & FitzGerald, 2012), and network governance. For example, Provan and Kenis (2008) proposed different

models of network governance, outlining situations when one may be more effective than others. Authors identify the tension between the desire for productivity (as a ratio of outputs to inputs) and member inclusiveness as one of three network tensions (Provan & Kenis, 2008), along with internal/external legitimacy, and flexibility versus stability. In this case, the tension between actions towards productivity and member inclusiveness was evident in the first six months of 'dithering'.

Although other people operated between the two networks of nursing practice/academia and nursing training/general education, there were two particularly interesting and informative roles working in this network intersection, namely the visionary leader and the VET agency executive. The remainder of this and the next section provide analysis of these two roles.

The government nursing policy executive, or "visionary leader", was a pre-existing direct interlock or 'multiple director', holding roles as an executive, director or advisor for four involved agencies; the funding agency, VET agency, university, and health agency. Direct interlocks may help with collaboration and communication and often hold a broader worldview than their individual agency or sector interests would suggest (Murray, 2017). However, amongst the potential benefits, direct interlocks potentially have a high degree of influence that is not necessarily as readily visible or transparent as some may desire for public sector work. In this case, the visionary leader claimed a long-held and bold idea, combined with a 'trigger' from a particular funding opportunity, and the connections to bring people from across agencies and sectors together.

In this case, the idea of interlock was not consistent with retaining team leadership. The visionary leader was uncomfortable with remaining the team leader for reasons including connection to the source of funds, issues with a government policy manager implementing health services, and a need for ownership of the Initiative to follow the funding and the ownership of the physical facility. This seemingly reasonable position suggests the role may

be better described as more of a social or cultural entrepreneur, as outlined below, rather than a visionary leader.

5.4.2 Socio-cultural entrepreneur leaves a leadership vacuum

The long-identified relationship between innovation and entrepreneurship in the literature is dominated by neoclassical economic ideas that include a reductive focus on individual self-interest. The role of the entrepreneur is effectively absent from econometric models of production and productivity (Lounsbury et al., 2019). While alternative economic approaches, such as the Judgement-Based Approach (Foss, Klein, & Bjørnskov, 2018) extend the neoclassical view through:

embrace of context in the form of the institutional, task, and intra-firm environments, their restricted focus on the discipline of economics unnecessarily hinders the development of a more fully contextualized understanding of entrepreneurship as socially and culturally embedded, thereby limiting the potential impact of their own work. (Lounsbury et al., 2019, p. 2)

Social entrepreneurship suggests a degree of altruism in the development of innovative projects to have a positive impact on others, rather than individual profit, with authors relating it to a servant leadership style with a natural inclination to serve others (Rivera, Santos, Martín-Fernández, Requero, & Cancela, 2018). This servant leadership style may be contrasted with transformative results focus through raising motivation, by an emphasis on follower empowerment. There are questions raised by this case study about conditions where it may be appropriate to empower through servant leadership, and when it may be more appropriate to hand the venture over altogether.

Überbacher, Jacobs, and Cornelissen (2015) discuss the processes of entrepreneurs becoming skilled 'cultural operators' through creating a distinctive venture identity to differentiate from competitors and align with the interests and values of potential funders. This process constructs

descriptions of 'who we are' and 'what we do' to motivate resource holders to invest. In effect, this is compelling storytelling of both the entrepreneur's personal capabilities and their vision (Lounsbury & Glynn, 2001; Thornton & Klyver, 2019). Gehman and Soublière (2017) present three distinct research threads on cultural entrepreneurship; namely a sociological perspective on making culture; strategic management and organisational theory perspective on deploying culture; and an evolution of the second termed cultural making. These and other authors further emphasise culture viewed as a political or strategic array of resources the entrepreneur can use to shape action in line with their own or representative interests. Lounsbury et al. (2019) draw this together to form a contemporary pluralist alternative, to understand a contextualised entrepreneurship that occurs within a socio-cultural setting, an ecosystem with an array of actors who help legitimise the proposed venture. In this case, the intersectoral collaboration between powerful individuals and positions in nursing training and education with nursing policy and practice created a compelling narrative for the potential funder. To form, as the funding manager noted in this research, a team of stars.

Stereotypical beliefs of entrepreneurs as poor managers suggest an incompatibility between service initiation and operation. In this case, the visionary leader or entrepreneur elected not to lead development and implementation for other reasons. Nonetheless, the visionary leader's withdrawal from leadership left a vacuum for continued progression of the Steering Committee, and indeed the overall Initiative. Manges, Scott-Cawiezell, and Ward (2017) propose different actions required of the nurse leader across the stages of group development. In this case study, the nurse leader formed the group as a vehicle to drive the Initiative and then took a back, or at least a passenger, seat. Because of this action, the nursing practice and academia network no longer held the leadership, and their interests became minimised in, and eventually excluded from, the Steering Committee and the overall Initiative.

5.4.3 Owning the innovation

The second role of note was the VET agency executive, whose agency owned the physical facilities, was the recipient of the funding, and took the lead and eventual monopoly of the Steering Committee. The VET executive presented a broad personal interpretation of public purpose for the VET agency, yet one that always remained expressed as consistent with a core purpose of training and further education. The physical building provided one point of vested interest for the VET executive, with the facility refurbished through the Initiative funding. However, the executive implied more than once that the VET agency could support a health service innovation but could not lead it. The decisions to provide the money to the VET agency and give the leadership of the Steering Committee to the VET executive effectively forced the direction of the innovation towards the interests of the VET agency; that is, enrolled nursing student clinical placements. The scale of placements required resulted in innovative responses to maximise hours of student output, at the cost of any primacy afforded to consider health service value.

5.4.4 Purpose, interests and multi-sectoral ‘innovation spaces’

These different interests between Committee members became apparent, with the potential for multiple interests to be advanced through a common purpose. Swedberg (2005) argues that the concept of interest is not only economic, but sociologically is used in two main ways; when interest is seen as the driving force in social life, and when it is one of many. However, Swedberg (2005) does not refer to a relationship between interest and purpose.

In this case, members had shared and separate interests. Most Steering Committee members identified ‘purpose’ (individual, collective, or both) from a distinctly public interest perspective. This sense of purpose, or mission, connected the identities of the team members. Each team member identified some compilation of individual, agency, sector, and social mission that provided a frame for identifying non-negotiable areas, and potential

'innovation spaces'. This internal identification of 'innovation spaces' had some hallmarks of a SWOT-style analysis that could only be confirmed here through a retrospective self-justification of individual choices by the participants. However, the narratives of the executives in particular held depth and credibility.

Nonetheless, the choices remained justifiable within a managerial orthodoxy and did not seem to represent fundamentally radical concepts or approaches; they were explainable as sound management when understood through their articulated purpose or mission (Diefenbach, 2013). Diefenbach (2013, p. 415) suggests non-managerial concepts:

have human values and concerns at a level at least equal to functional systems imperatives, usually even as their prime ideas; examples of these ideas include equality, community and individual development. Thus, such concepts imply some kind of non-hierarchical organisation and try to avoid privileging particular social groups or certain individuals.

The underlying Initiative objective was arguably attempting a non-managerial ambition through managerial means. The managerial approach subverted the Initiative purpose towards the interests of the most powerful agency.

As an alternative to managerial approaches, Mazzucato (2018) highlights mission-oriented innovation policy as a means to use intersectoral action to address public problems. In this case study, the boiled down problem statement for the Initiative was arguably one of managing chronic health conditions for an underserved population, but during implementation turned back to sectoral and agency issues, such as the quantity of student clinical placements. The technology limitation, or technical frontier, was the lack of knowledge on how to address the public issue of managing chronic conditions in this cohort. The innovation no longer addressed this, and was arguably, no longer an innovation. As succinctly put by one team member; "now basically an enrolled nurse placement, and an outpatient offshoot of the major hospitals" (U1), and "a social care model" (U1).

5.4.5 Educator driving production of health services

This case purposefully explored the meaning of productivity and health service production by MDTs. The Steering Committee was not a health service delivery team but was conceived as a team of people from different disciplines (including tertiary education, research, vocational training, project management, health policy, and of course nursing) working across vocational and university education and health policy and practice sectors. The team may have seemed united in a shared vision, but functioned more as a group than a team over time, with winning and losing representative agencies and sectors. Stakeholders not represented in this group included members of the target population and providers of existing health services.

How can health service production be understood in this case? The health services were originally intended to be PHC; a new model, focused on a specific cohort and targeting their needs. Not one of these elements survived and based on one objective approach to assessing the Initiative, the health services produced were of no value. This assessment possibly does not do fairness to the overall intent, and the lessons learnt by some participants for health service innovation in the future. However, there seemed no plans to document or disseminate this experience, which limited potential to learn from mistakes for both team members and a wider audience.

There is an interesting nexus here to consider when valuing health service production. While the health service delivery may be simultaneously produced and consumed, there is also potential to educate future workers, educate community members on self-management, and undertake research; elements that are not often factored in most health service production models. Service outputs, health outcomes, education and research, are some of the potential products to be included in a sophisticated model of health service production.

Irrespective of these other products, it seems reasonable that health services themselves must have value attributed in any production analysis. In this case, the service was an extension of hospital outpatients through an alternative funding source and producing more student clinical placement hours, arguably the only factor influencing changes to health service delivery. There were no explicit statements to this effect, including transparently advising patients that some of their health care may be unwarranted or unnecessary for them as an individual, and only performed to educate students. There seems a potential ethical issue here for further exploration by health services that include a teaching component. Similar ethical considerations as those applied to research could help address this teaching issue.

Student clinical placements have a latent health service value for future workforce quality and sustainability, as well as a reflective mechanism for supervisors of students to question and challenge their own health service practice. However, the placements are also clearly more than hours. There are decisions to be made about using placement for early student exposure to 'hands-on' care and the uncertain health care environment, or whether some skills can be taught through simulation and established before the student placement. Potentially there is no right answer to this conundrum, and it may depend upon whether graduates are expected by industry to be task-trained or something more. It seems, in this case, with the pressure and purpose of more clinical placement hours, an opportunity was missed in this Initiative to explore this topic at further depth, and is something for further research.

5.5 Concluding remarks - case study 2

This case study has provided an alternative conception of health service innovation by small groups, through a Steering Committee that was a self-forming team and a combination between two pre-existing networks. As a Steering Committee, the group was not directly hands-on with health service delivery, providing a different level of innovation to analyse.

Developmentally, the Steering Committee was quick to form from previous relationships, yet, in part due to those relationships, was possibly too quick to try and norm. With a direct interlock driving the Initiative forward, the executive level moved on without sufficient storming around interests and shared purpose, governance of the Initiative, and left the 'rowers' behind without shared direction. A vacuum developed with the interlock receding from the early leadership role. This change contributed to singular VET agency control of this intersectoral Committee through a power imbalance that served to augment already existing structural inequities including control of finances and physical buildings.

Productivity for the case participants included teamwork or team performance, and productivity of the Initiative or productive outcome. The teamwork included how the group functioned internally, with the Initiative productivity the perceived outcome of the team's work. The productive outcomes included various elements representing diverse individual and collective interests and purpose. Eventually, the Committee adjourned from its intersectoral role, transforming into a VET agency group supporting their specific interests.

Innovation seems well supported in this area of the public sector. Executives in particular exhibited active strategic approaches to their work, seeking opportunities within potential 'innovation spaces' they framed from their sense of individual purpose (including a broad commitment to public service) and collective purpose of their agency and sector. Although this particular innovation did not have the intended consequences for all participants, the 'innovation spaces' seems a consistent and useful approach to public sector strategic management.

The health service innovation, in this case, remains peculiar in terms of value, as the enduring purpose is financing student clinical placements rather than completely legitimising the health services themselves. There seemed more opportunity for combining health service innovation and clinical

placement here through student-led and clinical simulation models. Similar to health services research, combining health services with student training requires careful ethical consideration and action.

CHAPTER 6

Case study 3: Wellness Clinics in accommodation-based services

Productive innovation- towards human service outcomes

The findings for this case study commence with a narrative formed from an iterative process of data review and initial coding using the sociological imagination template to develop themes. The major narrative themes of context, clinic models, and health service productivity, are described in the next three sections. These themes are followed by an analysis section that connects the productive outcomes of the targeted innovations to their specific context, as well as addressing the team approach evident within this case study.

Notably, this case study intended to explore the introduction of health service clinics by a single team of nurses into services offered by key stakeholder not-for-profit firms in the geographical area of the Initiative. The health services were described as 'Wellness Clinics'. A stakeholder engagement process identifying interested stakeholders, and their needs and opportunities, resulted in Wellness Clinics being introduced into four human service accommodation facilities. The settings comprised:

1. Crisis Accommodation - a not-for-profit crisis and transitional accommodation facility for more than 50 adults who were homeless or at risk of homelessness;
2. Residential Facility - a not-for-profit residential aged care facility for previously homeless men;
3. Social Housing - a government-subsidised social housing facility for around 300, mostly older, residents; and
4. Youth Accommodation - a not-for-profit consortium-managed accommodation facility focused on the education, training and employment of almost 100 youth who were homeless or at risk of homelessness.

The findings highlight the importance of the different human service contexts for health service production in this case. Despite all providing accommodation for people at risk of homelessness, these four accommodation-based facilities were addressing different problems in different targeted cohorts, in different human service fields. There were commonalities between the facilities, including; the experience of change, the importance of planning, and the use of teams to achieve mission outcomes. The human service participants' views on productivity are summarised, highlighting the sometimes subtly different meanings at individual, team and firm-level while noting the shared emphasis on outcomes.

The case findings go into this level of detail about the human service context due to a significant change from the intended structure of the case. The original conception in the Initiative was a team of nurses providing Wellness Clinics across the settings. However, each nurse rapidly became established organisationally in the specific context. In effect, there was an early transformation from a health service team of nurses providing to four facilities, to four separate human services teams. The human service group at each facility included a nurse.

Following emphasising the importance of human service context, the findings shift to the four Wellness Clinics themselves. The different shapes of each Wellness Clinic for their specific facility, providing different services to meet differently understood gaps, and fit with the facility purpose, are outlined. The evolution of these 'shapes', negotiated to be consistent with facility needs, introduces the idea that the productivity of health services can be understood through their contribution to human service outcomes.

6.1 The importance of human services context

Participants for each of the four accommodation facilities described their facility in terms of sector, model, and relationship to health services (Table 7). The facility participants also described their service model characteristics such as; problem to address, target audience, program duration, method of

access, and user charges. The people using these services often did not have strong existing social connections or supports. They "...don't have a high number of people that have close contact with family. For a lot of our guys their social support is us and volunteers" (R2), and this included connections to health services. Models of linking people with health services varied from responsibility resting with the individual user in the case of the social housing, through to strong direction from the residential facility, with the other two facilities somewhere in between:

Our focus is also independent living so we don't hold hands we don't take them out. We say here is a list of GPs in the local area, these are the guys who bulk bill. You need to make an appointment if you need to see GP. (YW)

However, participants from the temporary facilities of youth and crisis accommodation did identify circumstances where there was more action from the facility, such as; "a lot of them come in with mental health issues so them, we link them in, refer them into mental health services and that's part of the case management" (YW).

Despite being four different facilities, common contextual factors included the recent experience of substantial change and identification of multiple teams within their facility. Productivity centred on an 'outcome' perspective, with desired outcomes established by service users within facility mission parameters. All facilities operated within some model of case management, with the social housing perhaps the 'loosest' arrangement, dependent solely upon resident's self-identification of issues.

6.1.1 Internal and sectoral change influencing planning

The firms responsible for each of the four facilities had undergone substantial internal changes, such as; organisational restructure; transfer from paper-based to electronic client records; builds of new or refurbished physical facilities; doubling of service size; through to actual initiation of the new

service. Each of these change processes occurred over at least the previous two years during which time the Wellness Clinics commenced in each facility.

Table 7: Facility description

	Crisis Accommodation	Residential Facility	Social Housing	Youth Accommodation
Sector	Crisis accommodation and support services to transition to other accommodation	Permanent hostel accommodation with priority given to previously homeless older men.	Local government involved in support services to State government subsidised accommodation	Youth work
Organisation	Not-for-profit crisis accommodation service	Not-for-profit residential aged care facility	Local government with community development and community support teams	Consortium of charitable youth work, State government tenancy, and vocational education and training (VET)
Problem being addressed	Homelessness or at risk of homelessness	Supported accommodation needs	Rental unaffordability	Education and employment of youths experiencing homelessness or risk of homelessness
Target group	Adult men	Men who are poor, with complex health needs that are prematurely aged	Older people	16-23 year-olds usually couch surfing between friends and family
Access and Model	Case management	National aged care assessment requirements for entry – Aged Care Assessment Team	Independent living	Self-referral, information session outlining expectations. Case management
Timeframe	12 weeks to 6 months	Permanent	Permanent	Up to two years
User charges	Percentage of Social support payment	Residential aged care payments	National Rental Assistance Scheme	Rental
Referral to health services	Service connects	Service sends	Individual responsibility	Service suggests

However, changes were not just limited to inside the firms. There was also substantial change in their respective sectors, such as reviews to the role of local government in human services, reduced sector funding, and the impact of 'ageing in place' reforms:

With a change of government has been a massive drop-off in funding for homelessness, it's gone into mental health... has to be all the time, be creative about their funding applications and those sorts of things, so that we can be getting whatever we need to be, we still have the same client base that hasn't changed. But we've gotta work out how to fund that because we're an NGO [Non-Government Organisation], a not-for-profit. (YW)

For example, Australia's aged care sector reforms were creating complexity for the residential facility. From formerly providing hostel accommodation with basic support services, there were expanding and more complex needs, including clinical nursing care. This expansion required individualised services, utilising different agencies, partnerships, and of course, teams: "we do now have our registered nurse on board but she's only part-time. And it's our partnerships with primary health care that mean that we can provide a really good service" (R1).

Planning seemed inherently necessary for the dynamic and changing internal and external contexts. The local government officers expressed their role as meeting the needs of their geographical residents. For the other participants, there was often a sense that they occupied a service niche in an uncompetitive or thin supply market. These service niches included; social housing in an unaffordable inner suburb; one of two specialised residential facilities for homeless men; and one of the few youth accommodations focused on education, training and employment.

There was also a sense that change was structurally built-in to their sectors, associated with the way funding operated as time-limited grants for many of their not-for-profit services. Not only was funding temporary, but the firm was

needing to re-present its work in a way that was acceptable to the priorities and performance objectives of the funding bodies:

I guess that's one of the biggest frustrations that any kind of organisation that is running on grants is that you've always got that, the funding bodies' expectations of the KPIs [Key Performance Indicators] that you're going to meet. And they're then not necessarily what the clients need. But the staff find it really frustrating to have to work in a particular way to meet a particular KPI that doesn't fit with the client's needs. (YW)

The participants highlighted the importance of planning at all levels to help guide processes and understand direction, with everything from strategic plans, change management plans, to building design plans. Some of the planning actions involved pilot projects to provide evidence through developmental evaluation. For example, a two-year pilot "while were waiting for this building to be built... so we had very, very small scale level of results ...We got a glimpse of how it might work but we didn't get a comprehensive idea" (YW). Equally, the plans provided future guidance, with each participant presenting examples where lessons were learnt from implementation. Strategic planning could relate to resident living experience, as "it's certainly part of our strategic objectives to reduce hospital-based admissions and emergency admissions" (R1).

Local government officers identified a hierarchy of interacting plans informed by and progressed through staff expertise: "We have a strategic community plan and a business plan and there are certain areas within it that are relevant to us particularly... That project plan system aligns with the corporate business plan" (LG1).

In addition to differing evaluation requirements between local government and the project-based non-government firms, there were perceived efficiency problems with government bureaucracy, with an array of forms to complete and hierarchical communication channels. Nevertheless, as in non-government firms, there was still clarity about the direction from strategic

plans, developed through community consultation. There was also organisational learning from planning processes and plans.

