

## **Exploring the impact of an Aboriginal Health Worker on hospitalised Aboriginal experiences: lessons from cardiology**

Kathrine Taylor<sup>1,2\*</sup>, Sandra Thompson<sup>1</sup> Mohammed Ali<sup>1</sup> Julie Smith<sup>3,4</sup>, Lyn Dimer<sup>4</sup>, Marianne Wood<sup>3,5</sup>, Narelle Wilson<sup>3</sup>

<sup>1</sup> Centre for International Health, Curtin University of Technology, Perth, WA

<sup>2</sup> Aboriginal Alcohol and Drug Service, WA

<sup>3</sup> Royal Perth Hospital

<sup>4</sup> National Heart Foundation WA

<sup>5</sup> Derbarl Yerrigan Health Service

\*Corresponding Author

Email address:

Kathrine Taylor:

## **Key question summary**

### **1. What is known about the topic?**

Cardiovascular disease is the leading cause of death in Aboriginal Australia and is responsible for significant rates of hospitalisation. Although there is considerable evidence for the effectiveness of cardiac rehabilitation (CR), the participation of Aboriginal people is extremely poor. It is widely recognised that from the acute to the outpatient setting, Aboriginal patients face a number of challenges, notably communication barriers and a cultural mismatch. Key strategic documents now recognise increasing the number of Aboriginal health professionals is a critical factor in improving hospitalisation care and increasing aftercare health program usage by Aboriginal patients.

### **2. What does this paper add?**

While there is considerable research discussing the issues surrounding Aboriginal admissions to acute settings, little research has been conducted on the effect of an aboriginal health professional in this setting. This paper presents data identifying the significant impacts an AHW had in a hospital setting, from improving the cultural security of care on the ward causing improved patient comfort and in reduction in premature discharge, increased certainty for effective health education and informed consent as a result of improved communication strategies, increasing patient contact time and follow up, and enhancing cultural safety skills of other staff. This paper also presents important data regarding the challenges that can arise in hospital AHW placements, such as poor role definition and limited acknowledgement in the hospital hierarchy that can negatively impact retention and role effectiveness.

### **3. What are the implications for practitioners?**

This paper has considerable implications for practitioners including highlighting the need, and immediate and consequential impacts that Aboriginal Health Workers can have when positioned in acute settings. It also has implications for improving recruitment and retention of Aboriginal Health Workers, as well as enhancing the impact of their role in Aboriginal inpatient care and outpatient program utilisation.

## **Abstract**

### **Background**

Cardiovascular disease (CVD) is the leading cause of death in Aboriginal Australians, and is responsible for significant rates of hospitalisation. This enormous burden requires that acute and outpatient settings improve responses to the needs of Aboriginal patients. In an effort to enhance Aboriginal inpatient care and improve outpatient cardiac rehabilitation (CR) utilisation, a tertiary hospital in Western Australia recruited an Aboriginal Health Worker (AHW). Research was conducted to assess the impact of this position.

### **Methods**

Qualitative interviews were undertaken with the cardiology AHW, other hospital staff including another AHW and with recent Aboriginal cardiac patients. Interviews were transcribed and analysed for key themes. Data was also collected from the AHW diary and hospital databases.

### **Results & Discussion**

The impact of the AHW included facilitating more culturally appropriate care, bridging communication divides, reducing discharges against medical advice, providing cultural education, increasing inpatient contact time, and improving follow-up practices and patient referral linkages. Challenges included poor job role definition, clinical restrictions and limitations in AHW training for hospital settings.

### **Conclusions**

This study demonstrates that Aboriginal health staff can have significant impacts on Aboriginal inpatient experiences and outpatient care, providing convincing evidence for the need for Aboriginal health staff in hospital settings.

## Background

Cardiovascular disease (CVD) is the leading cause of mortality in Aboriginal Australians<sup>1</sup>, and is responsible for contributing to high rates of Aboriginal hospitalisation<sup>1,2</sup>. Compared to other Australians, Aboriginal people have three times the rate of coronary events and more than twice the in-hospital coronary heart disease death rate<sup>2</sup>.

