

WILL AUSTRALIANS PAY FOR HEALTHCARE ADVICE FROM A COMMUNITY PHARMACIST? A VIDEO VIGNETTE STUDY.

Deepa Sriram MSc^{1*}, Alexandra McManus PhD, MPH, PGradDipPH, BScHP(H.Biol) GAICD², Lynne Emmerton BPharm (Hons), PhD, MPS³, Moyez Jiwa MA, MD, FRCP, MRCGP, FRACGP⁴

1. PhD Candidate, Department of Medical Education, Faculty of Health Sciences, Curtin University, Western Australia
2. Director, Centre of Excellence for Science Seafood & Health (CESSH), Faculty of Health Sciences, Curtin University, Western Australia
3. Associate Professor, Pharmaceutical Practice, School of Pharmacy, Faculty of Health Sciences, Curtin University, Western Australia
4. Professor of Health Innovation, Department of Medical Education, Faculty of Health Sciences, Curtin University, Western Australia

* Corresponding Author-

Department of Medical Education
Faculty of Health Sciences
Curtin University, Perth, Australia



d.sriram@curtin.edu.au



GPO Box U1987

Perth WA 6845



+61 431890299

ABSTRACT

Background

Large proportion of Australians have access to pharmacists' health advice at no cost. Impact of proposed co-payment levy for general practitioner (GP) consultation by Australian government is unclear. This raises an interesting question about consumers' perceived value of health-related consultations

Objective

This survey of representative sample of Western Australians explores the hypothesis that Australians are willing to pay for advanced model of pharmacy consultation.

Methods

Two videos illustrating current-services and quality-enhanced-service (QES) incorporating systematic assessment of symptoms and referral to GP if necessary, were used. Participants viewed videos online and completed a Willingness-to-Pay (WTP) questionnaire about their perception and WTP for each service. Logistic regression was undertaken to explore the data.

Results

Of the 175 respondents, one in nine (19/175, 11%) were willing to pay and (35/175) 20% might consider paying for advice at pharmacies as per current-practice. Almost one in four (49/175, 28%) were willing to pay and (47/175) 27% would consider paying for QES (McNemar Test $P < 0.001$).

Conclusions

Majority of West Australians may be willing to pay for consultation at pharmacies that offers more private, time-intensive experience with documented GP referral where required. Further research is warranted to test WTP with actual customers to confirm these results.

Key words: community pharmacist, willingness to pay, Australia, bowel symptoms, video vignettes.

INTRODUCTION

People living in Australia who are concerned about symptoms are able to consult a community pharmacist without making an appointment and at no charge. Alternatively, if they choose to consult a general practitioner (GP), they may also do so without incurring a fee-for-service at some practices in Australia.¹ However, in the 2014 federal budget, the Australian Government proposes to introduce a AUD\$7 co-payment levy for GP consultations.² Experts are concerned that:

*Vulnerable groups, including children, Indigenous people, older people and the financially disadvantaged, may delay seeking treatment for serious illness — or even serious worry — with consequent health compromise.*²

While consumer co-payments introduced in other countries have demonstrated minimal impact on consumer behaviour,² the impact of similar charges in the Australian healthcare system is unclear. Furthermore, it is possible that payment to other healthcare providers could also come under consideration.³ This raises an interesting question about consumers' perceived value of health-related consultations. In the case of community pharmacists, the first hypothesis was that most people would continue to expect consultation at no cost. However, the researchers wished to explore willingness to pay (WTP) for an advanced model of pharmacy consultation that would better determine the need for, and coordinate with, GP consultation. The second hypothesis, therefore, was that Australians are more willing to pay for a service that includes systematic assessment of symptoms and formal referral to a medical practitioner if necessary.

The aim of this study was to deploy a survey-based method to determine monetary valuations of a standard pharmacy consultation *versus* quality-enhanced service (QES). Few studies that have attempted to investigate WTP show that 13-57% of people are willing to pay for services in pharmacies, depending on the type of pharmacy service provided.⁴

METHODS

The project was approved by the Curtin University Human Research Ethics Committee (HR19_2013). The researchers selected assessment of bowel symptoms as the basis to test the hypotheses, following evidence that pharmacies are well utilised for purchase of medicines for diarrhoea, constipation and rectal bleeding.⁵ A recently-published decision-aid tool to manage customers presenting with bowel symptoms to a community pharmacy⁶ was the inspiration for the QES.

Vignettes

A video-vignette based Willingness to pay (WTP) survey was adopted. Vignettes are often used to elicit information about values, beliefs and perceived societal norms from participants. The use of video clips to deliver information to research participants makes vignettes more realistic, helps to engage the interest of research participants, and makes any variations in the vignettes more obvious.⁷ A major advantage of this methodology is allowing comparison of different respondents' behaviour over the same set of scenarios and estimating the independent effects of specific information on a person's judgements.⁸

The two video vignettes depicted a pharmacy customer supposedly with lower bowel symptoms being consulted by the pharmacists

1. Video 1: standard (current) practice, using verbal approach to get symptom information and for giving advice/referral; duration 50 seconds
2. Video 2: quality-enhanced service (QES), depicting greater privacy, systematic assessment of symptoms based on the decision-aid tool, and referral to a GP if necessary; duration 75 seconds.