6.1.2 'Teams of teams' on missions to achieve outcomes

All the participants from each human service facility were comfortable with using the language of teams, and some framed their firm, networks and partnerships as virtually a 'team of teams', with staff being members of one or more teams, at different levels of the hierarchy, or from different firms in the consortium: "Being a local government, team can be defined in many different ways" (LG1), and "can be as big or as small as" (LG2). The youth work participant identified numerous overlapping teams from inside and outside their employing firm, including teams with facility clients as members, such as "my team, the [facility] team, ...[clients] on their team, ... part of the consortium so they are our wider team" (YW). There were also teams across the firm outside the specific residential facility, as well as with stakeholders that all overlapped: "My team...as well as that of management level the senior leadership team...No, they're different teams. So, on my team there's different teams. Because obviously there's the community team. It's all the stakeholders" (R1).

The meaning was less about the team structure and more about the culture. There was a sense of teamwork, camaraderie and working collectively towards a common goal:

everyone has a part to play, and I am a spoke in that wheel... It comes back to the best service, the best care, quality of life that we can provide to the person. And to be able to do it in a way whereby we respect each other's role in that. (R1)

Unprompted, every human service participant clearly articulated a purpose or mission for their facility, with productivity primarily described around the progression of that mission. For local government more broadly, this was expressed by meeting community need; of "everyone in the community on every level" (LG2). Community need was determined through community

consultation, the expertise of community development officers, and authorised through elected council decisions, who were reflecting the public's will through political mandate. For the four accommodation facilities, the mission was to the service users, the: "mission is to provide supported accommodation for people who are homeless or at risk of homelessness. So that it is our primary goal and under that there's the values of justice, excellence, privacy, confidentiality" (R1).

There was regard for the individual choice and control of service users in facilitated co-production of priorities, within certain parameters. For example, in the crisis accommodation, this was broken into small incremental stages, where "the staff monitor them daily and the case managers see them weekly and set goals and the clients have to attend every week and the goals are focused on their goals. It's obviously nothing that we set for them" (C1).

There was a clear focus on direction rather than the size of the steps: "Sometimes they can achieve massive amounts while they're here, get into long-term accommodation. Sometimes they can achieve smaller things which to us would seem quite small but to them it's a massive step" (C1).

While all the human services participants emphasised a degree of support in their own way, only the crisis accommodation combined this support explicitly with 'easy' service entrance and exit:

support them to find accommodation that didn't need a program and then when they were ready to come back to us they can come back. Yeah basically it's just about getting them to a service that suits their needs at the time, and that could just be somewhere that provides a bed for them every night and not the support. (C1)

Measurement and reporting of these co-produced outcomes varied substantially, based on the facility purpose. The youth facility provided accommodation for up to two years while users embarked on education or employment. This facility undertook exit surveys and followed up user progress at one year following exit. The crisis accommodation with clients flowing through the service within three weeks to six months, utilised

outcome or ends-based logic, through the Homelessness Outcome Star together with “results-based accountability” (C1). These were methods to co-rate issue areas and co-produce priorities with service users, picking “between two and three areas to work on with that client as their immediate goals and they tend to be the ones the client sees as being their areas of highest need so the lowest scoring areas” (C1). These methods were also used managerially to assess service performance “at the end of every six months when we do our main audits and our main reports we would print that off and we could see the improvement over time of the clients on their outcome stars” (C1). Program level reports produced from these tools regularly and constructively adjusted practice through team meetings:

It’s a really positive conversation that we have because it’s based on the results-based accountability and the staff are actually really interested in that. Because I think it is one of the main areas that helps us to get positive reflection on the work that we do every day, because in this area you can feel like you face negativity all the time. (C1)

Teams in each setting were recipients of this type of “continuous improvement feedback” (LG1). As well as the value of this regular reporting to the team, there was acknowledged use of teams for collecting and responding to an evaluation of any form, including “questions comments compliments complaints... more creative ways to gather that” (LG1).

The social housing and residential care facilities were principally for ongoing (also termed permanent) residents. While each local government program or service utilised some form of reporting from attendance to compliments, the complexity of measuring outcomes in these ongoing accommodation services to an essentially closed target cohort was acknowledged:

Two ways really. One is through the obvious stuff, so we’re talking about feedback that we gather from events and the attendance and really as a bottom-line sort of thing... a very stringent audit process which includes methods of continuous improvement,

identifying gaps, identifying weaknesses, identifying whether there are problems, and working towards and solving. (LG1)

In contrast with this form of complexity, participants noted the specific non-government firm requirements to evaluate, which again were perceived as based on funding body requirements; “having worked in not-for-profit everything you do is with government funding or come from grants or those sorts of things” (LG2). The social housing service was measured solely on occupancy levels, so there was no evaluation of service experience, performance or outcomes. The residential care facility primarily used accreditation methods regulated by the aged care sector.

6.2 Productivity – personal through to human services work

The interpretation of the productivity concept was consistent between participants, with different meanings from the personal sense of productive life, to individual work productivity, program productivity, through to the productivity of the entire firm. In their personal life, productivity was “achieving the things that I wanted to achieve” (YW). At the level of an individual worker, productivity was about efficiency in getting things done and utilising other organisational resources, including knowledge and teams to do that. However, it was always results-focused. This focus on results meant that individual productivity to participants was not simply about an efficient process, not just the how but also the what:

time management and how you allocate your time to get what needs to be done, done. The best ways of doing things, so having a strategy in terms of what you need to achieve and when you need to achieve it by and how you going to achieve it... being productive is getting what you need to be done. (LG2)

Productivity was generally understood in work terms as contributing to the firm or agency mission, which for local government was “meeting community needs and coming up with ways of solving community problems and/or meeting community needs then I think they’re being productive” (LG1). The

results-focused nature and mission orientation ensured that increasing productivity at the firm or agency level was a strategic exercise.

The participants presented genuine commitments to co-design and co-production of services together with service users. There was a sense that the meaning of the human service outcome had to be at least understood from the user's perspective, possibly owned and developed by them, no matter whether seeming a big or small outcome to other people (Table 8).

Table 8: Productivity is achieving outcome relevant to user/s

Selected quotes from participant interviews
<p>Residential Facility So it would be a whole person approach and so that would involve obviously their well-being, their mental health, their physical health, how happy they are. And I often say that our job here is to ensure people are happy and free from suffering, free from pain. Because if you can achieve that then, then you've achieved your goal. As a service provider, as a service organisation we have. From the point of view of the person, if they are coming towards the end of their life, whatever that might be, if there is a degree of contentment and they are ready to transition to whatever is ahead, and that transition, that death is done in a way that they, there isn't regret, they've made peace, then we've achieved what we're here for in terms of a facility. And what we do see is an improvement in people's health and well-being and happiness and that's yeah, all the, so productivity is everything that goes towards that (R1).</p>
<p>Crisis Accommodation I mean it's probably one of the driving factors of my role, the productivity, because it's for us as a service, productivity is the outcomes that we get, and our productivity is measured on our outcomes and we do that very often because we want to make sure that our clients are getting outcomes ...an outcome would be a change for the client or an achievement for them of some sort and something that they see is an outcome or an achievement. So it can be as I explained earlier on, the goals, it can be something really quite small which has been troubling them for such a long time, like getting their fines in order, or something like that, because it makes a lot of difference to their income and then they have some money at the end of every fortnight rather than struggling (C1).</p>
<p>Local Government the purpose of local government is to meet the, to promote the social development, economic prosperity, and environmental... of the community for which it is responsible... That's what we try and do and that's why productivity is so difficult. Because that basically says make sure everything's fine for everyone. Which is quite hard to measure at the end of the day (LG1).</p>

6.2.1 Productivity is bigger than the ‘small hows’ of efficiency

Productivity was compared and contrasted with efficiency by the participants. The relationship between efficiency and productivity was complicated for some participants to articulate, almost synonymous but with qualitative differences: “I think it’s much the same... not so much the same thing but they work hand-in-hand. So if you’ve got the resources you can be more efficient” (R2). Although there was overlap, there was a tendency for efficiency to focus on a specific process or ‘small hows’, with productivity a bigger concept (Table 9).

Table 9: Productivity contrasted with efficiency

Selected quotes from participant interviews
Productivity I think is achieving what needs to be achieved, efficiency is how you go about doing it. Would be the difference that I see between those two (LG2).
Productivity I’m looking at big picture stuff, efficiency I’m looking at that, how long does it take you to write that report that needs to be written (LG1).
I think efficiency is more specific, it does seem more specific than productivity... never actually compared the two terms... and I think efficiency is much more how it’s done and productivity, yeah it’s is more the result. It’s more the outcomes at the end (C1).
It’s interlinked... between efficiency and productivity. I see productivity probably outcome specific linked (R1).

Efficiency for participants was related to the technical process of doing, and the technical relationship between means and ends: “Efficiency is doing. I think the local government sector is very simple in its understanding of efficiency. Efficiency is doing those things at minimum cost to ratepayer” (LG1).

As well as a focus on outcomes relevant to, if not developed and owned by the user, unlike efficiency productivity had a broad values orientation:

And that depends whose interests it is, whether it’s the person’s interests or the health department interests, say. And that can come down to your values as well and organisationally. I mean one

would hope there is an alignment, but given the specialised nature of the people we're providing service to quite often there isn't that alignment necessarily and we are always that, in the place of defining that alignment... Okay if I talking about productivity as being outcome and you've got health department saying they want less hospital admissions cos it costs them 1300 or whatever a hospital bed, they don't want people to smoke because they'll end up in hospital, shorten their lives and you've got all these other complex health issues. So that's like the productivity, the efficiency I guess is the way that we do it, and so our approach is as I say a palliative approach and harm minimisation strategies. And that's where there's kind of that difference. And if you were hard line, you know health, you would go as they do in the mental health, you're not allowed to smoke and you've gotta do this, and get fit and everything like that, well yes we all understand that people have a choice at the end of the day. So that's how I see that slight. Yeah. So they are interconnected, but I do see that shades of difference if you like, coming back to the value base. (R1)

6.2.2 Team productivity is also about outcomes influenced by teamwork

Team productivity for participants followed the same thread as both personal and work productivity, with a focus on results or outcomes, influenced by teamwork: "I guessing it's about getting the most effective results working together as a team, that would be good productivity" (YW). Team productivity was regularly examined by staff, looking for improvements, including changes to team membership; "our program is constantly under review and we're always going to the board and talking to them about the program and the outcomes from the program and what is happening within that program to increase productivity" (C1).

Productivity for non-government teams was oriented to outcomes for both the individual user and the current service. Firm-level productivity was also

unified across teams around the long-term mission, which included advocating publicly for both the firm and the mission: “Raising the profile, media profile in terms of trying to destigmatise homelessness and ensure that funding continues for specialised services such as ours. So that’s an important part and we’re all involved in that” (R1).

Moreover, the team reporting outlined previously was part of this unified mission, as “this in-depth reporting has mainly started coming through with organisations and the changing direction of needing to show the getting outcomes instead of outputs...results-based accountability” (C1).

6.3 Wellness Clinics as four distinct health services

Each Wellness Clinic formed to suit the specific facility and human service context. Characteristics of the Wellness Clinic varied between each of the four facilities:

1. Crisis accommodation where the health service was a weekly screening and referral service; “screen all of our new clients... They do a health screening on the clients and then refer them on to the appropriate services if they need any referral or just to generally make sure that they’re in good health” (C1).
2. Residential facility where the clinic initially provided an intermediate solution to substantial nursing service limitations evident as the hostel grew into a nursing home-like facility, and was now part of a more comprehensive health service system providing; “better healthcare, better healthcare systems in place... like continuous improvement” (R2).
3. Social housing where the nurse constructed the clinic as a community health check, whereas the local government participants saw it as chronic disease management.
4. Youth accommodation where the Wellness Clinic was a supplement, with the screening and referral function provided by youth work case managers. These case managers undertook an extended self-report screening with service users without any clinical testing, which

included health and mental health items: “How do you cope with those, what strategies have you got, are you linked in with any other services, health services, mental health services. How’s your physical health, how’s your nutrition?” (YW). However, the youth facility participant was clear that they did not directly manage health issues; “no way no that’s not our job” (YW).

Across the Wellness Clinics, the nursing staff was clear that their role was as a facilitator of clinical placements for students, and the health service was understood as ideologically grounded in PHC: “they were responsible for meeting with me, telling me what they wanted and actually giving me feedback about my suitability for the role. And for me that is primary health because the guys have a sense of ownership” (N1).

Despite the uniform naming convention as a Wellness Clinic, the nurse-run health service was very different in each facility in dimensions including and beyond the service model. There were differences in the content, scope, the perceived role of nursing students, and the understanding of facility staff of the health service. There were also differences in the formality of the facility relationship with the Wellness Clinic, and how each of these clinics had evolved as health services in two to three years of operation.

However, two prominent themes were common across the facility participants. The first was the health service provider was never explicitly identified as part of the facility team except in the residential facility but was always included in broad discussions about group interactions, described here as the ‘team approach’. The second was that the health service role was a negotiated service, determined by the facility. The health service and the individual nursing provider needed to fit well with the human service practices and norms. Ultimately, the health service productivity was primarily expressed in its contribution to human service (i.e. social care) outcomes. These value judgements included the Wellness Clinic’s contribution to user goals, the facility mission, and providing improved access to health services through different mechanisms.

6.3.1 Wellness Clinic need, description and evolution

All of the facility participants noted opportunities to improve access and use of health services for their service users through the Wellness Clinics: “Some haven’t seen that GP for 20 years, they just don’t, it’s not something that they go out of their way to do, especially they don’t know who’s gonna bulk bill and who’s not” (C1).

The Wellness Clinics had no formal or direct connection to an existing health service provider. A VET agency provided the Wellness Clinics. The VET agency existed external to the facility in all cases except the youth accommodation, where the VET agency was also a member of the service consortium. However, even the VET consortium role was understood as an education link for clients, not as a health service provider. The local government and residential facility participants offered some information on formal relationships. The local government operated with the Initiative informally but noted formal agreements that needed updating: “We have had a service level agreement with them that was established before I came ... It was only partially functional. It was more of an informal partnership that we had than a formal one” (LG1): “I’ve been liaising with them on drafting the MOU [memorandum of understanding] that we are developing at the moment moving from the service level agreement to the MOU” (LG2). Relationships in the residential facility’s aged care environment were much more formalised, except for the doctor: “there’s all service agreements in place ... We’ve never had an agreement with the doctor ever. Maybe they’re exempt. Certainly with the pharmacy we do, with the podiatrist and we’re about to draw one up with the physio” (R1).

Each of the facility participants had views on how the health service should operate, in terms of its service, models of access, and relationship to mainstream health care. For example:

A true adolescent clinic only works if truly flexible in they don’t have to make appointments, things like that because the not very

good at keeping those appointments. And we're insisting that they do that in education training and employment anyway and keep their rental inspection appointments. You know that's quite a grown-up concept for a lot of people doing that. So this is one place where they can do is go and knock on the door. (YW)

The single nursing team operating across the four Wellness Clinics as originally envisaged by the Initiative changed to a nurse allocated to each Wellness Clinic. A nurse identified each Wellness Clinic with a single facility team, rather than the facilities being a set of services provided by a nursing team across the clinics. In a sense, the cultural norms of each human service facility dominated the arrangements: "Each Wellness centre has its own team and the personnel vary according to the nature of the services offered" (N1).

There was also the ease of team language, with participants during interview moving between different team constructions, and other forms of group interaction such as networks. For example, a nurse also understood that while each service was originally "set up as a Wellness centres" (N1), they had evolved separately to meet needs, as interpreted by their respective human service facility; "become a nursing assessment and support service, [crisis accommodation] and [social housing] are wellness centres, primary healthcare model. People self-referring, coming for health education, health support, assistance to facilitate access to health, quite a bit of teaching, and monitoring of existing health conditions" (N1).

The Wellness Clinics were different in features such as content, scope, method of access. These were to meet the perceived needs of service users. For the social housing, there was a drop-in clinic that was catering to people with established chronic disease, as "they just don't call up and make an appointment. First you have a line of about three people usually outside and everyone keeps their eyes on and watches when someone goes in someone else comes down pretty quick" (LG1): "Some of them are coming every week they've got specific health needs that they're addressing and you know managing their chronic illness and those sorts of things" (LG2). The operation

of the Wellness Clinic in the youth accommodation was also relatively informal: “you can make appointments if you want to but the doors open basically you can walk in” (YW).

In aged care, the Wellness Clinic evolution had occurred alongside the building of the residential facility, which had moved to new premises, doubled in size, and grown to include considerably more complex residents. The Wellness Clinic evolved to provide an interim nursing solution, and then stepped back a little as the residential facility started to pick up its own health service responsibilities as a comprehensive nursing home facility:

So it was responsive to the changing environment that we have here. One of the things about it is it can change again because it can be flexible and adaptable to the changing needs here... I use the word organic, I mean you could call it chaotic, you could call it sailing by the seat of your pants, but it had to, it just grew. (N1)

In the youth accommodation, the nurse’s role evolved as the staff confidence in the service capability, including the skills of the specific nurse, developed:

we let her come in and kind of fit in if you like. And it was then when she had such a strong connect with young parents that I decided that I had a chat with her about could we do some combined health sessions around that and she’s been so open to that and she is using all the resources they have got that are appropriate at [Initiative]... so it’s fantastic. (YW)

In the Crisis accommodation, the Wellness Clinic evolved from a barely used service to an integral part of the program with a health screen on intake through an informal screening process:

we have had cases where guys have known there was a health issue but they’re too scared to get that addressed. They find it quite confronting to go and see a stranger ...they need to build that trust ...when she started with the program a lot of clients wouldn’t go and see her and then they started seeing here every single week. Over the course of probably two months she started to get

bombarded as she walked in the door by guys ... would be guys who just wanted to help her carry her stuff back out to the car and on the way ... they just wanted more that informal health screening and then they talked about it and got referred. And so yeah it's been a real eye-opener. (C1)

Particularly in the three newly established or heavily modified facilities (i.e. crisis accommodation, residential facility, youth accommodation), the Wellness Clinics evolved as each facility evolved, with participants evoking a sense of timing or synchronicity. However, there was also clear inclusion of the Wellness Clinic in the facility planning: "So the initial discussion was that we would have a clinic on site and hence that room was dedicated towards that and that was in the building plan" (YW).

Each specific nursing worker, through both their clinical knowledge and system knowledge, including their individual connections to mainstream health services, contributed differently to the development of their respective clinic. For example, the first nurse in the crisis accommodation "was a wealth of knowledge when she first came in and set up the program and then ... came in ... the links with inner-city mental health which seemed a lot more appropriate for our service" (C1). There had also been an evolution of the health services more broadly, through connections such as the NP and GP collaborative through the Initiative resulting in "definitely far superior outcomes for the residents" (R2): "So yeah it's just improved" (C1).

6.3.2 Health service or student training?

As previously described, the nurses saw their role as a facilitator of student clinical placements. There was a general acknowledgement from facility participants that there was a student component to the Wellness Clinics. However, understanding from facility staff varied from generally student-led, to student participation in a nurse-led clinic, to a marginal role in the youth accommodation (Table 10).

Table 10: Perceptions of student role in the different Wellness Clinics

Selected quotes from participant interviews
<p>Crisis Accommodation introduce the students they've got with them to the case managers and the staff on site and then get a handover from case managers... They go into the consultation room and then they spend the night on the floor walking... They manage them really well as well... Four of them don't rock up see one client which is brilliant... It's not too overwhelming for the guys and the guys come to see them more as a medical team (C1).</p>
<p>Residential Facility She basically puts them through assessments and stuff and goes and visits residents she'll get them to look at you know their history, diagnosis and medication and all that sort of stuff. And then with the student she'll show them how to assess... If there's any issues, if somebody's gotta a red eye or a temperature or then she will go with the students and get them active in assessing them to see what they could do and do they have to refer to (R2).</p>
<p>Social Housing the nurse is really the one doing things and the students are coming to help and to participate and to learn. But the nurse... is the one the residents identify as the one running it and she's who they come to see (LG1).</p>
<p>Youth Accommodation She has students sometimes and it depends on whether she has students that day... sometimes it depends on what we're doing. sometimes there's a couple of students and they will be, they'll help out with the child minding... the students can then come into class and sit and be participants in class. just depends (YW).</p>

However, there were subtle differences between the different facilities in the relative understanding of health service type or student clinical placement. The residential facility understood that they received the Wellness Clinic as a student clinical placement opportunity. The clinic was perceived as a 'win-win', with quality training experiences for students with a complex patient cohort, while addressing the residential facility's assessment requirements and providing staff access to mental health expertise:

it's a training program for enrolled nurses. And so the win for us is that a lot of our assessments are completed through the training of the enrolled nurses under the direction of the registered nurse. And so they just get fantastic experience with people that they would not come into contact with normally. (R1)

This win-win contrasted with the understanding by local government officers of other Wellness services in the general community, and at the social housing. These Wellness Clinics were all understood primarily as health services, with limited acknowledgement of the clinic role as a student clinical placement. While the social housing service was more of a chronic disease management clinic: “the community outreach clinics that we run are really structured. They check your blood sugar... that addresses certain health criteria rather than that looking at managing chronic conditions and those sorts things which is what they’re doing at [social housing]” (LG2).