Cardiac rehabilitation (CR) is an organized approach to secondary prevention and cardiac care involving exercise, risk reduction, behavioural modification and education<sup>3</sup>. With convincing evidence attesting to the effectiveness of CR in reducing coronary death by as much as 25%<sup>4,5</sup>, increasing the participation of Aboriginal people in CR has become an issue of critical importance<sup>3</sup>. However despite being twice as likely to die from CVD<sup>6</sup>, Aboriginal people are less likely to participate in CR than non-Aboriginal Australians<sup>7,8</sup>.

In the hospital setting, a significant opportunity exists to inform Aboriginal patients about cardiac health and post discharge CR programs. However for many Aboriginal patients, communication barriers and a cultural mismatch with the hospital setting can leave them anxious, unable to understanding hospital procedures or fully engage with health information<sup>9-11</sup>. Although the impact of this on follow-up care and attendance at outpatient services is not well documented, arguably poor inpatient experiences will reduce the chances of patients utilising outpatient programs.

Supported by evidence of the successful use of Aboriginal Health Worker's (AHW) in hospitals<sup>12, 13</sup>, there has been increasing interest within hospitals in recruiting AHWs to improve Aboriginal inpatient experiences. The 2008 National Health and Hospital Reform interim report states a commitment to increasing the Aboriginal health workforce<sup>14</sup>. In terms of cardiac care, involving an AHW in the care of Aboriginal patients has been suggested as critical in improving their utilization of CR programs<sup>15</sup>. In a tertiary hospital in Western Australia, despite Aboriginal patients representing approximately 7% of all Ischaemic Heart Disease admissions (note: this figure is likely to be higher as not all patients are correctly identified as Aboriginal on admission) Aboriginal patients did not have access to a dedicated Aboriginal health professional<sup>16</sup>. In response to this, and the sub-optimal attendance of Aboriginal patients in CR programs, a six month position for an AHW in cardiology was created. The role was designed to work closely with cardiac nursing and medical staff as well as CR staff to provide support and culturally appropriate health information (including

---

<sup>1</sup> 'Aboriginal' refers to Aboriginal and Torres Strait Islander people of Australia

education about CR) to Aboriginal inpatients, assist linking them to post-discharge CR services and provide outpatient follow up.

An AHW raised in a remote area of Western Australia with primary health care experience was appointed in December 2006. Despite interest from the hospital in continuing the position, in June 2007 the AHW left for 'personal reasons'. Research was conducted between November and December 2007, to explore the impact of the position and the lessons learned. This paper presents these results and illustrates how hospital programs that are inclusive of AHWs can positively impact Aboriginal patient outcomes and thus contribute to chronic disease care.

## **Methods**

Ethical approval was obtained prior to data collection from the hospital Human Research Ethics Committee and the Western Australian Aboriginal Health and Ethics Committee. Purposive sampling was used after identifying key hospital staff informants who had worked with the cardiology AHW. Staff were approached via email or telephone and invited to participate in qualitative open-ended interviews. These interviews were guided by a list of issues that had been developed by the research team exploring participants' views and experiences of the impact of the cardiology AHW position. Staff participants included cardiology ward nurses (n=4); CR nurses (n=2); doctors (n=2); social workers (n=2); the AHW who had worked in the cardiology position; an AHW appointed to work with renal patients; an exercise physiologist and a nurse from the Advanced Heart Failure Service. Recent Aboriginal cardiology inpatients (n=12) were also identified by a CR nurse (who was affiliated with the study) and invited to participate in open-ended interviews to explore their views of AHWs in hospitals.