This local government officer view, however, was inconsistent with the nursing position that the social housing Wellness Clinic remained a health check, without longitudinal or ongoing responsibility for clinical health care. The crisis accommodation participant also understood the clinic as a screening and referral service rather than management service and made limited unprompted reference to students: “I don’t know exactly what is involved in the health screening but it’s a general overview of taking blood pressure, cholesterol things like that” (C1).

Most participants from the facilities had a reasonably clear understanding of the basic tasks undertaken in the Wellness Clinic, but one, in particular, was unclear on health profession roles, particularly that of a nurse practitioner. Asked directly to confirm their understanding of a nurse practitioner: “Someone who is so skilled that they’re not just a nurse ... got additional training and that to be able to train. So I see them as an expert in their field” (YW).

6.3.3 Personal and task contributions to performance

There was a real sense from participants of the unique contribution of the specific individual nurse to the role. As introduced previously, the different contributions to the crisis accommodation service of different individual nurses were evident as the service evolved, identified clinical knowledge and system knowledge and connections. There was also an acknowledgement of

how each specific nurses' personal attributes could contribute to the service in the youth and residential facilities. The participant comments also indicated the complementary fit the facility participants felt between the task responsibilities, particularly case management in youth work:

she's mature to start with which is good. She is youth friendly she has teenage children of her own so that makes her, she doesn't overreact or judge or do any of those kind of things that we really don't need. We certainly don't need that with our young parents and don't need it with any of our young people. We don't need people to judge them for their past behaviour or what's going on in their life so she's very nonjudgmental. She's empathetic, she's compassionate. She's all those things that you would hope nurses would be. But the fact that she's actually can engage youth which often doesn't happen in other kind of health areas makes her right for here. She's a really good listener and she knows where to put that. She doesn't, she doesn't take over or case manage or do any of those things... her responses are perfect for young people as well and she is very open and flexible to that... so that's why she is and just to kind of add to that we did have someone that came in before... who wanted to case manage. And that created a lot of conflict between that person and the case manager and so we made that very clear... that she wasn't the appropriate person for here. She was very good with youth but she really, she started doing her own referrals and whatever and there wasn't a transparency of information between her and the case managers and she didn't have any experience in paediatrics. So the young parents wouldn't go to her. So that yeah we made that fairly clear... that she wasn't the appropriate person and that's when... came and we're glad she did. (YW)

The residential facility participants appreciated the important contribution of a blend of knowledge, skills, experience and other personal attributes across the involved health service providers at the residential facility:

one of the reasons [Initiative] is so successful here is about the personality... is highly skilled, intelligent but her approach is just so human, so warm. Her energy... we are so blessed to have such an amazing person. She's a special great teacher but she is more than that. Her experience in mental health. And as an example a couple of weeks ago we had a fire evacuation and there was a particularly difficult gentleman who was just new in the facility I would say quite unwell, acute and the way he was he was so anxious with the noise of the fire alarm and having to gather with all these strangers out there and he was really beginning to escalate and she just calmly guided him back in and was so reassuring and that was so typical of how she is with people, with complex people. So I mean that that is you know very much about the success. And... who comes here is also, different personality but a wonderful person, also mental health trained. So we've got, and even with our GP and NP they're just people, beautiful people as humans, as humans we cannot, was so lucky to have such an amazing team, health team... so that's definitely part of the success, that's something that you can't quantify... it's really hard to pin down. (R1)

6.3.4 Is it the 'team approach'?

This case study started with the proposition that there would be a team of nurses providing Wellness Clinics at different locations. These nurses would form a Wellness team, delivering health services in targeted locations to targeted cohorts. Certainly, in very early efforts as the clinics commenced, this seemed a reasonable description. Across the nurses, there was some continuing reference to a VET agency identity, and some sharing of nursing roles across the Wellness Clinics as a leave relief 'network'.

However, the situation changed as the Wellness Clinics evolved and matured. The teams were now many and varied; the clinic nurse now identified with multiple teams. The residential facility saw the nursing role as

integral within their newly strengthened health care capability, but in some ways, it became more about the 'team approach', understanding working together rather than structural team identities "and so that's another very important role that she plays within the team approach, it's very much a team approach" (R1): "I identify as a [VET] lecturer, however having taken on this role in the community, I now feel as though I work with several teams. For example today I am a member of the [aged care facility] team" (N1).

For the local government officers, this team approach included working together to support community-based events with advertising, as well as connecting individual service users to information and other services such as home care.

6.3.5 Negotiations dominated by the human service provider

There remained a generally consistent identity to the Wellness Clinics from a nursing perspective, around elements such as service accessibility and style: "some people are not comfortable with traditional mainstream service setups. They can be thought of as quite closed, quite cold... It's easier in fact to informally pop in to someone" (N1).

However, the health service providers and the facility negotiated the evolution of each Wellness Clinic. While some of the Wellness principles stayed true, the facility mainly set the boundaries of negotiations, such as that the nurses would not case-manage in the youth facility. The local government participants identified several health and wellbeing programs, overlapped with community development and in-home services, with many in partnership with non-government firms and private businesses. There was also a more regulatory component of the local government's work, including disability access and inclusion. In the residential facility, these negotiated boundaries included accepting poor health choices and risky behaviour:

Respecting a person, listening to a person, not judging a person and that can be incredibly challenging when people maybe don't always show the respect because they've got impulsivity or unwell

or pain. And you know from our point of view they continue to make poor health choices, drink excessively, smoke excessively, and we allow that here. (R1)

6.4 Health service productivity

One nurse recalled their past experience as a forced participant in the 1970s in productivity through time and motion studies. This participant reflected that their previous experience might have influenced their emotions about productivity and related terms, but also felt the meaning had changed to an outcome focus:

I've always associated productivity with throughput and efficiency might not be that at all, you might do less but what you do you do well and you have a satisfactory outcome... both should have not just how much but how well in them. But I think sometimes I've in the past associated productivity with bums on seats and numbers. (N1)

For facility participants, the Wellness Clinic productivity was generally understood in a similar way to productivity within their human services or social mission; as related to outcomes. The outcomes may be health outcomes, but needed to be both organisationally relevant and priorities of individual users:

And also to have that evidence from the point of view of the person receiving the service. It's not just a self-assessment of the team saying yeah we're doing all right or we're not... I mean again it's that team approach ensuring that everyone is on the same page, supported, able to debrief. (R1)

Health service productivity could also comprise connecting or linking with other mainstream and homelessness services, including health services. For one nurse, the Wellness Clinics were not necessarily considered uniquely suited to meeting needs, nor were they necessarily intended to be innovative in the sense of a grand introduced idea. However, what became clear was

that many participants saw the navigation, referral type action for people disconnected from mainstream health and social care services as essential; “we refer a lot to them and they say they would not get the community referrals if not for [Initiative]. We are picking up who are not picked up by others” (N1).

This linking and connecting to other services was a shared activity, with different people providing their contributions. For example, the local government was about “supporting them with any specific client needs that they come across. Yeah more of that support and liaison role” (LG2):

It was also we would deal with specific clients or specific concerns... if one of the nurses were to find a particular client they were worried about for some reason or whatever then they'd work with me to find a way to support the person or to link them in with other services or to make sure they were being monitored. (LG1)

The linking and connecting could be to information, support services, or health care. As well as external, there were internal health service connections in the residential facility, where when “they'd assess a resident's care needs and it's been brought to her attention that they would benefit from having an OT [occupational therapist] or benefit from, I guess that's where we responded and we've got these services in place” (R2).

There were also advantages from Wellness Clinic nurses having relationships, not only with other health service providers such as GPs but with the clients and their service providers across agencies and settings: “So they have a good partnership between them as well ... and when it's brought up in the team meeting he can advocate for the client because he knows them” (C1).

Participants expressed the systemic limitations of mainstream health services to address the complex needs of these underserved populations on several occasions: “these are not people who can be easily, seen quickly seen by GP ... So at a basic level the system breaks down. He doesn't attend

appointments they think they have given or doesn't make appointments" (N1).

Communication and information-sharing were critical for productivity. A nurse recognised and described the substantial difference in the sharing of information between facilities and their respective Wellness Clinic. The residential facility and crisis accommodation had detailed systems and documentation, whereas the 'walk-in' health checks of the social accommodation facility had a consent process, but no documentation retained as requested by the client group. Communication was central to team productivity in the residential facility, through various means, including formal channels: "Having that communication between all the whole team... Feel like they're aware of everybody else on the team so everyone knows what's happening" (R2); "it's an absolute team approach... has access to... their clinical notes as well as obviously the clinical notes within" (R1). Within the crisis facility, there was the augmentation of verbal conversations with formal written communication sharing noting the undertaking of a health screen and any referral actions from it. However, the actual clinical content was not shared. The youth facility depended solely upon verbal information sharing: "but because we have permission with all our young people to share, she will share verbal information with me and with the case managers, and then it's up to us to put those into our notes" (YW).

Limiting the sharing of information to verbal methods helped the youth facility sustain their negotiated boundaries for the Wellness Clinic's scope of activity: "We don't need nursing practitioner looking at all the mental health stuff and then trying to deal with that and doing their own referrals because that's what our case managers do" (YW).

The nurse retained no written information in the social housing Wellness Clinic and stood fast to a position that the clinic was a health check. However, the nurse was using a survey tool to keep some de-identified activity records; "consent is done every visit by the student in my presence with the client and they're shredded at the end of the session, it's not kept.

And if I do a referral, the referral is given to the client” (N1). When asked how to justify the lack of records with a stable cohort of patients with complex chronic conditions, there was a clear focus by the nurse on the health service as a health check, staying within those parameters, and encouraging the individual choice and control (i.e. agency) of service users: “I think all you do is you go back to original consent which was I’m coming in for a health check okay, so I’ll give you the health check and I’ll give you your feedback” (N1).

Risks expanded from those associated with providing health services to include safety risks to the Wellness Clinic providers and students. The nurse provided responses reflecting the balance of risk in her assessment:

The environments are not traditional nursing environments except [residential facility]... We do the managing challenging behaviour as part of our training anyway, so do the students. I also for example I’ve had offers and been given duress alarms and things. We never activated it, battery died. (N1)

There was some uncertainty around issues such as whether these Wellness Clinics were systemic or innovative, in targeting service and access for people marginalised by the mainstream system. Alternatively, whether they were illustrative of how mainstream health care should operate, with at its core a more humanistic philosophy of people working together:

I don’t know if it is innovative. I have to say though as a consumer and as a health professional I think that the philosophy is clearly different... And our philosophy is yes you’ve got these issues but let’s just work together, let’s learn to communicate with each other and then see if we can do something that makes the road to help easier for you... I know I’m coming across as a bit negative about it but I have to say there is a group of complex clients who I think do not feel health services are unconditional or have positive regard for them. (N1)

The residential facility participants recognised the substantial change in management of health issues, where previously many clinical issues resulted

in transporting residents to hospital emergency departments, yet they'd "be back in a couple of hours" (R1): "sending people up to emergency who were constipated and like if you had a nurse ... that can be identified pretty much straight away ... thinking they're having a heart attack when they just need to go to the toilet" (R2).

These frequent hospital presentations were often seen as unnecessary but forced by not having registered nursing staff. The impact of the Wellness Clinics was not simply the avoidance of unnecessary hospital presentations. There had been internal improvements to health service coverage through GPs and nursing, including "an RN on board which we've done, so there's other partnerships there, an occupational therapist has come on board and last week we've just started with a physiotherapist team coming in" (R1). In settings other than the residential facility, there was limited access to, and underutilisation of, health services before the Wellness Clinics commenced. However, any use of health services due to more than an assessment of need by the unregulated staff. Service users would make choices based on ease of access, and perceived expertise: "Often the young parents will call the at home doctor service in because it's easier with the child than trying to get sick child via public transport to somewhere. Or they'll go directly to [specialist children's hospital]" (YW).

In relation to productivity measurement, the youth facility participant felt there was no other approach than individual anecdotes, but that was normal for their sector: "But that's also very youth work type model of working, so we're used to working like that anyway... we go back in the interview some of our older ones a year later just a little bit of a survey" (YW). The residential facility participants had strong anecdotal beliefs that there had been a change in hospital presentations but could not really measure it except for an arduous retrospective and manual examination of paper records. For measuring health service productivity, there was the already noted historical technical perspective from a "nurse for almost 40 years and in the 70s we had the old time and motion studies still going on" (N1). However, this participant felt that productivity had changed over time and new measurements needed to reflect

that change. This changed measurement included factors such as value judgements about the worth of service, nature of the service, and therapeutic relationships, as well as unnecessary hospital presentations:

we look more at quality and outcomes in respect to productivity.

Throughput's a measure but it's not always a measure of quality and so productivity is for me now maybe, is it a good product? And are we getting a good outcome for what we put in. (N1)

Interestingly, there was limited consideration of students with Wellness Clinic productivity. All participants noted the training of nurse students through the Wellness Clinics, and all except the youth facility participant discussed the suitability of student numbers and mode of practice to the experience of their users. However, the nurse noted that the numbers of students might be slightly fewer than in traditional clinical placements, although not definitely. Some participants viewed the student experience as more positive from a PHC Wellness Clinic, but how to value the clinical placement and health service productivity together was an identified problem: "Where you know, what I'm saying they're getting this as well, whether that's economic, whether that's productive, whether that's even addressed I don't know but that would be more truthful" (N1).

6.4.1 Wellness Clinics contributing to the human service mission

The health service (Wellness Clinic) productivity was fundamentally about the contribution to the human service mission. Most important to the facility participants was that these Wellness Clinics productively contributed to this mission. For example, the youth facility participant identified living skills, including young single parents being able to care for the health and wellbeing of their child:

so that's going out into a private rental with a job or with an education that can lead to a job a skill that they didn't have before they came in, with the ability to pay rent, rental history and the ability to actually look after themselves with a whole barrage of

living skills that maybe they didn't have when they came in... we see that as being productive. (YW)

For local government, there was potential to use their information on community needs "so we can start to target some of our initiatives around what we know are health issues because they do get information that we can use... is our community one that needs more heart health messaging" (LG1).

The health service productivity of each Wellness Clinic was outcome-based, but this meant different outcomes to different audiences. For example, to the residential facility participants, it was "the aged care agenda you know, which brings in a lot of ethical issues. Because it's about, ultimately it's about quality of life" (R1). For others, Wellness Clinic productivity also involved facilitating mainstream health service access. But, as previously stated, each participant fundamentally articulated Wellness Clinic productivity in terms of contribution to human service mission and service user-valued outcomes.

6.4.2 Productivity impacts of funding, sustainability

The Initiative had time-limited funding, so participants gave consideration to factors such as Wellness Clinic sustainability, ability to scale or further expand the clinics, and what consequences could be if the Wellness Clinics were to cease:

we may have played a part and in time could withdraw even if the funding didn't cease. So if the funding ceases quite naturally we'll just hand over to the organisation and I guess it's up to them to say whether it is a service that benefited them and if so do they want to take it on board. (N1)

Understanding about Wellness Clinic funding was mixed amongst the participants, with some participants primarily concerned with the short-term costs to their facility. The residential facility participants provided interesting perspectives, noting that the Wellness Clinic "is funded through their own program. All this is cost neutral, it doesn't cost the resident anything and they

don't have the money and is not costing the facility" (R1). However, the Wellness Clinic had also opened up some longer-term sustainable financial opportunities for the residential facility; "what we're looking at with the bringing on board the physio services we're hoping that we can balance we're hoping that all will be cost neutral" (R1). The overall sustainability of their facility was viewed as dependent upon a whole of facility perspective, seeking opportunities for saving costs, cost-sharing, and funding avenues; "it's the only way you can survive. Partnerships. for an organisation such as ourselves. I mean we're not-for-profit charity. We rely on our partnerships" (R1).

Ultimately, the Wellness Clinic was nice to have in the view of the participants, but not essential in the cutthroat financial world of sustaining human services. The health service was secondary to the mission, and the human service facility could survive without it, as it had before.

6.4.3 Change of human services – in/dependence and increasing complexity

There were some interesting shifts throughout the project in understanding the role of health services in targeting specific cohorts, and issues such as dependence, increasing sophistication and complexity of the human services themselves.

There were differing positions between participants around "cotton-wooling" (C1) or learnt dependence as opposed to addressing an access gap:

It's interesting for me not from a productivity point of view but from looking at dependence and independence continuum and looking at some of the clients who I see at [social facility] who I see elsewhere and what they do is they recruit support don't they?...

It's quite appropriate to turn up to a clinic setting or a wellness centre setting rather than presenting at ED [emergency department] when you've got a leaking tap which is what he used to do. (N1)

The approach to the dependence issue had changed over time at the crisis accommodation. Previous arrangements were based on the idea “that it was better for clients to go out and seek services in the community because it was trying not to make build clients’ dependence on their service” (C1). This had changed more recently, when “it was identified more that it was appropriate to get clients that help that they needed when they needed it” (C1).

There were also changes in the sophistication or complexity of human services. The local government had shifted from rates, roads and rubbish to more comprehensive services to the community, but was under pressure to pull back from some of that expansion. The residential facility was coming to terms with new responsibilities from changing aged care sector expectations; “we’ve also gone from you know, to looking at advance care planning advance, care directives and you know, that’s in view of trying to be better meet people’s needs as they age in place” (R1). Crisis accommodation had started as ‘a bed for the night’, but had expanded services comprehensiveness to a similar number of clients; “it was a really limited service, it then changed to having one case manager for all the guys, and now we’re at three” (C1).