Staff and patient interviews were recorded on a digital tape recorder, numbered to ensure participant confidentiality and transcribed verbatim. This qualitative data was then analysed using a Framework Approach, which involved data familiarity, the identification of a thematic framework, indexing and charting of themes and finally interpretation<sup>17</sup>. Quantitative data regarding the number of Aboriginal cardiac admissions and discharges against medical advice (DAMA) was extracted from the hospital inpatient database (TOPAS), while data relating to the number of Aboriginal patient telephone calls post discharge was extracted from the CR database. Further information was sourced from the AHWs work diary, where patient contact was recorded. As the AHW had never worked in a hospital setting before, the research team chose not to utilise data from December 2006 based on advice that this

month was primarily job orientation. Thus, data was collected for the period January to June 2007, and where relevant, compared to the five months prior to the AHWs commencement (July-November 2006).

## Results & Discussion

### Identifying the need for an Aboriginal Health Worker in cardiology

Contemporary Aboriginal perspectives of hospitals continue to be heavily shaped by the effect of colonization<sup>18</sup>, creating a depth of fear and anxiety that is difficult for the non-Aboriginal community to comprehend<sup>19</sup>. In this study, Aboriginal patients referred to this enduring undercurrent as the key issue influencing their hospitalised experience. One participant said:

*Hospitals are colonialism... that's where the people go and we don't see them again...it's the place you go to die... (Aboriginal patient: 9)*

Aboriginal patients also indicated that during hospitalisation, the wounds of colonization are easily aggravated by communication difficulties:

*... (the staff) shout at us like we're deaf. And all it is, is that we can't understand the English; the orientation of everything...And one day I said 'I'm not deaf and I do speak English'... It makes you feel disgusting. Very patronizing. (Aboriginal patient: 1)*

For staff, their limited understanding of Aboriginal culture could result in misinterpretations, easily affecting staff-patient information exchanges:

*...the Aboriginal patient is probably a little bit shy, a bit overwhelmed, spends a lot of time looking at the floor...and not making eye contact, and the staff take that the wrong way...(that) either they don't understand or they don't care. They don't appreciate that there is a cultural aspect to that as well. So, then they're probably a bit dismissive of that patient and perhaps don't explain things as well to that patient as they might to someone else who they felt was engaging... (Nurse: 42)*

While these communication difficulties can affect the delivery of cardiac education, it also raises serious issues around the reliability of informed consent protocols (e.g see also<sup>9, 10</sup>). Further, hospital system impediments to the delivery of person-centred care coupled with the current emphasis of fast tracking patients to discharge lounges were identified by staff as having a serious effect on their capacity to provide cardiac education. One nurse described this:

*in the old days patients used to stay here about 6.7 days for an MI. Now...it's 5.1. So if you've got a small heart attack that's 1.7 days... the significance of that is....you have an emergency angioplasty. You're in the lab for three hours. You have a*

*sheath for four hours. You're resting in bed for eight hours. That's 24 hours gone. You have something to eat. You have a shower. That's another four hours ... So...if patients are here 1.7 days, you need to start educating them from the time they get off the trolley (but) ... Sometimes patients aren't interested either because they're tired, or in shock, or they've got family, ... Aboriginals tend to have a lot more family. Coronary care only lets you have two visitors at a time. So that means that if there are eight people out there, there's a constant turnover...The priority is to get people out of ED....So...you don't have much time for education (Nurse: 48)*

It is these cultural, communication, resourcing and workforce issues that provided the impetus for an AHW to be placed on the cardiology ward.

### **Impacts of the cardiology Aboriginal Health Worker position**

#### ***Delivering more effective health education and care***

Arguably, optimal health care occurs when staff share the same linguistic and cultural background as their patients <sup>11</sup>. By having the AHW on the cardiology ward, Aboriginal patients had access to a culturally congruent support mechanism, ensuring health information was being communicated in an effective way. The AHW gave examples of how this was done:

*when they don't look or give you eye contact, it could be a sign of respect or something completely different, like they are shamed, so you need to know so you can communicate properly... (AHW: 40)*

A key technique the AHW used to deliver health information was to 'yarn' with patients, a unique Aboriginal cultural process that involves listening and reciprocating communication (Burchill, 2004). The AHW explained:

*You sort of yarn and educate all in the one (AHW: 40)*

This utilization of yarning as an effective health service tool has also been identified as a fundamental factor in other studies <sup>20, 21</sup>.