6.4.4 Future and the Wellness Clinics

The nurse saw that the student clinical placement activity would need to continue regardless of the continuation of the Wellness Clinics: “The model wouldn’t be there and the philosophy wouldn’t be there, but the actual activity of supervising’s and facilitating students in a clinical setting is core isn’t it?” (N1). The youth accommodation participant was pleased with the Wellness Clinic service but pragmatic about any potential loss of the clinic. The crisis accommodation participant felt they would need to embed an alternative health screening mechanism:

because the health screening has proved to be quite an imperative part of the clients when they first move in. Identifying those health

issues as soon as they come in really helps the client to stabilise. So I think the fact that it's shown that we get a lot out of their program if it was to go we would have to look at something else to continue with that whole screening for our clients. (C1)

It seems only fitting to finish the case narrative with poignant commentary from a nurse regarding the Wellness Clinics now and into the future. The current reflections included the nurse's experience in the role, the recognition, risk and reward, including the potential to influence the attitudes of future nurses through the student clinical placement:

I actually don't know how I've ended up in this job or been it, but can I tell you because I'm enjoying it, I am continuing with it but the nature of it is, it needs to be looked at for many different reasons. And I think that it's opportune... we've had a number of nominations, I've had nominations, other colleagues have had nominations for quality and training, different initiatives. So I think we feel personally quite well recognised and I certainly feel like I belong to a team, the [Initiative] team. It's a very motivated team and a very flexible team that is willing to think outside the frame but also I think we are also willing to, not have a go of the profession or attack the profession as they sometimes see, but actually raise stuff that needs to be raised with a view to improving mainstream services... and their willingness to address the needs of the very complex group. And we are, and I have to say that I am as well. I'm also exposing myself and my vulnerability and the deficits in my knowledge and experience as I'm doing it. I'm doing it very publicly. So there is a degree of risk-taking in this for us as professionals but there's a huge amount of satisfaction from the experience that the students get, and the feedback that they give us is that it just brings their learning to life. And I'm hoping that we work on their attitudes and on their stereotyping and on their prejudices. (N1)

The future of the Wellness Clinics, and the Initiative overall, was for the nurse part of progressing nursing practice. However, this was not just a technical exercise in clinical skills advancement, this was as much or more about the social exchange with people and advocating for their care. Importantly, these Wellness Clinics should continue to evolve and not remain stagnant:

So I think we could within nursing stimulate more discussion about expanded nurses' roles. Especially in relation to the relationships with clients and saying, look you can still enjoy your clients you know. They're not the enemy. Actually making people take on board that not everybody is happy with us as nurses. That we should look for feedback and look to improve and look to be flexible in delivery. But also look at organisations who currently don't encourage initiative who talk about fear and risk management and prevent growth in people and services. So that's one arm. But this also could be replicated in so many different areas. The idea of growing people yourself. Perhaps that's what we can do, we can bridge the theory to practice into employment. But we could certainly also adopt a [Initiative] approach in mainstream settings and actually say you want to change the way you working, do you want to look at different models. (N1)

6.5 Case study 3 analysis

As a study of health service delivery within accommodation-based settings, this case provided interesting illustrations of the dynamic and evolving human service firms and sectors, and how these can interface with models of PHC shaped to meet the needs of the facilities and their users. The case also provided further insight into contemporary perspectives on productivity in service production, and the sociocultural rather than structural emphasis of the 'team approach'. Crucially, health service productivity was contextual, with the concept and measurement of productivity associated with achieving outcomes relevant to the user and the human service. While at times inclusive of more traditionally recognised health and health system

outcomes, these outcomes were purposefully selected as relevant to the human service context and service users' priority concerns.

This case study commenced as an exploration of productivity and health service production by an anticipated Wellness Clinic team comprising NPs, RNs, and potentially inclusive of NP candidates as well as students in RN and EN courses. This membership was consistent with the initiation of the Wellness Clinics project. However, as the clinics evolved in each facility, the Wellness nursing team essentially ceased with individual members and their work becoming more organised and aligned with their respective facility. A case study of one nursing team became a case study of four groups providing human services. Each group was associated with one facility, addressing different issues of different targeted cohorts at risk of homelessness. The health services in each setting became shaped to be consistent with the respective facility's values and mission.

6.5.1 Wellness Clinics implemented as a targeted innovation

The Wellness Clinics were intended as a targeted health service innovation, not as to substitute for mainstream primary health care. The Initiative Steering Committee undertook the planning and development of these Wellness Clinics with local stakeholders around the issue of marginalised and underserved populations, notably people homeless or at risk of homelessness. Targeting innovation in this manner has long been held as essential to successful innovation implementation, particularly when supported by the organisational climate and a good fit with involved worker perceptions of value (Klein & Sorra, 1996). This targeting led to planning for these health services initially into four facilities; crisis accommodation, residential facility; social housing; and youth accommodation. Except for the social housing clinic, the opportunities identified and supported by these stakeholders were into physical facilities that were still in their design phase and not yet built. This timing may have reduced the risk of implementation failure. Despite the challenges with identifying the health service models and delivering health workforce for these services, implementation of all of these

Wellness Clinics continued due to recognisable organisational characteristics including the dynamic climate, financial support for the innovation, and the desire of workers to learn and establish routines suited to the new facility and its purpose (Klein & Knight, 2005).

The joint design and production of the Wellness Clinics evolved from an early stage of NP-led services, into RN-led services with primarily EN students. The initial NP-led services were beset with issues, with the initial NP team identifying concerns with clinical governance, but also that the service scope did not necessitate an NP workforce, and could instead utilise RNs. A recent case study found problems with sustainability of emergency department NP roles due to low levels of organisational support, but also underuse, recommending a comprehensive and supportive management framework (Fox, Gardner, & Osborne, 2018). However, this cited research examined an alternative model of health service input (NP rather than a doctor) in a traditional health service setting (emergency department). Unlike the substitution innovation in that study, the Wellness Clinics provided essentially a funded 'blue sky' opportunity for NPs to start, stretch and grow capability over an extended time of some years. Factors such as the imagination, creativity, perseverance, or risk tolerance of the individual NPs involved may have limited this NP opportunity. Alternatively, perhaps it was a cultural limitation, with the tertiary hospital-based training and practice of WA NPs affecting capability. Regardless, it certainly seemed that the RNs who followed the NP withdrawal were able to move the Wellness Clinic practice toward a more PHC philosophy.

What remained following the NP withdrawal was not a residual service, but something different from what was originally envisaged in terms of service, structure and relationships. In each facility, the Wellness Clinic became a shape negotiated with the facility. The facility retained a dominant role in these negotiations that appear to have happened organically at the 'coal face' with the respective nurse. A nurse was gently dissuaded and removed if the nurse was unable or unwilling to both; find a way to create a health service niche, and; exhibit personal characteristics that were deemed by

facility staff as consistent with their views on what was required. The nurse fit of personal and work characteristics, including 'way of working', had to be consistent with the facility principles, and seen as adding value.

The firms responsible for each facility were themselves in the process of change in response to internal and external challenges and opportunities. These firms were navigating this change through various inter-related levels of planning, ensuring that their course stayed true to their overall mission. Strategic planning by public sector agencies and not for profit firms is essential to achieving their mission and create public value (J. M. Bryson, 2018). This planning through social processes, through deliberation with others, could be particularly important in turbulent environments (J. M. Bryson, 2018). While change for these firms seemed the norm according to the participants, the introduction of the Wellness Clinics occurred at a point where the associated firms were managing internal and external change of unusually large scale and speed. The inclusion of Wellness Clinics into planning during this period may have aided successful clinic implementation.

There were numerous involved groups and teams identified as this case study progressed, except for the original conceived Wellness Clinics 'team of nurses' which no longer appeared to exist. Indeed, this may never have been a team in the sense of members interacting towards a shared goal, but more a functional group of people undertaking the same role in different settings (Allen & Hecht, 2004; Pearson & Jones, 1994). Nurses (and particularly NPs) involved earlier in the project certainly identified together as a collective, but when the Wellness Clinics became more established, this group identity dwindled. The subsequent RNs continued to identify with the broader Initiative team, but the originally conceived team of Wellness Clinic nurses essentially became colleagues providing leave cover.

6.5.2 Language of collaboration and the team approach

The nursing staff, as well as all participants from local government, not-for-profit charitable human service firms, and publicly funded health systems

were comfortable with an array of collaborative terms such as networks, partnerships and teams. Authors recognise the importance of a shared understanding of the “language of collaboration” for joint action (Beatty, Wilson, Ciecior, & Stringer, 2015, p. S342). However, these authors emphasised technical aspects of shared language, such as definitional agreement and measurement. In this case study, some differences were observed in use of this language of collaboration, with networks sometimes larger in size, partnerships between firms rather than between people, and teams the dominant terminology for describing small group interactions. However, the collaborative language appeared more symbolic than technical/rational in its substance. It seemed that a more psychological connotation, shared confidence and trust with being amongst like-minded collaborators who would contribute to collective aims, was instilled from the common language of collaboration.

In particular, the term ‘team’ was used frequently with comfort by participants to describe multiple team memberships, teams within teams, and teams of short or long duration. Within individual firms, the teams tended to follow organisational structure (i.e. units on an organisational chart), but most other team language was more associated with the ‘team approach’. This ‘team approach’ indicated satisfaction with how individuals played the game. It was cultural, about the shared understanding of and shared work towards mission and values, and the social bonds between players. This cultural use included an appreciation of various attributes of individual nurses, including their personality, their clinical expertise, their system knowledge and relationships. This team approach is consistent with Dickinson and Sullivan’s (2014) discussion of cultural performance as a lens for viewing the benefits of, and motivations for, collaboration. Dickinson and Sullivan (2014) highlight that organisational efficiency and effectiveness may be insufficient performance constructs for collaboration, proposing instead cultural performance emphasising social efficacy, a collective competence exerted through individual choices.

6.5.3 Wellness Clinic productivity is human service outcomes

Productivity was a 'larger' concept to these case participants than that of a measure of technical efficiency. Productivity was both bigger and different to meaning in neoclassical production theory and various performance frameworks (e.g. Productivity Commission (2009)). Rather than distinguishing between effectiveness and efficiency as performance frameworks commonly do, productivity was central to the participants' work; about the achievement of outcomes. Organisational mission and priorities for action identified by individual users were fundamental outcomes. While arguably near synonymous with productivity, participants saw a difference with efficiency. Participants perceived efficiency as a more technical process measure of what could be termed 'small hows'.

Health service productivity had potentially changed meaning-in-use from 1970s workforce time and motion studies. Health service productivity in the form of the Wellness Clinics was about issues such as: questioning current health service status quo; consistency with human service mission and outcomes; providing a link or connection to access other appropriate services as and when required; governance and communication models; ensuring appropriate utilisation of mainstream health services; as well as in this case, the inter-related nature of student clinical placement and health service in developing a sustainable funding model.

Critically, the Wellness Clinics were perceived as good by all the participants, but not essential. While perceived as an unfortunate scenario, people could survive without the Wellness Clinics and the health services in their various constructions sourced in other ways. The Wellness Clinics provided improved service quality, and a means to achieve better outcomes, but firms, facilities and their service users would survive their loss.

A sense of possibility balanced this pragmatic attitude of all case participants. There was a perceived need not to sit still, that health services such as the Wellness Clinics needed to continue to evolve and adapt in response to

external factors such as identified health service weaknesses, gaps and overlaps, as well as opportunities for continuous improvement within the facility and the clinic itself. This dynamism could not be internal or navel-gazing, there had to be adaptive and systemic reflection resulting in change meaningful to funders, users, and involved firms and agencies.

Health service literature tends to focus on outputs and outcomes, respectively as health service activity and defined health outcomes. It was interesting that the contribution towards the facility's mission partially expressed the productivity of each Wellness Clinic, and the Wellness Clinic service purposefully designed to complement the current human service work towards that mission. At the individual user level, this was mostly about addressing individual user identified priorities, with formal approaches to this including the Homelessness Outcome Star. These priorities may or may not include externally identified health outcomes as would be understood in mainstream health services. Individual user choice dominated the outcome agenda. A recent review of the Homelessness Outcome Star suggests that uncritical use may contribute to blaming individuals for homelessness, ignoring the contributions of systems and structures, and potentially propose a right way through behavioural modification for people to respond to the issue of homelessness (Johnson & Pleace, 2016). However, the Homelessness Outcome Star provides a useful outcome measure, that if used sensibly, provides useful insights to funders and service providers operating in a complex sector (MacKeith, 2017). While there is potential for outcome measures to be used competitively between firms in search of funding to address issues cloaked in complex health and support needs (Dobson, 2019), used judiciously as an operational tool there seems to be value in these sorts of outcome measures.

Wellness Clinic productivity was also assessed in its capacity to appropriately divert from, as well as link and connect to, mainstream generalist and specialist health services. The Wellness Clinics did not own any patient in a coordination or case management role. The service was truly a frontline primary care model, screening health issues, intercepting unwarranted health

service access, and actively facilitating appropriate care. There was a philosophy of patient choice and control expressed as person-centred PHC. The Wellness Clinics were not perfect, with some potential concerns, including the patient understanding of their personal responsibility, when patient expectations could be for a more paternalistic approach as evident from many other health services.

Funding and service sustainability seem issues never far from the minds of the human service participants. However, the primary focus was sustainable financing of their mission, with various efforts all coalescing around that purpose. The Wellness Clinics were a small contribution that had fallen like 'manna from heaven' into their laps. The facility participants were not attending to the Wellness Clinic sustainability in any meaningful way. Other means of providing the health services currently provided by the clinics could be found. Service was not dependent upon a structure.

The facility participants were peripherally aware that the Wellness Clinics involved students, but only a Wellness Clinic nurse was attending to the fact that clinical placement productivity was the key to the sustainability of the current clinic form. This health service/clinical placement interaction was not explored further by any participants. The nurse saw their "coal face" (N1) role as reporting the activity and assumed the Initiative Steering Committee and funding organisation could interpret the value proposition. Assessed solely on student clinical placement hours, which was the primary focus of the VET agency and the funding body, this model would struggle to compete with other clinical placement options. Attributing value to the health services is necessary as well, for these unique Wellness Clinic experiences to be worth continuing when other clinical placements for students could be made available.

6.6 Concluding remarks - case study 3

Initially intended to explore the innovation by a team of Wellness Clinic nurses, this case shifted to exploring four distinct Wellness Clinic

arrangements. An RN staffed each Wellness Clinic by providing clinical placement opportunities for EN students.

The respective human services context was fundamental to the design and evolution of each Wellness Clinic. In each of the four facilities, the sectoral reforms and internal firm changes required extensive planning at all levels, of which the Wellness Clinics were a small part. Wellness Clinics were included and valued through both their delivery style (influenced by the service model and individual nurse characteristics) and outcome achievement. Importantly, these outcomes were those consistent with the human service mission or individual user priorities, and not necessarily more traditionally accepted health service outputs or health outcomes.

Teams were more culturally mediated than structurally determined, with the 'team approach' and other language of collaboration demonstrating a shared belief in working collectively towards the human service mission and user-determined interests. Wellness Clinic success required negotiation by the nurse with the respective facility to have a service model consistent with facility mission and values.

Wellness Clinics in these four settings were targeted innovations, perceived by participants as valued, although non-essential contributors to human service outcomes. Wellness Clinics needed to continue to evolve, including a better valuation of both the student clinical placement experience beyond the number of hours and description and measurement of health service models in a human service context. The Wellness Clinics model could then potentially inform future targeted innovations that cross and connect aged care and disability sectors as well as health, mental health and human services more broadly.

CHAPTER 7

Multiple case study findings

This chapter commences with descriptive findings before proceeding to a more interpretative analysis of common and disparate elements between the cases. The descriptive findings follow the research aim to explore the meaning of productivity in small groups or teams, to extend innovation theory, particularly in relation to the consequences of innovation. Description of the findings concerning each research objective follows a brief review of the units of analysis in these cases.

Subsequently, the comparison of the cases is to both the themes identified in the individual case findings as well as the research aims and objectives. This comparative analysis explores the following five key elements of production and productivity in micro-level innovation derived from the cases. The first element considered is different small groups as types of micro-level organisation. The second is the focus on achieving outcomes as fulfilling the concept and measure of productivity in these cases. The third is the production process itself, and how value is conceived, created and measured. Analysis of the importance of context for productivity and production is followed by sustainability as the final element. Finally, the chapter outlines some of the limits to the analytic generalisation of the selected cases.

7.1 Cross-case study objectives

The research objectives were developed from the research aim to explore the meaning of productivity to contribute to innovation theory, and comprised:

1. Identify and categorise health service outputs within the selected cases.
2. Describe the concepts of productivity, efficiency and innovation.
3. Conceptualise models of efficient production in small groups.
4. Categorise and evaluate the innovation strategies in the cases.
5. Synthesise theory of innovative health service production.

Cross-case comparisons of findings for each of these objectives are described and tabulated in this chapter. These objective findings are preceded initially by a brief review comparing the intended teams with actual groups identified in the three cases (Table 11).

Table 11: Intended and actual micro-level of analysis in cases

	Intended	Actual
Case 1	Project team to implement a financially sustainable NP-led multi-disciplinary PHC clinic aimed at meeting community needs including cohorts that traditionally do not access GP services, such as the homeless, aged, young people, low-income earners.	Findings surfaced two distinct but overlapping groups: 1. Project Management Team 2. NP Coalition
Case 2	Multi-sectoral Initiative Steering Committee operating as a team comprising executives and senior managers from VET agency, university, and health agency.	Initiative Steering Committee also formed as a new network by the socio-cultural entrepreneurship of a direct interlock between two existing networks.
Case 3	Introduction of health service clinics by a team of nurses into accommodation-based services offered by key stakeholders for people experiencing homelessness or at risk of homelessness.	The team of nurses effectively ceased with 'team approaches' formed instead, by Wellness Clinic nurse/s with their respective human service facility.
Cross-case	Multidisciplinary teams (MDTs)	A culture of group work rather than always a structure of teams. Collaborative small groups utilising a "team approach" and shared teamwork language or a 'language of collaboration'.

The intention was for the three cases to provide three health service teams for analysis, comprising; a multidisciplinary project team developing and delivering an NP-led PHC clinic, a senior management/executive team steering the overall Initiative to provide innovative health services, and a team of nurses providing Wellness Clinics into stakeholder human service facilities. Instead, different forms of small group organisation emerged. The first case did retain a project management team, but also included an overlapping NP coalition. The second case was a team, but equally resembled a new network formed from two networks by a person common to both; a person who acted as both a direct interlock and sociocultural

entrepreneur. The third case saw the single initial nursing team operating across facilities disband even as it was starting to form, with gradual replacement by groups situated in each facility. Each of these facility-based groups in the third case used collaborative language and a team approach, but not a formal team structure.

Across this research, there were diverse examples of small group organisation. There was more cross-case consistency with collaborative language and culture than with formal MDT structure.

7.1.1 Objective 1: Identify and categorise health service outputs

Traditional production theory identifies production as a transformative process of converting inputs into outputs. While tangible production processes are evident in primary (mining, agriculture) and secondary (manufacturing) industry, services can seem a conceptual stretch for this theory. The very term production is often absent in service literature and practice; reference in health services is usually to service delivery rather than service production. Nonetheless, there is a general acceptance of some form of health service process akin to a production process, involving inputs converting to outputs. This output may be health service activity (service events or occasions), or health outputs such as changes in health status. Many service process models extend this further, with performance as inputs transformed into outputs, contributing to outcomes.

These above process models present health service production as an aggregate of individual events. The findings of the cases studied here extend thinking on production outputs, to include ideas such as attaining project objectives (i.e. Development of a new service); setting the policy agenda; a broader (and sometimes poorly-defined) set of 'productive outcomes'; and through contextual contribution of value to a human service mission, including value as perceived by individual service users (Table 12).

Table 12: Types of health service outputs

<p>Case 1 Project Management Team (PM)</p>	<p>Attaining project objectives From the project management perspective, the project output had major sequential shifts from the original multidisciplinary PHC vision to:</p> <ul style="list-style-type: none"> • An NP-led Chronic Disease Health Management Clinic; then • An RN-led clinic for clinical training of EN students; and finally a • Community-based hospital outpatient clinic.
<p>NP Coalition</p>	<p>Setting the policy agenda The NP coalition had complementary objectives unified as a single purpose: A strategic endeavour to promote and progress the NP role:</p> <ul style="list-style-type: none"> • From specialised hospital roles to experience and training in a family practice/PHC model. • To showcase NP capability and increase the public's confidence. Develop evidence for role through demonstration and research.
<p>Case 2</p>	<p>Productive outcomes</p> <ul style="list-style-type: none"> • Principally clinical training hours as meeting both funding agency and VET agency interests. Other productive outcomes included service delivery, benefits to community, students, as well as efficient resource allocation and return on investment. It was not established how to value or measure these ideas less tangible than clinical training hours. • It was not clear how to sustain these outcomes beyond the project funding term.
<p>Case 3 Common outputs</p>	<p>Value based on contribution to facility mission</p> <ul style="list-style-type: none"> • Health service outputs valued by contribution to the facility mission. • At an individual service user level, co-production of priorities within certain parameters was valued. Health services could directly or indirectly contribute to identifying or addressing those priorities. • Wellness Clinic outputs were also valued in their contribution to facilitating appropriate access to other health services. • Health system impacts from the Wellness Clinics included less unnecessary use of emergency departments for residents, internal improvements to health service coverage at the facility. In other facilities, there was clearly limited access and underutilisation of health care. However, any use of health services was based on more than an assessment by unregulated staff of need. Service users would make choices based on ease of access, and perceived expertise.
<p>Case 3 Variable outputs</p>	<p>Wellness Clinics value proposition included clinical placements for EN students, PHC philosophy, but differed in various dimensions including:</p> <ul style="list-style-type: none"> • Crisis accommodation - as a screening and referral service, with measurement including Homelessness Outcome Star. • Residential facility - as an intermediate solution as the hostel grew into a nursing home like facility, with measurement including sector accreditation and reporting • Social housing - community health check clinic or chronic disease management clinic, with measurement through feedback on meeting community need. • Youth accommodation - as a supplement to screening and referral provided by case managers, with measurement including anecdotal follow-up of some users after left service.
<p>Cross-case</p>	<p>Diverse context-specific health service outputs Health service outputs included:</p> <ul style="list-style-type: none"> • PHC service/clinic creation • Advancement of NP role • Clinical training service • Productive outcomes including: Clinical training hours; service delivery; community benefits; efficient resource allocation; return on investment. • Contribution to human service mission, and within these parameters, the changes valued by individual service users

7.1.2 Objective 2: Describe the concepts of productivity, efficiency, and innovation

Production theory explains productivity as a measure of productive efficiency, the ratio of outputs to inputs. In this theory, innovation extends the productive frontier by releasing technical constraints to the production process. The three conceptual ideas emerging from these cases are; productivity as outcome, efficiency as a narrow process measure, and innovation as a diverse concept.