The AHWs ability to communicate effectively with Aboriginal patients also helped clarify procedures and demystify the hospital experience:

*one patient had said to me he thought he was going for five different operations because he was seeing five different doctors and no one had explained it to him...(AHW: 40)*

Several hospital staff commented that having the AHW on the ward visibly affected Aboriginal patients who appeared calmer, less anxious and engaged more with other staff. Importantly, the AHWs facilitation of effective communication also meant there was greater

certainty that Aboriginal patients gave informed consent, better understood medical procedures and had knowledge of CR programs.

### ***Reducing Discharge Against Medical Advice***

Staff felt that by having the AHW on the ward, there was a reduction in the number of Aboriginal patients who would discharge themselves against medical advice (DAMA). One nurse recounted a situation that highlighted the significance of the AHW on potential DAMA situations:

*We would just lump them, 'Oh, they're Aboriginal; they'll want to be in the same room.' We nearly started a war one time. We had two people who were both the same sex, but the family groups were not friends and should not have been together...and the AHW told us 'You need to move these patients straight away otherwise someone will walk.' If she wasn't there we would have had a DAMA situation ... (Nurse: 48)*

These qualitative responses were substantiated by looking at statistical data. Despite data limitations (although disproportionately represented in cardiac admissions, Aboriginal people remain a small minority of cardiology admissions and the AHW 'intervention' was for only five effective months), analysis of TOPAS discharge data revealed a significant difference between the number of DAMAs occurring during the AHWs tenure (n=5) compared to the five months prior to her commencing the position (n=11). With Aboriginal patients known to DAMA more than non-Aboriginal patients<sup>22</sup>, this reduction of DAMAs highlights an important impact of the AHW not only in improving patient comfort, but also in reducing the risks associated with premature discharge.

### ***Increased time for Aboriginal patient contact***

Having an AHW on the ward also increased the time available for patient contact due to the resource allocation. Without the AHW, CR nurses were only able to visit the ward in the morning, which meant if an Aboriginal patient was absent or busy during the ward round, or admitted at lunch and moved into discharge early the next day, they could miss being given information about CR. As the AHW visited the ward twice a day she had twice as many opportunities to provide heart health and CR education to Aboriginal patients.

### ***Improving Aboriginal identification mechanisms***

The under-identification of Aboriginal patients is a major issue in health information collection systems<sup>23</sup>. While there are various reasons for this (such as Aboriginal people not identifying themselves due to fear of racism), identification is critical if hospitals are to ensure all Aboriginal patients have access to culturally appropriate support and care<sup>24, 25</sup>.

Qualitative responses suggested that having an AHW on the ward improved Aboriginal identification. Community knowledge meant the cardiology AHW was less reliant on hospital admission data, able to identify some Aboriginal patients when looking at their surnames on the inpatient board. While the evidence for this is limited, the AHWs alternative capacity to identifying patients suggests the potential for improvements in ensuring Aboriginal patients have access to cultural support.

### ***Informal and formal cultural education to other staff***

Part of the AHWs role was to deliver monthly cultural awareness sessions to hospital staff. While these sessions were beneficial, it appears that the practical, hands on knowledge staff learnt from working alongside the AHW was far more significant. The AHW explained how the sharing of information afforded staff deeper understanding of the real life challenges facing Aboriginal patients:

*... there are little things in daily discussion I would tell the nurses. Like, out in the community, their medications get stolen and you need to factor that in to their care plan.... and it was shock, like 'Really, does that happen?' (AHW: 40)*

For staff, these fluid and informal knowledge exchanges were critical not only in terms of improving patient care, but also in enhancing their appreciation for Aboriginal people. One nurse told:

*I got a better appreciation for Aboriginal people. I realized how important family is to them, and I'm a lot more empathetic about their community difficulties (Nurse: 49)*

These responses suggest that workplace partnerships between AHWs and other staff build practical knowledge regarding delivering culturally appropriate care that is more effective than formal cultural awareness training.