Neoclassical economics is replete with different forms of efficiency, with productivity (productive efficiency) one distinct form. Participants in these cases viewed productivity as a centrally important concept in their work (Table 13). Work productivity was both more and different to productive efficiency, with a focus on outcomes. These were socially constructed outcomes valued by the embedded culture. They could be nursing sensitive, health or health system outcomes. However, health service outcomes could also be about the contribution to other aspects of life valued by the sector, agency/firm, or individual service user. Health service productivity was not always assessed against traditional health service or health outcomes.

Team productivity was also about outcomes; team outcomes. However, the teams were not usually structural or located within a single agency or firm. Interorganisational and cross-sectoral small group outcomes were subject to subversion to unexpressed cross-purposes by the powerful group members. Exhibition of power included by professional coalition, or ownership (of funds/facility or program).

Table 13: The concept of productivity

Productivity	
Case 1	<p>Productivity as health service outputs and health outcomes Productivity was broadly associated with good and effective use of one’s time. Individual productivity shifted from inputs (time) in personal life to outputs at work. Productivity of NP work related to outputs (health service activity) and effects on patients, including nursing-sensitive outcomes.</p> <p>Systemically, productivity was superficially associated with efficiency, quality and effectiveness in work, indicating the powerful effects of this language in contemporary health service. Lost productivity through unwarranted processes was a theme. A clear focus on work structure and in particular processes, with little discussion of relationships between workers.</p> <p>Despite a clear awareness that this research was studying productivity in teams, no interviewee discussed team productivity as either teamwork performance or the outcomes of teams. Team identification was repeatedly with the employing agency, yet discussion of productivity referred back to their profession as nurses rather than the primary activities of their employment sector (i.e. teaching and/or research). NP identification was with health services, doctors and other health professionals as the collective.</p>
Case 2	<p>Productivity as derived from sense of purpose Individual productivity is derived from innovative combination of shared values between work-networked people, their personal sense of purpose and their connection of this to interpretation of their agency mission. Individual purpose consistent with agency purpose but extended for the executives in different ways as a ‘public’ role obligation to enhance public services offerings to the community.</p> <p>Individual productivity is interwoven with their individual commitment to some purpose, and ability to draw together ideas from multiple sources to connect with their personal purpose and their agency’s ongoing work. This creation occurred from previous relationships that may have been formal or informal, but importantly had some understanding of the other people’s work motivations and values.</p> <p>Agency productivity was around different product offerings. For university it was research, teaching and student clinical placement. Initiative and Steering Committee productivity were both associated with progress towards vision, a strategic management perspective that was both planning and execution.</p>
Case 3	<p>Productivity as contributing to mission Personal life productivity – achieving those things want to achieve. Individual worker productivity – efficiency in getting things done and utilising other organisational resources such as knowledge and teams to do that. But it was results-focused; not just the how but also the what, what needs to be done.</p> <p>Organisationally productivity understood primarily around progression of the human service firm’s mission. The meaning of the outcome had to be at least understood from the user’s perspective, ideally owned and developed by them, whether seeming big or small to others. As well as focus on outcomes relevant to if not developed and owned by the user, productivity had a broad values orientation.</p> <p>Most important to the facility participants was that these Wellness Clinics productively contributed to the human service mission. For facility participants, the health service productivity was generally understood in a similar way to productivity within their social mission, as related to outcomes. The outcomes</p>

	<p>may at times be health outcomes, but needed to be both organisationally relevant and priorities of individual users.</p> <p>Productivity had changed from 20th Century time and motion studies and new measurements needed to reflect that change. This measurement included factors such as value judgements about worth of service, nature of the service, and therapeutic relationships, as well as unnecessary hospital presentations.</p> <p>All participants noted training of nurse students, and all except Youth related the suitability of student numbers and mode of practice to the experience of their users. However, the nurse noted that the numbers of students may be slightly fewer than in traditional clinical placements, although not definitely. The student experience was viewed as more positive, but how to value the clinical placement and health service productivity together was an identified problem.</p>
Cross-case	<p>Multiple dimensions of productivity – generating value, producing outcomes, culturally embedded</p> <p>Productivity was about value from the existing workforce and resources. Productivity was both more than and different to productive efficiency. Productivity for workers focused on outcomes. For many nurses this was health outcomes, and for one it was nursing sensitive outcomes.</p> <p>However, for some nurses and all other non-nurse participants, it was about socially constructed outcomes valued by the culture the health service production was embedded in. This could include the value not being outcomes directly related to health or health-services, but to other aspects of human life valued by the sector/agency or service user.</p>
Team Productivity	
Case 1 PM	<p>Project survival prioritised</p> <p>Survival prioritised over value assessment, a “solution in search of a problem”, expanding clinical training prioritised over health service purpose.</p>
NP	<p>Purpose-based coalition productivity</p> <p>In health service production terms, this was an input specified model, the NP role.</p> <p>NPs proposed productivity through increased service occasions, nursing-sensitive patient outcomes. However, fundamentally productivity was advancement of the purpose, the NP role.</p>
Case 2	<p>Productivity both teamwork performance and productive outcome</p> <p>Assessment of Steering Committee performance varied between participants, including different views on productivity, and what it may mean to different groups and agencies. The Committee formed quickly largely based on prior relationships, then struggled to perform internally due to potential mismatch between the broad diverse intersectoral vision and the structure, leadership choices, and perhaps over-dependence on transferring previous relationship experience to the current context.</p> <p>There was a power imbalance in stakeholder interests with VET agency dominant.</p> <p>For some, the productivity of groups and teams was not only their internal performance, but related to the Initiative itself as both a form of technical efficiency and a productive outcome, an achievement.</p>
Case 3	<p>Team productivity about moving in the direction of socially constructed outcomes</p> <p>Team productivity followed a similar thread to personal, work and organisational productivity with a focus on results or outcomes. However, the interplay between people became more evident, whilst the team goals could be team specific.</p>

	<p>Team productivity was regularly examined looking for improvements, including changes to team membership.</p> <p>Productivity for NGO teams was both individual and current service-oriented, and also unified across teams around long term mission, including advocacy. Communication played a key role in team productivity.</p>
Cross-case	<p>Team productivity is outcomes of group, but subject to subversion by powerful members</p> <p>Team productivity is also about team outcomes. However, the teams were not always structural or intraorganisational. Interorganisational and cross-sectoral small group outcomes were subject to subversion to unexpressed cross-purposes by the powerful group members. Power was exhibited in ways including professional coalition, ownership of funds/facility, and/or program.</p>

Almost exclusively, participants described efficiency only when expressly elicited in interviews. The prompting required suggested that efficiency was not a priority topic for participants, except where there was disdain expressed for (often bureaucratic) inefficiency. Increased efficiency was afforded an acknowledged role as technical process improvement, or the ‘small how’, relative to productivity as the larger outcome-oriented concept (Table 14). Productivity and efficiency were similar ideas, yet productivity a ‘dirty word’ when narrowly conceived as efficiency. There was often a concern with process inefficiency, which was viewed with dismay by participants and focused on more than actual efficiency.

In contrast to the narrow process or ‘small how’ interpretation of efficiency across the participants, innovation involved a broad set of ideas, including multiple forms of entrepreneurship and collective negotiation as social actions to introduce, design, and progress the innovations. The socio-political context influenced roles and services, resulting in health service production that was socially constructed. The value proposition of the health services had to make sense to the involved parties. Establishing financial sustainability for and through the health services was also part of innovation (Table 15).

The first case exhibited project team attempts to develop innovative service models. There was limited shared understanding when exploring these models, suggesting a benefit from some shared definitions or categories of service models, as well as education and training in these models to support

NP entrepreneurship. Through the NP coalition, the first case also considered a PHC (or family practice) style NP as an innovative worker. Analysis of strategies for setting this innovative worker on the policy agenda using Kingdon’s streams model suggested important requirements, including how problems and solutions were presented, political timing, and the need for one or more NP ‘policy entrepreneur’.

Table 14: The concept of in/efficiency

Case 1 PM	Inefficient use of time Inefficiency concerns with time spent planning
NP	Inefficient processes, structures, relationships, technical capability Inefficiency concerns including capital works delays, complexity of employment arrangements, lack of leadership – a coalition leader, NP role immaturity, unequal distribution of power
Case 2	Inefficient process, relationships, shared understanding Process inefficiency was identified with lost time and resources expended understanding different perspectives on the vision, and refining the bold vision into practical implementable ideas. Inefficiency also in the source of potential innovation – the interagency, intersectoral relationships. There was discordance at times in their understanding of each other’s purpose. Inefficiency with the practical implementers not ‘up to speed’ with the conceptual ideas of the executives.
Case 3	Efficiency as technical process concept Efficiency was related to the technical process of doing, and the technical relationship between means and ends. Productivity was compared and contrasted with efficiency. The relationship between efficiency and productivity was difficult, almost synonymous but with qualitative differences. Although there was overlap, there was a tendency for efficiency to focus on specific process or ‘small hows’, with productivity a bigger concept. There was also conflict about facilitating mainstream service access versus providing specific services and the issue of user dependence.
Cross-case	Productivity was a ‘dirty word’ when focused on efficiency. Efficiency was necessary, particularly for process improvement, but a smaller, narrower concept than productivity, and not on its own enough to be meaningful to innovating or improving services.

The second case highlighted the idea of ‘innovation spaces’ across health service delivery, design, education and training. Public sector executives and senior managers were actively seeking opportunities to innovate within these personally defined boundaries, creating an ‘innovation space’ within which

they were prepared to consider possibilities. These innovation spaces formed from a personal synthesis of their understanding of agency/firm and sector purpose and public interests. The purpose or mission-orientation of this mentality was sharply evident.

Table 15: The concept of innovation

Case 1 PM	Innovative service models Need to clearly articulate innovative service description from the model jungle – incl. medical model, teaching models, business and finance models, employment models, service delivery models.
NP	Policy entrepreneurship NP policy entrepreneurship to successfully place the innovation on political agenda.
Case 2	Socio-cultural entrepreneur selling ideas in intersectoral ‘innovation spaces’ Innovation considered through different lenses, from innovation at the health service interface, to innovation to address the growing importance of educating health workers to their business. The university executive looked at changing nursing practice, through a measured evidence-based approach. Innovation occurred around the core purpose of the sector and agency, actively seeking new ideas, and not satisfied with current state. The purpose of the individual and their agencies coalesced around public interests. The ‘visionary and transformative leader’ was a socio-cultural entrepreneur. The entrepreneur choosing not to manage the resulting project left a leadership vacuum.
Case 3	Negotiated innovation in uncertainty The Wellness Clinics evolved into a shape negotiated with each individual facility. There was uncertainty around issues such as whether these Wellness Clinics were systemic or innovative, in targeting service and access for people marginalised by the mainstream system. Or whether they rather were illustrative of how mainstream health services should operate, with at its core a more humanistic philosophy of people working together.
Cross-case	Socially-constructed health service value proposition The innovative aspects of these cases of health service production included: <ul style="list-style-type: none"> • Socio-political context influencing roles and services, with the health service production socially constructed. • Consideration of clinical training as a component of the production model; • Value proposition of health services in terms of: <ul style="list-style-type: none"> ○ additional clinical placement opportunity ○ demonstrating value of NP role ○ Trial new PHC models ○ contribution to social care organisation’s mission ○ contribution to individual service user’s aims, including need for access to mainstream health services Other aspects of service ‘model’ including financial sustainability.

The innovation related idea of the entrepreneur was again evident as in the first case, this time as a socio-cultural entrepreneur successfully advocating the case for change across two networks to form a new network focused on the Initiative. However, there was a leadership vacuum created when the socio-cultural entrepreneur receded, highlighting the critical impact of leadership and power on the innovation design and implementation.

The third case provided a different view from individual entrepreneurship, with more collective bargaining or negotiation of innovation shape to align with or fit the context, particularly the human service mission. Innovation, in this case, was situated and targeted, with the contextualised nature providing the systemic lesson.

Interestingly, innovative student clinical placements were largely judged based on clinical placement hours (and some aspects of quality), missing an opportunity to further connect the clinical placement to health service output. Not having a health service provider entity involved directly in the Initiative may have contributed to this position.

7.1.3 Objective 3: Conceptualise models of efficient production

These cases provided different examples of small group organisation, multidisciplinary in nature (although perhaps not in a traditional health service sense) that structurally were not always teams. When broadly considering the research objective on the models of production in innovative small groups, several elements became apparent. From across the cases, while efficiency was a small technical process concept, production was primarily about the contribution to human service outcome. These outcomes can include a contribution to the sectoral/agency mission, and co-produced outcomes valued by the individual service user within the mission parameters (Table 16).

Health service was a part contributor to this larger production process. Efficient production was not the same as introducing technical efficiencies to

the service process. Efficient production was when the outcomes were appropriate (at individual, process, firm, or sector level) and action understood as contributing to those outcomes. Efficiently targeted health service production can include improved appropriate access to mainstream health services as an outcome.

Table 16: Models of efficient production in small groups or teams

<p>Case 1 PM</p>	<p>Shared understanding of models Better specification service and output required through shared language, especially around models. Alternative project management approaches could be considered with more flexibility for intermediate stage redesign. Final product (i.e. hospital outpatient expansion for the purposes of clinical training) no real relation to product originally intended by project team.</p>
<p>NP</p>	<p>Appropriately phrased problems and solutions led by policy entrepreneur Influences of timing and entrepreneurial action in political agenda setting, including the communication of problems and solutions.</p>
<p>Case 2</p>	<p>Practical ideas to achieve intersectoral outputs within ‘innovation spaces’ Combination of individual and collective purpose or mission as serving the public interests provide a non-negotiable frame in which to explore innovation spaces. There must be practical implementation conceived to address the visions identified in these innovation spaces.</p> <p>The intersectoral aim to provide health services to underserved populations turned back to sectoral issues, such as clinical placements, when Initiative ‘hit’ the technological frontier of limited knowledge on how to address the public issue.</p> <p>Efficient and sophisticated health service production models require a clear synthesis of intersectoral outputs – including health services, education, research, and community. These cannot be treated solely as positive/negative externalities in serving the public interests. All must be weighed and valued.</p>
<p>Case 3</p>	<p>Collaborating for mission-valued outcomes Cultural ‘team approach’ of small groups with shared team language. But not necessarily team structure. Operating within negotiated mission parameters to create value in the contribution to that mission and the outcomes desired by individual service users.</p>
<p>Cross-case</p>	<p>Collaborative language and shared understanding to achieve valued outcomes Health service productivity in these cases is primarily about human service outcome, including contribution to sectoral/agency mission, and co-produced outcomes valued by the individual service user within the mission parameters. Targeted health service production can include improving appropriate access to mainstream health services.</p> <p>The importance of language by leaders and entrepreneurs.</p>

These efficient and targeted models of health service production included:

- Innovative health service production through better and potentially more agile project management, suggesting greater efficiency and outcome from a greater shared understanding of service aim, scope and specifications.
- Innovative workforce opportunity potentially best understood as a political process with suggested efficiency and outcome improvements using Kingdon's streams model. These improvements included problem and solution statements aligned with the intended outcome, timing and action of policy entrepreneur.
- Entrepreneurs operating across sectors needing to recognise and propose action in the shared 'innovation spaces' of executives/decision-makers, incorporating a synthesis of outputs/outcomes important to each sector.

Consistent across these efficient production models for innovation was the importance of language, including through communication from leaders and entrepreneurs. Individual cases highlighted in turn; shared understanding, and crafting appropriately phrased problems and solutions; describing innovation spaces and communicating practical action in these towards sector-significant outputs/outcomes; and the use of collaborative language to negotiate mission-valued outcomes.

7.1.4 Objective 4: Categorise and evaluate innovation strategies

Innovation failure is frequently about the lack of innovation strategy as much as a failure of implementation (Pisano, 2015). Innovation strategies are described across numerous dimensions in the business management literature, including; combinations of the traditional Schumpeterian types (product, process, marketing and organisational); trade-offs between exploration and exploitation; and open and closed approaches (Pisano, 2015). Ideal types are also proposed based on factors such as risk tolerance, speed and willingness to move compared with competitors. Technological and business model dimensions are also proposed, with many of these

strategies considered for application to public sectors and agencies (Queensland Government, 2019).

Many if not most of these above innovation strategies are considered at the firm or sub-firm unit level, with the value to the business firm a major consideration. This research provides an opportunity to consider public sector innovation strategies, evaluating them based on factors such as internal coherence (Table 17). In these case studies, the Initiative was broadly a public undertaking, across multiple public sectors of government, namely vocational education, tertiary education, and non-government human services. Value considerations were hence more public, rather than principally firm-based. These innovation strategies presented as four 'modes of innovation production', namely; project, political, strategic and relational modes.

7.1.5 Objective 5: Synthesise theory of innovative health service production

Individually and collectively, these cases provide some interesting concepts to contribute to a theory of innovative health service production (Table 18). Some of the key concepts worth emphasising include framing 'productive innovation' through the communication of coherent and contextually relevant value propositions. The social and socially negotiated nature of innovation is highlighted, including the important contribution of different forms of entrepreneurship to both frame and sell ideas. Culturally embedded innovation consistent with and contributing to the mission seems more likely to achieve productive outcomes. The language of collaboration, supported by deed, may help shape and tailor the innovation to a specific situation.

From a more technical perspective, creative consideration of multiple valued outputs (including student clinical placements, research, human service outcomes, health outcomes and health service outputs and benefits) also seem to offer interesting possibilities for models of health service production.