### ***Impact on outpatient follow-up***

Studies have shown that telephone follow-up is particularly important in improving coronary risk profile following hospitalisation <sup>26</sup>, increasing patient engagement in CR programs <sup>27</sup> and enhancing compliance to a wide range of risk-reducing interventions <sup>28</sup>. The increase of telephone follow-ups to Aboriginal patients by the AHW was reported by staff as one of the critical gaps filled during her tenure. Fifty Aboriginal patients were followed-up by phone (with 18 receiving >3 calls) by the AHW, compared to 7 (with 2 receiving >3 calls) during the 6 months prior to the AHWs placement. For Aboriginal patients coming from outside the metro area, the AHW was also an important link with health services and other AHWs in terms of referrals and patient support. Although assessing the impact of the AHW position on CR uptake is limited due to the short time of the intervention, the increase of telephone

follow-up and linkages to primary health care services is arguably fundamental in enhancing the potential of Aboriginal engagement in CR programs.

### **Lessons Learnt**

Limitations faced in the cardiology AHW position provide important lessons to hospitals who are considering such placements. Firstly, the AHW training appears to be insufficient in preparing them for a hospital setting. The cardiology AHW reported that unfamiliarity with the hospital environment coupled with the expectation of explaining complicated medical procedures to patients created enormous pressure and highlighted a sense of feeling undertrained for hospital work. On the other hand, the clinical capacity of the AHW was restricted in the hospital compared to the AHW training, creating job dissatisfaction:

*when I went for the interview they said that it was education and some clinical, but when I got there it was just education. I have not done any clinical ... Even though you've had all this training... I mean, I can do injections but I'm not allowed to, and I'm thinking, 'Bugger this.'* (AHW: 40)

Until very recently, there was no national uniformity regarding the role and responsibilities of AHWs, and how the role fitted alongside other members of the workforce<sup>29</sup>. The ambiguity of the role has been particularly highlighted in hospital settings, where the opportunities for AHWs to use their clinical skills are limited. Confusion of the role of an AHW can prevent effective shared care<sup>8</sup> create discomfort both for the AHW and for staff working alongside them, and can undermine the role's importance.

The multiple responsibilities of the AHWs role and the fluidity of these responsibilities in relation to other hospital positions are evident (Diagram 1). For the AHW, poor role definition coupled with the socio-cultural needs of Aboriginal patients meant the role easily became more of a social worker, causing one of the primary responsibilities of providing cardiac health information to be impeded:

*... because I was the only Aboriginal person pretty much on that ward the education side of things were put to the side a little bit because they came to me for all their social stuff* (AHW: 40)

Ambiguity around role function, particularly in relation to a social worker or liaison officer, may also have influenced the underutilization of the AHWs skills, such as in a clinical cultural advisory role in team patient management procedures. Other issues faced in the role included no personal working space, poor remuneration, and limited career pathways.

### **Recommendations for improving the AHW role in a hospital setting**

There are a number of recommendations for improving the AHW role in a hospital setting. Firstly, prior to the commencement of ward duties, hospitals must allow adequate time for AHWs to become comfortable within the environment and to provide basic training in medical terminology and procedures. Secondly, supporting the AHW to build collaborations with other Aboriginal health staff in the hospital is important in terms of providing workplace support and contributing to retention. Thirdly, having a clearer delineation of job role responsibilities is critical in 'mainstreaming' the AHW role in the hospital. Research aimed at identifying the practical socio-cultural needs of Aboriginal patients admitted to acute care settings may assist clarifying the AHW role compared to other Aboriginal professional roles<sup>10</sup>.

Attracting AHWs to the hospital setting and the demands upon them to fulfil multiple functions requires that the specialised role is recognised with decent remuneration (Abbott, 2007). It is critical that the AHW feels supported, respected in their role and informed and competent with respect to relevant health information. Further, with research suggesting patients enrolled in programs using multidisciplinary teams will have significantly fewer hospital readmissions than routine care patients<sup>30</sup> inclusion of the AHW in patient team management is critical. Such suitable acknowledgment within the hospital hierarchy is also likely to improve role effectiveness and has significant implications for staff retention.

Finally, sufficient time must be allocated for the AHW to develop and maintain service linkages with primary health care services including Aboriginal Medical Services (AMS). Critical factors in reducing the risks of patient readmission (and secondary complications) is ensuring patients do not fall through referral gaps following discharge, having tenacious follow up procedures, and improving utilization of outpatient programs. This is particularly indicative for rural/remote patients, with a common experience for Aboriginal post-hospitalised patients being poor aftercare and linkage protocols to AMSs<sup>3</sup>.

## **Study Limitations**

Limitations faced in the study included the short time period over which the intervention (appointment of the AHW) and the fact that the AHW position was new, so naturally inclusion in the medical management of patients and role definition was a work in progress.

## **Conclusions**

Despite the short length of the AHWs tenure and subsequent data limitations, results from this study demonstrate that an AHW has significant impacts on hospitalised Aboriginal

patients by improving the cultural security of health care, reducing DAMAs, improving follow up practices and linkages to primary health care services. Having the AHW deliver cardiac information to hospitalised Aboriginal patients is also likely to increase participation in CR, supporting the National Health and Medical Research Council's recommendation for the inclusion of AHWs to strengthen CR services for Aboriginal people <sup>3</sup>. Consequently, reductions in repeat hospitalisations and mortality following heart attack could be expected as well as potential health service savings. Importantly, the position simultaneously builds the practical cultural safety skills of other staff.

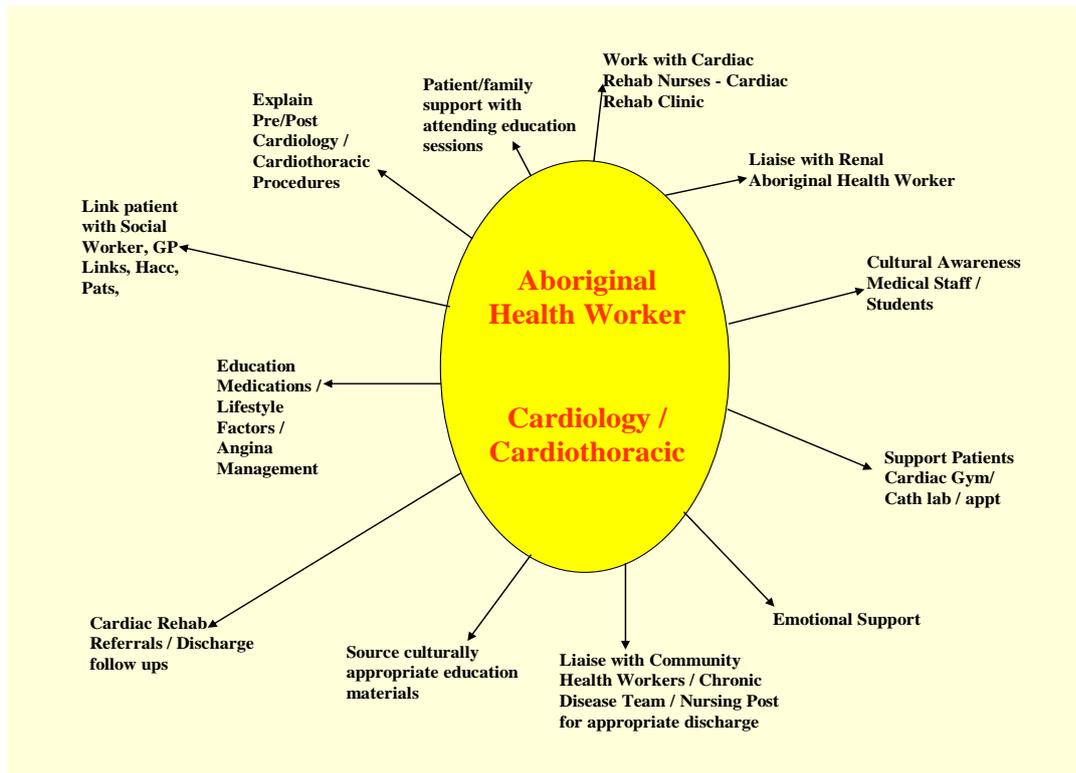
In the current environment of pressure on hospital beds and working towards prompt discharge, there is a critical need that the specialised needs of Aboriginal patients are not neglected <sup>24</sup>. With national health statistics showing disproportionate mortality and hospitalisation of Aboriginal Australians, the responsibility for reducing these health disparities requires commitment from the health care system, through an improved service interface and an adequate Aboriginal workforce <sup>31</sup>. With closing the 17 life expectancy gap between Aboriginal and non-Aboriginal Australians <sup>32</sup> a matter of national priority, results from this study demonstrate that positioning AHWs in hospital settings are a significant link in improving acute and chronic care service impacts for Aboriginal people.