Table 17: Evaluation of innovation strategies

<p>Case 1 PM</p>	<p>Project-based implementation Value of an innovative service delivery model should be established using project logic, understanding resources and activities towards objectives. In this case the logic was poorly specified and the project management methodology selection and implementation questionable.</p>
<p>NP</p>	<p>Political economy/policy innovation From a production theory viewpoint the NP role was an input specified innovation. However, perhaps better suited to considering as a political strategy, to set the NP role on the policy agenda. In this case the problem and solution were inappropriately framed for the intended purpose, and the policy timing needed influence from policy entrepreneur/s.</p>
<p>Case 2</p>	<p>Strategic innovation opportunities 'Innovation spaces' through strategic positioning, and identifying and facilitating new opportunities in areas associated with existing work. Strategic innovation for the VET agency was both changing products as well as process. The strategic innovation implementation was 'two-tiered' with each agency having a team shaping the Committee's vision into practical implementation. (Strategic management and implementation by Steerers and 'way-finding' by Rowers).</p>
<p>Case 3</p>	<p>Relational innovation through trial resource What became clear was that many participants saw the navigation, referral type action for people who were disconnected from mainstream health and human services. This linking and connecting was shared activity, with different people providing their contributions. The linking and connecting could be to information, support services, or health services within or across agencies and firms. The Wellness Clinics were not necessarily considered uniquely suited to meeting needs, nor were they necessarily intended to be innovative in the sense of a grand introduced idea. But the cross-sectoral work of the human services needed some resource to bridge or fill gaps.</p>
<p>Cross-case</p>	<p>Diverse innovation strategies in the public sector Provided examples of different types of innovation strategy across public sectors and agencies, described here as 'modes of innovation production':</p> <ul style="list-style-type: none"> • Project-based implementation • Policy innovation • Strategic innovation • Relational innovation <p>These strategies were interconnected. The strategic innovation, and perceptible project-like implementation, was across the Initiative (i.e. across the cases). The socio-cultural entrepreneur connecting pre-existing networks and their 'innovation spaces', but then shifting into a project implementation mode. The policy innovation strategy could have been applied to all the cases, but wasn't. The relational innovation may have been inherent in a targeted set of innovations such as the Initiative, but was not explicitly clear as a strategy throughout. PHC service delivery models were input specified for professional coalition, and rational project implementation of poorly specified service. Wellness Clinics were culturally embedded in human service firm and valued in their contribution to mission and service user identified outcomes.</p>

Table 18: Concepts for innovative health service production

<p>Case 1 PM</p>	<p>Developing theoretical propositions from failure – building or confirming.</p> <p>Innovative project management may require:</p> <ul style="list-style-type: none"> • Shared understanding of language to describe innovation, and hence implement. • Value frameworks to enable value creation at stages in the project lifecycle rather than an all or nothing value exchange at project completion.
<p>NP</p>	<p>Policy agenda setting of innovative role by professional coalition with mutual interests and shared identity requires:</p> <ul style="list-style-type: none"> • A clearly messaged, carefully constructed problem • A coherent value proposition from the proposed solution • Development of potential policy entrepreneurs • Coalition to be, and externally seen to be, unified in purpose
<p>Case 2</p>	<p>Health service production driven by student clinical placement outputs. Socio-cultural entrepreneur acting as a direct interlock between existing networks to form the Steering Committee, with network-like tensions between; productivity and member inclusiveness; internal/external legitimacy; and flexibility/stability.</p>
<p>Case 3</p>	<p>Targeted innovation to improve health system equity of access (and health outcomes) utilises a collaborative ‘team approach’ to evolve health services (Wellness Clinics) to contribute to the human service facility’s outcomes. These clinics may contribute to the facility’s mission for a short time and be phased out or further evolve, or be a long-term complement to the facility’s core work. Complementary but not essential. Financial sustainability could be established through some combination of health system funding (e.g. project/Medicare), aged care system funding, government in-kind support, and/or clinical training funding.</p>
<p>Cross-case</p>	<p>Productive innovation is culturally embedded and socially constructed to establish value proposition/s</p> <p>Innovation theory potentially can be expanded to include value judgements through a ‘productive innovation’ view. In this view, individual innovation may be valued by its cultural embeddedness; its fit with shared morals and values.</p> <p>The process by which this occurs in these cases is an iterative negotiated process of multiple actors shaping the innovation to fit the purpose of the specific context.</p> <p>It is not just a technical project implementation; socio-cultural entrepreneur/s sell the idea using linkages to powerful actors. Policy entrepreneurs promote appropriately framed problems and solutions.</p> <p>Innovation is more likely to achieve productive outcomes if embedded in the culture of the ‘owning’ organisation.</p>

7.2 Multiple case study analysis

Purposeful selection of these cases as examples of non-hospital innovation enabled exploration of productivity and health service production by small groups, including MDTs. This section commences with the general findings

concerning productivity and MDTs, before focusing more specifically on health service production.

7.2.1 Small group modes – team, network, coalition, and dyad

The intention was that these cases were examples of MDTs undertaking innovative health service production.

A deliberately broad interpretation of multidisciplinary was applied. MDTs in hospitals commonly comprise different health professionals, including doctors, nurses, and allied health professionals. However, there are instances where nursing teams have been considered multidisciplinary by virtue of combined nurse workforces of NPs, RNs or ENs. ‘Multidisciplinary’ has extensive origins including across academic disciplines, and in management literature around members with different knowledge and skills, providing a level of task cross-functionality. In addition, health services in these settings would incorporate non-health workers in the service development, and potentially coal face delivery. There are long-standing examples of this, such as teachers in disability teams, caseworkers in mental health and drug and alcohol services.

Interestingly, despite the explicit introduction of the multidisciplinary idea in these case studies, the concept was only alluded to in interview around prospects for a future multidisciplinary clinic. No-one used the multidisciplinary term to describe any of their current teams or groups. Nor was the term used in any attended meetings or in observation of facilities to refer to existing groups.

Teams – examples of team structures versus the ‘team approach’

The intention was each case as one small group, with the first case a project team, the second the overarching Initiative’s Steering Committee, with the third case a team of Wellness Clinic nurses operating across multiple human service settings.

The Initiative Steering Committee remained the only clear case of a single team. Even this team, with its pre-existing work relationships, arguably formed one network from two networks connected by a principal actor. However, irrespective of the group's performance, a structural team could be demonstrated.

The first case presented a project group, but also acting within it, a majority NP coalition focused on advancing the NP agenda. The third case had commenced clinic development with a pair of NPs, and then a small group of RNs as the Wellness Clinics team. However, these dyads and team disbanded as integration occurred of the Wellness Clinics into each of the four settings. The resulting small groups comprised each Wellness Clinic as a single RN providing a health service negotiated by the respective facility. While these small groups could be structurally considered teams, this was an inconsistent interpretation. This irregularity was telling; often, they were not perceived as teams amongst the veritable sea of work teams presented by these participants. This sea of work teams included individual membership of multiple teams, teams within teams, teams with shared membership, and teams reporting to teams.

There was widespread comfort with collaborative and small group terminology. As well as the sea of teams, the term 'network' indicated a somewhat larger group or a somewhat looser connection between members. 'Partnership' was more reserved for relationships between two or more organisations, with members as organisational representatives.

There was also a telling differentiation between teams as a structure and as a shared teamwork language, showing appreciation for the 'team approach'. Almost exclusively reserved for intraorganisational teams, structural team descriptions were most commonly the units in the firm's design. An organisational chart could identify these structural teams. In sharp contrast, any individual, including members of partnerships, networks, or teams, could demonstrate teamwork or the 'team approach'. Where perhaps teamwork is

presented in organisation psychology as exclusive to the interaction between team members, the 'team approach' was more celebratory, acknowledging positive reflection on some other individual/s personal attributes and behaviour. This 'team approach' could be explicitly phrased, or couched in terms about the quality of the person and their work relationships. Invoking the 'team approach' brought the other individual inside the tent; indicated preparedness of the individual to view work, including process, priorities and purpose, from the perspective of the person congratulating the behaviour. This 'team approach' was related to but different from collaborative terminology, as the person demonstrating the 'team approach' was exhibiting the cultural norms of the dominant institution. While participants did not expressly use 'team player' and other power-related terms in these cases, the 'team approach' may have some parallels with someone being a 'team player' as viewed inside a power base.

7.2.2 Productivity and outcomes

Productivity was not just productive efficiency in these three cases. It was both more and different to this microeconomic definition. A simple answer could be that productivity means different things to different people. However, while near synonymous with an efficient process, productivity was often considered a larger concept and consistently reported as about outcomes. Broadly, these cases present some preliminary suggestion of a possible and possibly growing differentiation between the meaning ascribed to productivity by workers, and the meaning operationalised in neoclassical production theory.

Is this simply a play on words, a linguistic evolution, or something else? Moreover, does it matter; can a technical, operational definition differ from use in the vernacular? Of course, it can and does in many situations. However, pragmatically, the productivity concept requires meaning in action beyond a simple mathematical calculation of the ratio of outputs to inputs. The productivity concept for these people working in and around health

service innovation was central to their work and meant more than a simple mathematical calculation.

Productivity could be a negative idea, “a dirty word” (U1), particularly when focused on efficiency. This efficiency could be ‘efficiency dividends’ as cost-cutting measures. Productivity narrowly conceived as efficiency in “time and motion studies” (N1) left an emotional scar, but the participant felt that productivity had evolved from this efficiency orientation to focus on quality outcomes.

The funding manager provides a good example of the productivity concept in the public sector. This manager viewed productivity as having two interpretations, with the outcome-focused version dominant:

Productivity means to me the ability to do a volume of activity, and the ideal is it should be high performance productivity. That’s the usual interpretation of it if we look at Productivity Commission reading of the word. Productivity by my definition would be being very busy, active. So either of those interpretations would be ones that I would use. My preference is that productivity is performance, so better clinical outputs and outcomes in this situation. But not necessarily a frantic hive of activity. More for less, then great...I think outcomes is the real word there. It’s agency, it’s the ability to influence things. And again a mixture of working hard and working smart. That’s specific to work life stuff, whether that’s actually career related stuff doesn’t matter. Personally I think of myself as a pretty productive, pretty industrious in most senses of the word. (F1)

Productivity for the funding manager’s work team was about ideas such as workflows, quality, and working smart. Activity and outcomes were both parts of the picture: “Do things, and then was the thing worth doing in the first place” (F1).

Productivity is primarily about outcomes

Outcomes. It means definitely the ability to be mindful of what the outcomes are, understand how the task sits in relation to that, and then do that task as smart as possible. In order to secure the outcomes. Being very clear on why you're doing something, what you're wanting to change in the status quo. (F1)

This outcome focus was reported by all participants across the cases, in their work and the work of their teams and groups. The type of outcome varied but remained valued in contribution towards some purpose, mission or objective. For most individuals, some outcomes related to their employing organisation. For example, the university workers wanted research activity as well as clinical placement hours for their NP candidates and RN students. The VET workers wanted clinical placement hours for their EN students. Local government participants wanted to meet the community needs better. Government policy officers wanted to improve health workforce opportunities.

Individual nurses saw productivity as health service improvements, but the potential scope of acceptable practice varied considerably, including how outcomes could be framed. For one project manager, there was a need to understand nurse-sensitive outcomes, to be able to quantify the value of the nursing contribution to health care, particularly in hospital environments. For NPs, the framing of outcomes was working to, but not beyond, their full scope of practice. For a few NPs, there was a sense that others 'did not get' their value proposition which the NPs saw as self-evident. Rather than explore this dissonance, these NPs either railed against the injustice or tried to identify practical ways to allow them to work to their scope. Some of the NPs were capable of being critical of each other around the perceived scope of practice. Most individuals with a nursing background saw advancing the nursing profession in some way as a partial outcome.

Team outcomes

When identifying teams as organisational units, there was generally a consistent outcome focus that described how their unit function or purpose contributed to their respective firm or agency. For example, the funding manager was clear about their team outcomes with the Initiative:

grants with the clinical training fund. Not necessarily the best example because there was so much about the program that was on very hastily thrown together footings. But in terms of the team being focused on outcomes, it meant getting the money through to the coalface in a way that created as little red tape as was humanly possible. And kept out of the way of clinicians and managers in terms of putting enough acquittal requirements in place as required by the funder, but trying to do that in a way that was considerate of them and understand the pressures they were under. (F1)

However, group outcomes were not always the same as those of individuals or these structural teams. While there may have been a common or shared vision expressed, a number of these small groups were interorganisational, with cross-functional membership, and at some degree of unexpressed cross-purpose. Supposedly unified by a single vision or goal, individual group members were able to go along with the process, and deliberately or unconsciously subvert the direction towards their own priorities. Their capacity to influence the group determined the overall group direction.

The power to influence group direction was evident in all three cases. In the first case, the priorities of the numerically powerful NP coalition formed from the nursing 'home team' were effectively dismissed through VET agency control of funds and explicit ownership of the Initiative. In the second case, the Steering Committee had a direction shift with the vision owner/entrepreneur relinquishing the leadership. This relinquishing was a deliberate decision based on work role and need for boundaries, which created a power vacuum that was rapidly filled by the dominant VET agency.

The VET agency then set the direction, which had some superficial trappings of the former vision but was fundamentally different.

In the third case, the initial group providing the collective of Wellness Clinics disbanded to form four groups, one formed for each Wellness Clinic, dominated by the facility. Health services were fitted into the public sector, such as local government or vocational training, government subsidised social housing, and not-for-profit accommodation facilities, with the health services consistently judged on the value of their contribution to the overarching mission or purpose of the respective institutions. This contribution was different from health service outputs, activity, or even health outcomes, and not purely based on epidemiological disease or health condition patterns and priorities established by health experts. The judged value was about the institution's mission and the value of addressing the self-assessed community or individual priorities.

Importantly, outcomes were not binary measures of achievement or failure. The outcomes were improvements or progressions towards, expressed in terms such as 'increases in', 'better meeting', or 'helping with'.

7.2.3 Value in health service production

These cases were purposefully selected to provide examples of innovative health service production away from mainstream and hospital settings. Additionally, these health services were developing based on time-limited funding provided for student clinical placement activity. The health services would need to be justifiable to survive long term.

There were a series of themes that prevailed in these cases of health service production, including; consideration of student clinical placement training; individual and organisationally determined value propositions, consideration of political and social system context; and factors for sustainability.

Student clinical placements and health service production

The whole Initiative was funded through a clinical training grant. Therefore, it is unsurprising that clinical training through student placement played such a substantial role in these cases. However, the cases provide two glaring issues. One is the value placed on clinical training within health service production. Despite the clinical training funding, participants did not generally show an integrated view of the training and the health service. In most instances, the participants were either primarily about human service delivery (including health), or primarily about student clinical training. Rarely both.

This positioning contributed to the second issue, which was establishing the primary purpose of health service production. With the possible exception of the community-based hospital outpatient services that resulted from the first case, these were all new health services. Addressing a health service need could be reasonably argued as the reason for their existence. However, the creation of some of these services was primarily to provide a student clinical training opportunity. Some participants did not discuss the health-related value of these clinical training opportunities. While this may be reasonable given the funding source, and communication to patients that students are involved, the public likely would expect that the service was primarily in their interests. The health-related value of these services could need further elucidation.

Determining value propositions in health service production

This discrepancy leads to the issue of how to value health services. As above, the VET agency, and to a much lesser extent, the university, valued these new health services in terms of clinical placement opportunity. The NP coalition in the first case made the value proposition about the value of the NP role. This role-based approach is limited in developing a production proposition as it focuses on valuing the inputs. From a political perspective, this approach needed to reframe communicated problems and solutions.

For most health professionals (nurses) involved in the cases, there was a chance to develop and trial new PHC models, inclusive of considering new worker roles, funding streams, business models, integrated to address community need as well as provide student placements. There was some work to utilise expert people to develop some models. However, no formal analysis or evaluation seems to have been undertaken or planned, beyond a broad ambition to undertake some related research. There seems to have been a tremendous opportunity to trial and showcase different models, yet in the 'model mania', there was little clarity communicated about each discrete health service model.

The approach for most human service participants was to value the innovative health service production in Wellness Clinics in two related ways; in its contribution to the organisation mission; and within that frame as an individualised service. The health service value was embedded in the organisational service value determined by the individual participant within certain boundaries. The outcomes were mission and individual-related and included how the service helped to connect people to mainstream health services. These services needed to continue to evolve as the organisation's capability and intentions involved, partially in response to environmental change.

7.2.4 Political and socio-cultural system context

The environmental change faced by agencies and firms included numerous factors, but notable examples influencing health service production were the political and social context.

The political context included societal change such as a change in government and the associated change in government policy and priorities. However, there were more examples of politics at the sectoral level. For example, national health system changes to addressing health workforce had flow-on effects for the management of the whole Initiative, and how the individual officers understood the roles of the health agency policy officers.

Changes to the VET sector altered what was considered acceptable activities for the VET agency to undertake. The local government worked in part within a series of project opportunities. Government funding changes to the sector, changed government program priorities, funding criteria, and performance indicators, all influenced how the services were shaped. This shaping included at the service encounter level, in the design of the health service, and at the meso level of the Initiative Steering Committee as well.

Health service production in these cases was socially constructed. Beyond the internal group relationships, individual member relationships with other parts of the involved sectors were important. The relationships needed to have utility to the group, such as; to identify an opportunity through needs, gaps, or strengthening; or be able to provide service access or referrals; or to be leveraged to advantage the group and the service users, including through direct or indirect resource access.

The internal and external relationships required communication on diverse levels. There were technical issues around health service records and information sharing. While some participants saw no solution, at times, defining the service as a 'health check' circumvented these issues. This example highlighted how important the definition of the health service is, but also how important that the definition, and implications including risks and responsibilities, are shared with other actors, including potential service users. Prospective clients need to understand the service scope to inform their consent and appreciate implications for their personal responsibility.

The health service production also required systematic communication pathways between the groups, involved firms/agencies, and wider stakeholders. These evolved as the health services evolved towards their current shape. However, it was clear that inadequate communication could reduce the value of the health services.

7.2.5 Sustainability of long-term health service production

Sustainability of the health services in their various forms, and the Initiative as a whole, were ongoing considerations from the very commencement of the Initiative. This long-term thinking is laudable but appeared to be more about survivorship of an Initiative already invested in, rather than a clear rationale for that survival.

Thus, the sustainability of any health service model is important, but establishing and confirming the ongoing value proposition should be given primacy. Notably, this value proposition could be considered from multiple perspectives, including from an ethical stance.

7.3 Limitations associated with the selected cases

These cases were all within a single time-limited funding Initiative, and hence were part of an externally funded innovation collective. There are valuable lessons from the different perspectives, including project management, agenda setting, power and influence in relationships, as well as networks.

The funding manager offered some interesting and contrasting ideas related to public sector innovation. This participant looked favourably at the non-government firms as “scroungers”, needing to work “hand-to-mouth”, and hence “lean and mean” and with “fire in the belly”, but also saw that at a system level, as in big “deficit times need to question business as usual” (F1). The emphasis on the non-government firms is perhaps due to case selection from a specific Initiative involving human services. However, this and the language from other participants about needing partnerships to survive, leveraging, and shaping bidding for projects to address own interests, was suggestive that relatively small amounts of funding could impact the health and human service system at its margins.

These cases were about targeted innovation. These cases were not about fundamental reform to whole systems, but niche innovation targeted to

individuals not necessarily well supported by mainstream services. However, some participants suggested there were lessons for the whole system around individualised and more 'human' human services as opposed to more industrialised models of health and human service production.

CHAPTER 8

Discussion and conclusions

Starting from a position that innovation is a means to achieve ends rather than an end in itself, this research explored innovation by small groups. These particular innovations aimed to provide health services for people who are homeless or at risk of homelessness, within a time-limited Initiative funded for clinical training of registered nursing students. Analysis across these cases identified four modes of health service production, namely project, political, strategic, and relational. The next sections discuss these modes of production and their potential for combination across the stages of innovation, including the stages of creativity and implementation. Identification of relevant modes can set desired outcomes of innovation and measure success.

The chapter then proceeds to discuss contributions from this research to understanding worker perspectives on the productivity discourse, as well as theoretical contributions in relation to 'productive innovation' and its situational embeddedness. This research has focussed on productive innovation through health service delivery in specific non-traditional settings. Considerable attention elsewhere has been on innovation in hospitals and primary care, particularly general medical practice in the latter. In the non-traditional settings, these innovative health services are not necessarily 'cutting-edge' in and of themselves. Placed into a traditional health care setting, some of these health services could be considered mundane or even superfluous. Nurses within this case study were not even sure that these health services were innovative; for example, some Wellness Clinics were just 'health checks'. These cases from the margin serve to remind of the importance of context in understanding innovation.

The chapter finishes with conclusions including the limitations of this research and potential directions for research and practice.

8.1 Four modes of innovation production

Analysis of these cases identified four modes of innovation production, namely project, political, strategic, and relational. These modes are interrelated across the innovation stages of ideation (or creativity) and implementation. Collectively these modes of innovation production highlight socio-cultural elements including social relations and cultural embeddedness. This socio-cultural contribution extends innovation theory from the traditional technical and communicative processes of implementation and diffusion, to consider situating the innovation within an interplay between actors and the organisational climate. Within this research, productivity or 'productive innovation' consistently focus on achieving outcomes established from adherence to one or more mode of innovation production. Consequently, these modes of health service production can be used to set desired outcomes of innovation and to measure success against these outcomes.