### **Competing interests**

No competing interests.

### **Acknowledgements**

This study was funded by the Department of Health WA through the State Health Research and Advisory Council. The study formed components of postgraduate dissertation at Curtin University of Technology, Bentley, Western Australia.



**Diagram 1: Cardiology Aboriginal Health Worker defines responsibilities**

## References

1. Zhao Y, Guthridge S, Mangus A, Vos T. Burden of disease and injury in Aboriginal and non-Aboriginal populations in the Northern Territory. *Med J Aust.* 2004; 10(2):498-50.
2. Australian Institute of Health and Welfare. Australian hospital statistics 2004-05. 2006; Canberra, Australian Institute of Health and Welfare(AIHW catalogue no. HSE 41).
3. National Health and Medical Research Council. Strengthening Cardiac Rehabilitation and Secondary Prevention for Aboriginal and Torres Strait Islander Peoples A Guide for Health Professionals. Canberra, Australian Government. 2005.
4. Taylor RS, Brown A, Ebrahim S, Jolliffe J, Noorani H, Rees K, et al. Exercise based rehabilitation for patients with coronary artery disease: a systematic review and meta-analysis or randomized trials. *Am J Med.* 2004; 116(10):682-692.
5. Walsh WF. Cardiovascular health in ATSI Australians : a call for action. *Med J Aust.* 2001; 175(7):351-352.
6. Australian Bureau of Statistics. The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples. Canberra. 2003; Australian Bureau of Statistics(ABS publication 4704.0).
7. Scott IA, Lindsay KA, Harden HE. Utilisation of outpatient cardiac rehabilitation in Queensland. *Med J Aust.* 2003; 179:341-345.
8. Shepherd F, Battye K, E C. Improving access to cardiac rehabilitation for remote Indigenous clients. *Aust N Z J Public Health.* 2003; 27(6):632-636.
9. Tanner L, Agius K, Darbyshire P. "Sometime they run away, thats how sacred they feel": The paediatric hospitalisation experiences of Indigenous families from remote areas of Western Australia. *Contemp Nurse.* 2004-05; 18(1-2):3-17.
10. Watson J, Hodson K, Johnson R. Developing strategies to gather information about the maternity experiences of Indigenous women in an acute care setting. *Aust J Rural Health.* 2002; 10(3):147-153.
11. Lowell A. Communication and Cultural Knowledge in Aboriginal Health Care: A review of two subprograms of the Cooperative Research Centre for Aboriginal and Tropical Health's Indigenous Health and Education Research program. Casuarina NT: Cooperative Research Centre for Aboriginal and Tropical Health. ; 2001.
12. Trantor E, Taylor K. Alternative practice pilot employment of Aboriginal Health Workers at Alice Springs hospital *Aborig Isl Health Work J.* 1996; 20(5):4-5.12
13. Ellis R. The Red Shirts at Royal Prince Alfred. *Aborig Isl Health Work J.* 1996; 20(4):14-15.
14. National Health and Hospitals Reform Commission. A healthier future for all Australians: Interim report for the National Health and Hospitals Reform Commission. Canberra, Commonwealth of Australia. 2008; P3 - 4822.