These modes of innovation production are in some ways analogous with Marxist work on economic modes of production; including theory on the development of tribal, feudal, capitalist and socialist modes in societies. The 'modes of production' approach claims the creation of clearly identifiable and differentiable economic systems through an interplay between forces of production (i.e. inputs of land, labour, capital and technology) and relations of production (including who controls or owns the forces, and who retains the surplus value) within a broader ideological superstructure (including societal institutions) (see Overton (1988) for a useful entry discussion for students of disciplines little associated with Marxist economics). In the Marxist view, it is the material economy (the allocation choices of the types of scarce resources available) not ideas and thoughts that primarily determine and shape the societal structure and culture (Wuthnow, 1992). Within any society, there is likely articulation or interaction between the different modes of production that are dominant, secondary, decaying, or emergent (Overton, 1988).

Authors have drawn parallels between Marxist economic modes of production, including to stages of educational development from craft to

mass production (Farnes, 1993). Marx's modes of production provide a theoretical scaffold, that change is not pre-planned, but rather formed through interaction between available production inputs, changing technology, and the social relations amongst actors and agencies. These technical and social elements occur within and are influenced by the societal structure.

The four modes of innovation production identified in this research are outlined below. The project mode of production generally provides for a rational, technical process approach to innovation. There is continued debate in the literature related to setting clear project goals in innovation, with some arguing that clear goals improve innovation efficiency while others argue that goal setting limits novelty and hence ambiguity is beneficial (Stetler & Magnusson, 2015). A survey of an automotive research and development department found a U-shaped relationship, with more novel ideas when goal clarity is high or low, and fewer novel ideas with mid-range clarity (Stetler & Magnusson, 2015). A project mode of production suggests setting clear goals and measurable objectives; however, the project mode could be used differently through the different stages of innovation. An early project mode could emphasise idea generation as project goals, while a later project mode may further emphasise the successful implementation of a chosen idea.

The political mode of production provides a particular focus on policy-style analysis to plan for innovation. For example, Walt and Gilson (1994) in their influential work highlighted shifting the emphasis from a simple description of the policy content to appreciating the relative power of and conflict between involved actors in framing issues and solutions within the broader context, and the processes of change. Notably, while their policy triangle is often applied for a retrospective analysis of policy process, the authors themselves highlighted the potential of political economy usage to precede policy choice; that is to plan, such as in agenda-setting and implementation stages (Walt & Gilson, 1994; Walt et al., 2008).

The strategic mode of innovation production brings together executive (i.e. authorised to make decisions) actors to agree to a vision for change within potential 'innovation spaces'. Within the space bound by their individual perspective of possibility and permission, these executives actively look for opportunities. A number of conditions may aid in working with networking executives to stimulate this strategic mode. This strategic mode of production is largely consistent with notions of creating public value, but in this research emphasised the interplay between executive actors as an extension from the more traditional focus on individual strategic planning.

Finally, the relational mode of innovation production emphasises relationships at the different organisational levels; between services, people and entity missions. Value propositions are described using these relationships, showing links and connections. The relational mode may have particular relevance for public sectors such as health and human services, looking for seamless and integrated services and supports to meet the needs of service users. With the potential service user at the conceptual centre; the relational mode aims to develop parsimonious and pragmatic, coherent and useful relationships between services and organisations. These relationships can be referral pathways for people to navigate access to appropriate and timely services, or connections between actors to ensure services are coordinated and necessarily tailored to an individual's needs. As particularly highlighted in this research, focus on the mission of the organisation and priority needs of the individual can also result in health services that have a principally human service outcome.

This research has been at the micro end of work organisation, at the level of small groups and teams, whereas Marx and other applications of modes of production have been macroeconomic; concerned with the whole of society level. Nonetheless, this research identified some commonalities with Marxist modes of production. The modes of innovation production were not selected purposively in advance by the participants but rather emerged from the way the group members understood and collectively organised the work. Societal institutions influenced the group members' understanding, such as law and

regulations around health workforce and Medicare benefits, the general structure of civil society and non-government entities in human services, as well as their perceived role in serving the public interest.

The portrayal of elite interests may shape these societal institutions and structures. In these case studies operating in service to people at risk of homelessness, these elite interests became evident through the productivity discourse.

8.2 Productivity discourse

Discourse may represent elite interests in power and politics. This multiple case analysis further illuminates the productivity discourse by contributing some worker perspective to the positions that dominate economic, policy and management literature. The prevailing perspective across the three cases studied was that productivity was about outcomes. This perspective was consistent whether people were involved in direct service encounters, functioned as service managers, or were people involved in the teaching, policy or research spheres surrounding the services. The valued outcomes varied for individual actors depending upon organisational cultural factors such as their interpretation of their sector and agency/firm mission. For the providers of health or human services in this study, the valued outcomes were established within mission parameters either from the perspective of or by, the individual service user.

Importantly, outcomes were progression-based rather than fixed on some static final accomplishment. Service users had areas of their lives they wanted to change, and the valued outcomes were about working in that direction. The service was about progressing person-centred service outcomes, similar to patient-centred perspectives in health care. The outcomes were individualistic; there were no family-centred outcomes presented here. This individualism may be due to the relatively isolated social situations prominent amongst service users in these particular cases. Further study could explore this productive outcome orientation with people in receipt

of services, aiming to understand the co-production of individualised services.

The outcome orientation of productivity in this research poses some challenges to the treatment of outcomes within health care, as opposed to human services more broadly. Health services embedded within human services may have to focus more attention on human service outcomes, and use secondary measures of health access and utilisation, rather than more traditional health outcomes. Health services research has historically focused primarily on objective health outcomes, such as mortality and morbidity. Interest has grown regarding patient self-report of health status, such as health-related quality of life measures. The range of instruments has grown, to include patient-reported outcome measures and experience measures (Weldring & Smith, 2013). There was certainly interest among some nurses in this study around these measures as well as those outcomes that were sensitive to nursing care. A recent systematic review of patient report measures for patients with chronic disease identified an additional four instrument types including; symptoms/functional status; feelings and attitudes towards illness; experience of health care; and attitudes about health care (Forestier, Anthoine, Reguiat, Fohrer, & Blanchin, 2019). These authors suggest these self-report measures address three main domains of; illness experience (or impact of illness on life); service experience (judgement of health care received); and lived experience of the illness (coping/adaptation to illness).

Situating and valuing health services within a broader human service frame may require altered or different outcome measures. These may include social outcome measures, or use of tools such as the Outcome Stars, notably the Homelessness Outcome Star in these cases. Hence, health services such as the Wellness Clinics that are embedded in human service missions may have productivity indirectly measured through perceived or actual contribution to these human service outcomes, as well as the secondary health service measures. Aiming to achieve these measures may not be easy technically or culturally, but seem better suited than a sole emphasis on health outcomes.

Within this research, productivity was only a negative concept when associated primarily with waste reduction, such as efficiency dividends or time and motion studies. Efficiency was a secondary idea to productivity; the economics of the production process through analysis of resources or inputs was efficiency-related and absent from the productivity discourse.

Productivity for participants seemed to assume attaining or attempting a stable or increasing level of resources, such as funding or staffing. There was no sense of 'rightsizing' or other versions of reducing staffing or funding. In these cases, productivity was about the value achieved.

8.2.1 Humanising the productivity discourse

Further research could expand the contribution from the service user perspective to the productivity discourse, using service-user oriented action research to challenge convention and change the way it impacts on their lives (R. Winter & Munn-Giddings, 2001). There could be the further assertion of "the primacy, value and dignity of the disadvantaged service user" (Cocks, 1994, p. 34) and give more voice to individual citizens. For example, in understanding support for people with disabilities, there has been criticism that there is a dehumanised "human service land" (Cocks, 1994, p. 22) that limited personal choice and control (Duffy, 2012), even when well-intended (Pozzoli, 2018). One critique argued there is a "modern formal human services paradigm", constituted from the interaction of three models – the bureaucratic, the professional, and the technological - in an intensely political environment (Cocks, 1994, p. iii). The characteristics of these "models work together to create 'formal' human services in contradiction to 'informal' approaches to helping and caring" (Cocks, 1994, p. 24). The interaction of these models results in common institutionalised human service responses, including similar physical structures (e.g. hospitals, nursing homes, prisons) associated with a practice of segregation. Management practices bring objectivity explicit in bureaucratic structure, professional detachment, and scientific-technological reductionism together "in the search for the holy grail of efficiency and 'good' management" (Cocks, 1994, p. 27).

In a more recent UK case study, Pozzoli (2018) claims that the personalisation vision has been hindered by the available government toolkit focused on budgets and care markets. Pozzoli also argues that the vision of personalisation has lost the person-centred practices in some instances as it has been interpreted and shaped by government and not-for-profit actors in policy, management and professional roles. Pozzoli (2018, p. 65) specifically names a “social innovation network around which all these actors moved.” These and other scholars highlight risks associated with any form of production system (e.g. market, bureaucracy) for human services that is not inclusive of service users.

Forming contemporary human services has involved “professionalizing, centralizing, and publicly funding an ever growing number of activities which once were the province of the individual, the family, and the community” (Korten, 1981, p. 615). This modernity has resulted in centralised systems that struggle with complex and sometimes contradictory roles acting for society as a whole while meeting individual service needs. There was no evidence of what Cocks (1994) termed goal displacement, or legitimising efficiency over effectiveness in this current research. Participants focused on individual human needs rather than serving societal ends, on achieving positive outcomes for service users rather than system efficiency. Human dignity was asserted, albeit within a service mission frame.

8.3 Productive innovation

This research aimed to expand innovation theory to include some attempt towards judging value. This ‘productive innovation’ took a different stance to much innovation theory that attempts to explain how to stimulate or introduce innovation. While markedly under-represented in innovation theory, this productive innovation is not an entirely new position. For example, within social innovation thinking, there has been an acknowledgement that innovation is not in and of itself the desired objective (Seelos & Mair, 2012). However, these authors suggested the need to understand better how social innovation develops within organisations and how they form the ability to

innovate continuously (Seelos & Mair, 2012). That is, develop an innovation culture.

8.3.1 Innovation culture versus innovation embeddedness

This section compares creating a culture of innovation with inserting the innovation into the existing culture. Creating a culture of innovation remains an interesting and potentially important idea. Notions such as innovation teams, research and development teams, organisational ambiguity, all point to a need for established organisations to undertake exploration of novel practices while simultaneously exploiting existing routines (Benner & Tushman, 2003; A. K. Gupta, Smith, & Shalley, 2006; March, 1991; Raisch, Birkinshaw, Probst, & Tushman, 2009; Stetler & Magnusson, 2015). While start-up firms are assumed inherently innovative through entrepreneurial activity, introducing innovation culture remains framed primarily as a culture change internal to a single established organisational entity. The difficulty associated with introducing purposeful change to organisational culture is oft-reported.

Additionally, the idea of innovation culture still gives primacy to innovation as an end in itself, rather than on the value of any single introduced innovation. Three principal oversights identified in social innovation include; over-rating innovation as some form of developmental shortcut that underplays the value creation of incremental improvement of established routines; not engaging in cumulative context-specific learning from failure of proven innovations when applied in different settings; and ignoring “the power of negative organizational factors, such as bad leadership, dysfunctional teams, and overambitious production goals” (Seelos & Mair, 2012, p. 46). The excessive and positively biased focus on innovation as inherently good and important fails to note that many if not most innovations fail to have the anticipated, or any, impact. At worst, the innovation may absorb resources needed to retain viability in existing work practice.

A different research endeavour could focus more on the value proposition of a single innovation. Rather than creating a culture of innovation, this approach considers embedding an innovation in the culture. The cultural embeddedness, or fit with the shared morals and values, would provide the appropriate signals for establishing the value proposition of the introduced health services. The productive innovation would be culturally negotiated and determined.

The notion is that cultural embeddedness leads to value propositions developed through an iterative and negotiated process of multiple actors shaping the innovation to fit the purpose of the specific context. This negotiation increases the likelihood of productive innovation, defined as an innovation that contributes valued outcomes in line with the sector's mission. The idea of cultural embeddedness is not new (Hess, 2004; Lounsbury et al., 2019), although this extension that it may lead to an increased likelihood of productive innovation gives more than a passing nod to implementation and change management research as well as existing innovation theory. Importantly, the innovation starts life as an idea, that may be an abstract thought or reality applied in another setting. Nevertheless, the innovation is not simply a technical exercise in implementation through some careful project management. Consistent with cultural innovation theory, the innovation is 'sold' as an idea, possibly by a cultural entrepreneur who is using socio-political linkages to share the idea (Lounsbury et al., 2019). From this germination, stakeholders brought into the implementation use their influence to negotiate for their angle. The prediction is that the innovation is more likely to achieve valued outcomes if it is embedded in the culture of the 'owning' organisation and sector.

8.4 Embeddedness in intersectoral innovation

This research suggests socio-cultural and political influences on how people collaborate across sectors (and agencies/firms) in producing innovative health services. Two major findings of this research are that these collaborations are negotiated relationships between actors that may be

successfully signified as working in a 'team approach', and that health service innovation in other human services may be valued in terms of its cultural embeddedness in the human service agency or firm.

8.4.1 Negotiations and the team approach

This multiple case study analysis focused on exploring health service production to understand how workers involved in innovative practice view productivity and construct value from these innovations. The use of teams was secondary, seeking to have a micro-level of organisation from which to undertake this exploration. The choice of MDTs was purposeful, as this work unit is well recognised as both prevalent and required in health service delivery. However, in these cases, the concept of the team was culturally mediated rather than structurally formed.

What became evident in these non-traditional health service settings was that collaboration was necessary and expected by actors, but not necessarily viewed as organisational work teams. The term 'team' was usually limited to defining structures within the single entity's organisation. Liberal use of the team term within a single entity described departments and other intraorganisational units in the formal organisational structure, rather than cross-departmental teams.

Other forms of collaborative language were evident in this research. The idea of partnership was limited to organisational relationships and mainly about joint ventures or pooled funding or resources in some endeavour.

Collaborations or networks described interactions between actors from different organisations (that were also in different sectors in this research). These interorganisational and intersectoral interactions were not considered team structures, but were influenced by working together in what was called a 'team approach'. The 'team approach' signified satisfaction with how actors were working, particularly those external to the organisation owning the facility.

The intersectoral interactions were not moderated by a simple 'organisational context' as is often understood in team research within a single organisational entity. The interactions were negotiated relationships between individual actors with their own beliefs and representing the interests of their organisation and their sector. Factors such as ownership of the facility that was accommodating the health service, control of funding, and in one instance relinquishment of leadership, strengthened the position of actors and their organisation/sector in these negotiations.

There was diachronicity evident, as actor judgement of what could be done, or what was possible, varied over time through actions such as knowledge sharing between people in these groups, virtual thought experiments, as well as experience throughout the implementation of each innovation. These individual judgements of possibility were limited to within each actor's understanding of purpose. These were a personal sense of purpose from their interpretation of organisational and sectoral mission.

This 'team approach' leads to some preliminary contributions to extend work team literature and considering how embeddedness may increase the value of health service innovation embedded in human services.

This researcher agrees with Kozlowski and Ilgen's (2006, p. 78) argument that changes to organisation from "individual jobs in functionalized structures to teams embedded in more complex workflow structures" has occurred in parallel with a "shift in research focus from the study of small *interpersonal groups* in social psychology to the study of *work teams* in organizational psychology" [italics in the original]. The concept of group dynamics, or how people work together, has arguably been dominated by the broad field of psychology, including specialties such as social psychology and organisational psychology. For example, *Group Dynamics: Theory, Research and Practice* editors reportedly "construe the phrase group dynamics in the broadest sense—the scientific study of all aspects of groups—and publish research by investigators in such fields as psychology, psychiatry, sociology, education, communication, and business" (American Psychological

Association, 2019). While the journal's interest extends to an array of groups outside of organised work, the journal is a publication of the American Psychological Association.

The extraordinarily large literature on work team effectiveness continues to be dominated by a psychological understanding of teams and teamwork. This literature routinely commences with some relatively standard definition of a team, such as:

defined as (a) two or more individuals who (b) socially interact (face-to-face or, increasingly, virtually); (c) possess one or more common goals; (d) are brought together to perform organizationally relevant tasks; (e) exhibit interdependencies with respect to workflow, goals, and outcomes; (f) have different roles and responsibilities; and (g) are together embedded in an encompassing organizational system, with boundaries and linkages to the broader system context and task environment. (Kozlowski & Ilgen, 2006, p. 79)

This structural definition is usually followed by some heuristic model of team effectiveness (such as input-process-output or more recent adaptation). The clearest distinction between psychology study with its focus on the act of teamwork and organisational study such as health services research with a focus on task achievement:

The central focus on *what teams have to do*—their task—is the key factor that distinguishes a social-psychological perspective on the study of teams, in which the task is merely a means to prompt interpersonal interaction, from an organizational perspective, in which the task is the source of goals, roles, and task-based exchanges. For the latter, interpersonal interaction is relevant, but it is in the background rather than the foreground. (Kozlowski & Ilgen, 2006, p. 80) [italics in the original]

This current research provides a few considerations concerning team and group effectiveness. Firstly, rather than commencing from a technical

definition of team structure, small group work organisation between human service organisations and sectors may be better studied in terms of shared language surfacing culture, such as shared values, principles, and priorities. Others have hinted at this with appreciation that interprofessional working and collaboration can occur through mechanisms other than teamwork (Øvretveit, 1996). However, the dominance of team-based research in studying small groups suggests that there could need to be space made for a culturally determined definition of teamwork as well to complement the voluminous research with definitions primarily based on team structure.

A second structural consideration for team research lies in the concept of multidisciplinary, and associated terms such as cross-functional, interprofessional, interdisciplinary and transdisciplinary (Berlin, Carlström, & Sandberg, 2012; Lemieux-Charles & McGuire, 2006; Opie, 1997). These definitions can point to relatively subtle differences and can signal the field of inquiry. For example, contemporary usage gives primacy to interprofessional as the term for preparatory training shared between students of different professions. Broadly, organisation and management literature preference cross-functional to indicate different functional capabilities or tasks of individuals. Academia tends to prefer interdisciplinary as work across academic disciplines. For health services research, multidisciplinary, interdisciplinary and transdisciplinary indicate groups comprising people from two or more health professions. These three terms can indicate different levels of task and skill sharing, with multidisciplinary and interdisciplinary sometimes acting as synonyms or umbrella terms for all groups comprising more than one health profession (Lemieux-Charles & McGuire, 2006; Opie, 1997).

Fundamentally, these terms tend to privilege specialised expert workers organised together. There continues to be limited space within structural definitions of these terms for the generalist, potentially non-professional service provider, perhaps expert in the field but not formally trained in some profession. For that matter, the unpaid carer, or other volunteers and supporters, are also afforded little consideration. Importantly, there seems no

space for the ultimate specialist in the individual's personalised needs, the individual service user. Ideas of co-design and co-production can involve service users in the aggregate service design. However, co-production at the service encounter necessarily places the individual (and their significant others) at the table, if not at the head. A service team language needs to develop that is explicitly inclusive of the service user.

Finally, the effectiveness of small workgroups could be more clearly and further separated between assessment of teamwork or group functioning and the value of what they produce. Every field has jargon, and for health services effectiveness is principally associated with either service outputs or activity levels, or clinically accepted health outcomes.

8.4.2 Cultural embeddedness and productive innovation of health services

This research deliberately focused on health service innovation in non-traditional settings, in these case studies serving people who were homeless or at risk of homelessness. Despite strong public policy rhetoric about a different, more sustainable model of health care (Sustainable Health Review, 2019), the hospital and medical dominance of the systems continue to frame the conversation and bound exploration.

This research was in part about trying to explore a health services space away from the hospital and medical innovation hegemony. One case in the research was only partially successful in achieving this aim. The NP collaboration requirements, the strong hospital-based influence on NP experience and values in WA, particularly around clinical governance, meant that medical and hospital influences remained strong. Ultimately, the NP-led PHC clinics became community-based hospital outpatient services. The hospital and medical culture dominated as people were unable to imagine or create a viable alternative despite extensive efforts.

This cultural embeddedness was evident through the case studies. In the first case, the initial PHC vision was co-opted into looking for a health service to accommodate in a refurbished physical VET facility. It seems unsurprising that hospital outpatient clinics with capacity constraints could use the extra space and resources. An annexe built at the hospital site likely could achieve similar outcomes. In the second case, the Initiative Steering Committee and the Initiative itself became overwhelmingly a VET enterprise, and hence finally became valued almost solely in terms of EN clinical placement hours. The VET mission and culture dominated efforts by external parties. Even the funding intent of RN clinical training became subjugated to the VET influence as 'owner' of the Initiative. Finally, the Wellness Clinics shifted from one team of nurses coming into four facilities into four discrete health services that individually were culturally negotiated to fit the respective facility's mission.

Understanding cultural embeddedness provides insight into what may represent productive innovation, by situating each innovative health service in a dynamic, diachronic and negotiated human service environment. Social actors interpret the relationship between the health service and the human service mission to shape the value proposition of the health service. The outcomes of a health service innovation are established through their contribution to that mission as perceived by service users, providers and decision-makers.

A productive innovation appears one that has established both cultural embeddedness and a perceived adequate contribution to the mission. In the case studies here, the missions belonged to a public sector VET agency, local government, and non-government firms existing to help people who were homeless or at risk of homelessness. Hence, although there was some significant actor interpretation, the basic missions respectively were training hours, meeting community need, and helping individuals to move their lives in their preferred direction. However, it was not enough for health services to be aligned to or consistent with the mission. The health services and their providers were judged on their cultural fit as well as their mission contribution.

This cultural embeddedness idea may be extrapolated analytically to other more general contexts. For example, for a health service innovation within a traditional health service, the culture is dominated by health professionals and their value judgements in relation to elements such as patient agency in service encounters and health outcomes. In hospitals, the culture may manifest through both health professional and managerial values and may include more health service outputs and hospital indicators. As was evident in the first case study, successful private enterprise culture in general practice not only incorporated business values such as profit and return on investment. The focus was largely on the business model, as this was the way for the practice to survive for the general practitioner's own interests, and presumably those of their patients.

The cultural embeddedness was not fixed. The negotiations were between actors who were frequently interpreting what was possible and consistent within their understanding of the health service and the organisational mission. There could be missteps, changed actors, different attempts. Health service and human service representatives were continually gauging the value. Their personal views of each other, the health service, the mission, and 'how we do things' as expressions of cultural norms, led to personal judgements of the value of the health services.

8.5 Study limitations

Case study is useful in many instances, including exploring bounded social phenomenon such as an innovation, with a critical view to theory building where there are many potential variables of interest, and many directions to be iteratively examined. However, the limitations of case study research have also been discussed widely, with questions on the legitimacy of case study as a research method, approach or inquiry strategy (Crotty, 1998; Creswell, 2014; Stake, 1995; Yin, 2009). In particular case study undertaken as a qualitative method draws concerns related to researcher bias on case selection and findings (Bryman, 2016). This research mitigates these

concerns through emphasis on theoretical bases of resource-constraint and reverse innovation for the type of cases selected. An audit of methodological decisions is provided to strengthen the transparency of the research, including decisions throughout the research program. Finally, each case provides substantial evidence for the narrative, with iterative theoretical analysis of findings to increase conceptual validity within each case.

Multiple case study can elicit further confusion as sometimes mistakenly considered an effort to increase sample size to improve statistical generalisation (Stake, 2006; Yin, 2009). This research was limited to three cases within one funding Initiative in one area of a metropolitan city in Australia. The cases were all associated with health services for people experiencing homelessness or at risk of homelessness. The Initiative funding was time-limited with dedicated government project funds for expansion of clinical placements for student health professionals.

There is no basis for statistical generalisation from this research. The research provides analytical generalisation to contribute ideas to extend innovation theory, including in terms of modes of innovation production and the consequences of innovation. As an informative purposive sampling from the margin of the health system, these cases provide a 'non-usual' perspective for health service innovation, to broaden and extend thinking.

8.5.1 Ethics of segregation and implementing health services primarily for student experience

Two particular ethical elements became apparent through the research; segregated accommodation and providing health services principally to benefit student training.

The accommodation settings introducing the Wellness Clinics arguably perpetuate segregation of disadvantaged people who are homeless or at risk of homelessness from broader society. This segregation was through specialised residential aged care, specialised youth accommodation while

establishing their employment potential, crisis accommodation, or through a social housing apartment block. Addressing this topic is beyond the scope of this research, but should be acknowledged as perpetuating a segregated institutionalisation frame. So while the value contribution to the facility mission and service user outcomes can be recognised, and even applauded, there remains a risk that the Wellness Clinics help perpetuate a broader and negative segregation paradigm.

Secondly, as noted at points in the case findings, there must be transparency about the purpose and value propositions of health services introduced primarily to create student clinical placements. This transparency importantly includes clear purpose and value to the individual service user.

Targeting health service innovation to promote equity of outcome may be commendable, and certainly consistent with public service aspirations in Australia. However, there are risks, including to quality of services and ethics, operating innovatively in these marginalised areas. There is a danger that lower quality services that would be unacceptable in other societal settings may be allowed to emerge and grow. A clear ethical frame may be necessary, prioritising the interests of people at risk, with risks including paternalism, segregation, and lesser quality services.

8.6 Implications of the research

To some participants, these health services were not innovative in the traditional health care sense that privileges knowledge and skill specialisation and physical technology. These were generally 'low tech', and either acted as a community-based substitute for hospital outpatient clinics or provided a health check. It was their non-traditional context that made these health services at all innovative, and hence it was perhaps unsurprising that the context mattered, particularly the cultural embeddedness of the innovation. However, this highlights that studies of innovation may become too enamoured with the innovation itself, particularly when centred on physical or

ICT change, without sufficient consideration of contextual effects on innovation relevance, implementation success, and ultimately, value.

In contrast to Chen et al. (2019), this research offers a view of innovation production using the innovation as the unit of analysis rather than the organisation. Further research may consider connecting their organisational typology of innovation with the modes of innovation production to provide a deeper perspective on innovation, particularly in public services. Research exploring the practical application of the modes of innovation production in stages of innovation conceptualisation, implementation, and evaluation, could also provide useful lines of inquiry. This future research could explore modes of innovation production in additional cases in community-based services. The innovation production model could also be tested in hospitals as well as other environments combining human and health services such as correctional and education facilities.

In conclusion, this research intended to explore selected cases of innovation, and how and why they were conceived, implemented and valued by the people involved. The purpose of this research was to move beyond an assumption that innovativeness is inherently good, by helping to generate and build innovation theory, particularly about the consequences of innovation.

Consistent with other studies of innovation consequences, this exploration of innovation in community-based health services found that innovation can fail to have the intended, or indeed any, impact. As described and analysed in chapters 4,5 and 6, the findings of each individual case highlighted examples of twists and turns an innovation may take from the direction anticipated or conceived by the initiators. In the end, the innovation may not create value irrespective of whether or not it takes the intended shape, particularly if value propositions are not identified and shared during creation and implementation.

Considered collectively, the case studies suggest innovation may be more likely to achieve value if the innovation is embedded in the extant culture of the setting, including aimed at achieving outcomes consistent with that culture. Further study can explore the impact of cultural embeddedness on innovation success, as well as examine the utility of different modes of innovation production to stages of creation, implementation and evaluation.

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Appendix 1: Guide for minimally structured interviews

Interview Guide	Date
<p>This interview is about your work in relation to the [REDACTED] project.</p> <p>1. Please tell me about your team.</p> <p>Key prompts: Team history – beginnings, evolution or development, purpose/vision/direction Team membership – definition, composition, duration and stability Team interaction – ways of working, dynamics, multi/inter/transdisciplinary Team management – within team leadership, external management</p> <p>2. What services does your team provide?</p> <p>Key prompts: Service output types, location, model of delivery, what in 'business' of, business model Service recipient demographics – age, location, conditions Comprehensive description of services Service quality, quantity</p> <p>3. Have there been any changes in the services your team provides?</p> <p>Key prompts: Recently, any time in the past Eg. Staff – individuals (number, way work together or interact); model of delivery, service philosophy</p> <p>4. In your opinion, are these changes innovative?</p> <p>Key prompts: Category of innovation – target, scale, continuity</p> <p>5. What do you consider the effects of these/these change/s?</p> <p>Key prompts: Service quality, quantity, or model of delivery Productivity or efficiency, Innovation Power/political, technical/structural, cultural</p> <p>6. What does efficiency/productivity mean to you?</p> <p>Key prompts: Definition (in own words), Alternative term - productivity, relationship to effectiveness, quality, innovation</p> <p>7. What do you feel efficiency/productivity means for your team?</p> <p>Key prompts: Team interaction/group dynamics, power relationships</p> <p>8. Are there any other items you would like to raise about your team?</p> <p>Key prompts: Teamwork, performance standard and direction, other</p> <p>Thank you for your time.</p>	

Appendix 2: Initial categories – Case study 1

Structural	<i>Secondary nodes</i>
Vision	Multiple purpose
	Shifting focus
Project Management	Preparation and organisation
	Physical facility and related requirements
Models	Collaborative PHC model
	Training models based on ownership and form of interorganisational relationship
	Teaching models
	Employment models
	Case models
	Service delivery model - telehealth
	PHC or OP model
	NP models
	Finance models
	Sustainable financial models
	Project financing
	Project governance
	Corporate governance and ownership
Clinical Governance	
Understanding/interpretation of shared vision	Collaborative PHC teams
	Enhanced formal professional roles and identity
	Fill service gaps for targeted cohorts
	Showcase
	Funding agency priorities
Implementation and operationalisation	NP influence
	Lack of leadership/ownership
	Illusion but not reality of vision
	Limited assessment needs or service gaps
	Vision inconsistent with funding/funding agency purpose
	Physical model duplicated without output specifications – which are ideological?
	Outpatient or PHC or both?
	Not just perceived need, but also service gap to fill
Models of service – business and service delivery	Education required to assist with innovative business model
	Confused interpretations of models
	Medical model – biomedical ideology vs GP led.
	Model mismatch with practical experience
	Technical aspects of service delivery model
Clinical Governance	Medical records and their ownership had technical impacts on potential models
	Clinical governance changing both the input and output of the service
Rules	
WA NP skills mismatch with intended PHC delivery	
Financial models of reimbursement	
Cultural	
Roles and Responsibilities	Research role

Relationships	Relationships with GPs
	Relationships within NP community
	Financial and formal
Relationship Modes	Networks for recruitment
	Retained service delivery relationship norms
	Project team relationships
	Collaborative relationships
Scope of practice norms	
Roles	Service roles
	NP leadership role
	Project leadership
	International comparisons
	Local context influences roles
Critical	
Project recognition	
Actor priorities	
Impact of 'home team'	
Power and control sector/turf	
Nursing Profession is the 'Home team'	
Value-based research to drive, embed, justify change	
Power to effect change	
Historical	
From vision to relationship	
From relationship to teamwork	
From project to services	Loss of visionary leader – 'interlock'
Project evolution	
Success dependent upon timing, context and situation	
Constrained entrepreneurship	Entrepreneur perseverance
Rosy-ish future and optimism	

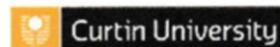
Appendix 3: Initial categories – Case study 2

Structural	<i>Secondary nodes</i>
Formal pre-existing relationships	
Purpose	Sector Purpose as a public institution VET interpretation of community benefit – public good
	Agency
	Initiative Assessment of productive outcome for the Initiative
Representation	Sector/Agency
Forming the collaboration	Seeking new ideas
	Individual attitudes
Context change	Compulsory schooling to year 12
Cultural	
Relationships	Intersectoral competition
	Complementary relationships
	Financial and formal
Roles	Understanding of own role
	Understanding own role
Critical	
Individual ownership of idea	
Connecting time limited project to ongoing operations	
Sector specific pressure	'Pinched' between two education sectors
	Compared with private sector
Multiple team membership and dynamics	
Historical	
Changing sectoral roles	
Connecting networks	
Growing importance health care connection	
Clinical placements for students	Competition for clinical placements – incl. private
	Paying for clinical placements
	Innovation direction – simulation and/or student led clinics

Appendix 4: Initial categories – Case study 3

Structural	<i>Secondary nodes</i>
The importance of context	Facilities addressing homelessness
	Four distinct approaches to one issue
	Human service impacts health service
Change is 'built in' to sector	Time-limited grant funding NGOs
	Same work presented in a different way
Work productivity varies between levels	Individual, team and organisation
	Results focused
	Mission oriented and hence strategic
	Not just efficient process
Measurement and reporting	Continuous improvement cycles
	Outcome measures
	Co-produced value
Wellness Clinic models	Health service fit with facility mission
	Sustainable Primary Health Care
	Wellness Clinic check vs full service clinic
A team of nurses	Disbands
Cultural	
Human services value co-production	
The human service field varies	Mission parameters and values
	Targeted cohort
	Outcomes
Evaluation	Govt for the sake of it vs funding requirement
The team approach	More cultural than structural
	Team of teams
	Wider team
	Teamwork and common goal
Productivity	Productive life vs work productivity
Productive outcomes	Human service outcomes
The meaning of case management	'Loose' navigation to 'tight' case management
Critical	
Change is crucial	Internal to firm, service change
	Sectoral change, including funding, government policy
Planning plays a major role	Planning to address change, for future change
Levels of planning	Strategic, operational, business, building design, change management
Negotiation	Power rests with human service
	Optional health service has to negotiate
	Health service role to fit human service
Historical	
Evolving human services	Substantial service change
	Facility development or renewal
Complexity increasing	Services now more than just a bed
	People with complex social and health issues
Productivity as time/motion studies	Evolving meaning towards outcome and quality

Appendix 5: Participant information sheet



Participant Information Sheet

Title	<i>Productivity and Multidisciplinary Team Health Service Production: A Multiple Case Study</i>
Protocol Number	<i>SPH-54-2014</i>
Investigator	<i>Mr Mark Petrich (PhD Candidate)</i>
Associate Investigator(s)	<i>Professor Phillip Della (Principal Supervisor) Dr Delia Hendrie (Associate Supervisor)</i>

We invite you to take part in this unfunded research study, which aims to understand productivity from the perspectives of health workers. Mark Petrich will use the study results towards a Doctor of Philosophy degree.

You are invited due to your involvement with the [REDACTED] project. This Participant Information Sheet tells you about the study. Knowing what is involved will help you decide if you want to take part. Please read this information carefully. Ask questions about anything that you do not understand or want to know more about.

What does participation in this research involve?

Participation in this study is voluntary. Participation may include one or both of the following:

- An audio-recorded interview of around 60 minutes with Mark Petrich. The interview will include questions about the [REDACTED] project. The time and venue for the interview can be of your choosing.
- Observation of [REDACTED] meetings or workshops in which you may be involved by Mark Petrich. Non-identifiable notations will be made of these sessions.

If you do consent to participate, you may withdraw at any time. You are free to stop the interview at any time. You may also refuse to answer any questions that you do not wish to answer during the interview.

Aside from giving up your time, we do not expect any risks or costs associated with taking part in this study. Your decisions about taking part will not affect your relationship with the researchers, Curtin University or the [REDACTED] project. There will be no clear benefit to you from taking part. You will not benefit financially from your involvement even if, for example, knowledge acquired from your information proves to be of commercial value.

By signing the consent form you consent to the research team collecting and using personal information about you for the study. Any information obtained in connection with this study that can identify you will remain confidential. Data will be stored for 7 years from thesis publication on the Curtin University computer network with access restricted to only the named investigators. At the end of 7 years, the data will be deleted.

Further information and who to contact

If you want any further information concerning this study or if you have any problems which may be related to your involvement in the study, you can contact the researcher Mark Petrich on 0414649847 or his supervisor Professor Phillip Della on 9266 2062.

This study has been approved under Curtin University's process for lower-risk Studies (Approval Number SPH-54-2014). This process complies with the National Statement on Ethical Conduct in Human Research (Chapter 5.1.7 and Chapters 5.1.18-5.1.21).

For further information on this study contact the researchers named above or the Curtin University Human Research Ethics Committee. c/- Office of Research and Development, Curtin University, GPO Box U1987, Perth 6845 or by telephoning 9266 9223 or by emailing hrec@curtin.edu.au.

Appendix 6: Consent form



Consent Form

Title *Productivity and Multidisciplinary Team Health Service Production: A Multiple Case Study*
Protocol Number *SPH-54-2014*
Investigator *Mr Mark Petrich (PhD Candidate)*
Associate Investigator(s) *Professor Phillip Della (Principal Supervisor)
Dr Delia Hendrie (Associate Supervisor)*

Declaration by Participant

I have read the Participant Information Sheet or someone has read it to me in a language that I understand.

I understand the purposes, procedures and risks of the research described in the study.

I have had an opportunity to ask questions and I am satisfied with the answers I have received.

I freely agree to participate in this research study as described and understand that I am free to withdraw at any time during the study.

I understand that I will be given a signed copy of this document to keep.

Name of Participant (please print) _____
Signature _____ Date _____

Declaration by Researcher*

I have given a verbal explanation of the research study, its procedures and risks and I believe that the participant has understood that explanation.

Name of Researcher* (please print) _____
Signature _____ Date _____

* An appropriately qualified member of the research team must provide the explanation of, and information concerning, the research study.

Note: All parties signing the consent section must date their own signature.

Appendix 7: Permission for use of third party copyright material

From: **permissions (US)** <permissions@sagepub.com>
Date: Fri, Mar 20, 2020 at 4:24 AM
Subject: CCC ticket 600007022
To: mark.petrich2@gmail.com <mark.petrich2@gmail.com>

Dear Mark Petrich,

Thank you for your request via Copyright.com ticket 600007022 to use Fig. 1.1 from "Research Design" within your forthcoming thesis/dissertation. I am pleased to report we can grant your request without a fee.

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The screenshot shows the Copyright Clearance Center Marketplace account management interface. The user is logged in as Mark Petrich. The page title is "MANAGE ACCOUNT" and the current view is "Special Requests". The specific request is titled "Research design : qualitative, quantitative, and mixed methods approaches".

GENERAL INFORMATION

Request ID	600007022	Request Date	08 Feb 2020
Request Status	Denied	Deny Reason	Other (See email from permissions@sagepub.com for gratis ...)

COMMENTS

- 20 Mar 2020 4:25:00 AM, by Mary Ann Price: As permissions have been granted via email, we will cancel your order. If you have any questions, or if we may be of further assistance, please let us know.
- 06 Mar 2020 7:40:35 PM, by Mark Petrich: Email address as requested is mark.petrich2@gmail.com
- 06 Mar 2020 3:58:49 AM, by Mary Ann Price: Please provide your email address so we can contact you directly.
- 08 Feb 2020 9:53:02 PM, by Mark Petrich: Request to use a modified form of Creswell (2014, p5) Figure 1.1 A Framework for Research in PhD thesis (caption will be amended to acknowledge copyright approval) [Adapted Creswell 2014 p5.pdf](#)

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From: CARDINAL, Gillian <Gillian.Cardinal@oup.com>
Sent: Wednesday, 13 May 2020 2:53 PM
To: Petrich, Mark <Mark.Petrich@health.wa.gov.au>
Subject: Re: [Request received] Copyright permission for use adapted figure in PhD thesis

Hi Mark,

I really apologise for the delay, we have a massive backlog at the moment.
Use of this figure is no issue and you have our permission.
Please fully acknowledge the source of the figure in you PhD thesis.

With regards,
Gillian

Gillian Cardinal
Rights and Permissions Manager
gillian.cardinal@oup.com
8/737 Bourke St, Docklands VIC 3008
mobile +61 (0) 4785 31944 | switch +613 9934 9123

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From: Mark Petrich <mark.petrich2@gmail.com>
Date: Tue, Apr 21, 2020 at 8:02 PM
Subject: Re: [Request received] Copyright permission for use adapted figure in PhD thesis
To: Oxford University Press <support+id244259@oxforduniversitypress.zendesk.com>

Hello

I am emailing for an update on my request to use an adapted version of the Germov figure (as attached) in my PhD thesis.

Thanks Mark

Figure 3: Sociological imagination template