15. Hayman N, Wenitong M, Zangger J, Hall E. Strengthening cardiac rehabilitation and secondary prevention for Aboriginal and Torres Strait Islander peoples. *Med J Aust.* 2006; 184(10):485-486.
16. Wilson N. In: Average ATSI IHD discharges for CCU/4F/6G and transit ward discharges from 04-07. 2007. Perth, Western Australia
17. Pope C, Ziebland S, Mays N. Analysing qualitative data. In: Pope C, Mays N, editors. *Qualitative Research in Health Care.* BMJ Books: online version available from <http://www.bmjbooks.com/> 1999.
18. Reid J, Trompf P. *The Health of Aboriginal Australia.* Sydney NSW: Harcourt Brace; 1998.
19. Andrews S, Austin N, Clarke A, Goodman H, Miller J. Promoting Koori children's health - an affirmative approach. *Health Promot J Austr.* 1998; 8(1):29-33.
20. Coffin J. Rising to the challenge in Aboriginal health by creating cultural security. *Aborig Isl Health Work J.* 2007; 31(3):22-24.
21. Kemp K, Nienhuys T, Boswell J, Leach A, Kantilla C, Tipuamantamirri M, et al. Strategies for and Problems Associated with Maximizing and Monitoring Compliance with Antibiotic Treatment for Otitis Media with Effusion in a Remote Aboriginal Community. *Aust J Rural Health.* 1994; 2(4):25-32.
22. Gruen RL, Weeramanthri TS, Bailie RS. Outreach and improved access to specialist services for indigenous people in remote Australia: the requirements for sustainability. *J Epidemiol Community Health.* 2002; 56(7):517-521.
23. Simon H, Todd A. Improving the Identification of Aboriginal and Torres Strait Islander Peoples in Health- related information collection systems. *NSW Public Health Bulletin.* 2000; 11(12).
24. Jackson D, Teale G, Bye R, McCallum J, Stein I. Postacute care for older Aboriginal people: An exploratory-descriptive study. *Aust J Rural Health.* 1999; 7(1):53-59.
25. Campbell D. The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples. *Aborig Isl Health Work J* 1997; 21(3):4-9.
26. Vale MJ, Jelinek MV, Best JD, Santamaria JD. Coaching patients with coronary heart disease to achieve the target cholesterol: a method to bridge the gap between evidence-based medicine and the real world – randomized controlled trial. *J Clin Epidemiol.* 2002; 55(3):245-52.
27. Goble A, Worcester M. Best practice guidelines for cardiac rehabilitation and secondary prevention. Melbourne Heart Research Centre on behalf of Department of Human Services Victoria. 1999.
28. Miller NH. The use of the telephone in cardiac and pulmonary rehabilitation. *J Cardiopulm Rehabil* 1996; 16(6):349-352.
29. Murray RB, Bell K, Couzos S, Grant M, I W. Aboriginal health and the policy process. In: Couzos S, Murray RB, editors. *Aboriginal primary health care: an evidence-based approach.* Melbourne: Oxford University Press; 2003. p. 37.

30. Sochalski J, Jaarsma T, Krumholz HM, Laramie A, McMurray JJV, Naylor MD, et al. What Works In Chronic Care Management: The Case Of Heart Failure. *Health Aff.* 2009; 28(1):179-189
31. Cunningham J, Cass A, Arnold PC. Bridging the gap for ATSI Australians. *Med J Aust* 2005; 182(10):505-506.
32. Australian Bureau of Statistics. Population Distribution, Aboriginal and Torres Strait Islander Australians. 2006; cat. no. 4705.0.