Adult English-speaking consumers whose age and gender profile closely matched recent census data were recruited for this study from across Western Australia⁹ using the services of Qualtrics, an online survey organisation. Participants viewed both videos online, and then completed a brief WTP questionnaire online.

WTP Questionnaire

The Contingent Valuation Method (CVM), which is a survey-based, hypothetical, direct method to determine monetary valuations of effects of health technologies or interventions, was applied.¹⁰ WTP elicited by the Contingent Valuation Method directly refers to the expense or cost that equals the valuation of the presented health outcome.¹¹ The WTP questionnaire comprised questions about the participants' understanding of the scenarios depicted in the two video vignettes, their perception of the service provided in each video, and their WTP for each service, including the sum they would consider paying for the QES depicted in Video 2. (Figure 1) Content and face validity were confirmed by a panel comprising a general practitioner, a community pharmacy researcher and a public health practitioner (authors MJ, LE and AM), and then by pilot testing with 10 volunteers. Refinements to the questionnaire were made following each validation phase. Self-reported demographic data were age, gender, marital status, education level, employment status, annual household income, and postcode of residency.

Data Analysis

A sample size of approximately $n=110$ is adequate for regression analysis to detect an independent variable exhibiting an effect size of $r=0.3-0.5$.^{12, 13} Descriptive statistics were used to report the study sample and identify the proportion of the consumers who were willing to pay. Logistic regression was used to explore the influence of demographic data on their responses. For all statistical testing, a significance level of $p<0.05$ was adopted. Analyses were conducted using SPSS® 22.

RESULTS

The target number of 175 participants completed the WTP survey. The demographic characteristics are shown in Table 1. The sample was representative of the Western Australian population regarding their age and gender profile.

Seventy-nine percent of participants (n=139) perceived a difference in the service offered in the two videos, and 82% (n=144) acknowledged that the consultation length in Video 2 was longer than Video 1. Forty-one percent of participants (n=72) were not willing to pay for either service. Twenty-eight percent (n=49) of participants were willing to pay for the QES (Table 2), indicating a median payment of AUD\$15 (range \$1-\$75). In comparison, 11% (n=19) of participants were willing to pay for the standard service, indicating a median payment of AUD\$10 (range \$1-\$50). Eighty-two percent of the people who were willing to pay (n=40) preferred the service/consultation depicted in Video 2 (QES) and 88% of the participants thought that the consultation offered in video-2 (QES) was more helpful in providing advice.

Education status was the only demographic variable that significantly influenced a positive attitude to WTP for the QES. Holders of a trade certificate or diploma were less willing to pay compared to the high school education level or tertiary education level (odds ratio 0.265).

In the regression analysis, the 19 participants who were willing to pay for the standard service were excluded, as the majority of these indicated they were also willing to pay for the QES. Of particular interest was the profile of the participants who were not willing to pay for the standard service and were willing to pay for QES or were unsure about paying for QES (n=58, i.e. 9+24+25), compared with those who were not willing to pay for the QES (n=79). Binary logistic regression revealed no significant association between the socio-demographic variables and a change in the decision towards a positive response for the QES model.

DISCUSSION

These data offer some support for the primary hypothesis, insofar as most (121/175, 69%) of this representative sample of Western Australians were not willing to pay for the standard service. There was also some support for the second hypothesis, as almost one-third (49/175, 28%) indicated WTP for a QES. An equally large proportion was ambivalent about their WTP for the QES (47/175, 27%). This is consistent with previous reports from pharmacies about the services for which consumers are willing to pay.^{5,14}

An unexpected finding was that income was not a significant factor in determining a person's WTP. This may reflect economic circumstances in Western Australia, where tradespeople have comparatively high incomes.¹⁵ Interestingly, the participants were also willing to pay more than the proposed AUD\$7 GP co-payment. It is hypothesised that this may be related to the convenience of attending a community pharmacy, where there is no need to make an appointment. Therefore, it is speculated that WTP may reflect the value placed on convenience as much as on the perceived expertise of the community pharmacist.

The key limitation to the study is the measurement of WTP, an inherently subjective concept. Experience of the service, face-to-face, by a consumer experiencing symptoms of concern, may elicit a perceived value of the service that differs from that indicated in a theoretical exercise.¹⁴ Despite this, theoretical WTP studies are a cornerstone of exploratory research in the development of new services or products, and the findings suggest significant consumer acceptance of a user-pays pharmacist-led service in triage of symptoms. A prospective study of the feasibility and clinical value of the QES described in this paper is underway. Further research is warranted to develop suitable decision support tools that could support a QES for the majority of customers who might seek health advice at a community pharmacy.

CONCLUSIONS

The majority of Western Australians may be willing to pay for a consultation service at a community pharmacy that offers enhanced privacy and a time-intensive experience, with documented GP referral where required.

ACKNOWLEDGEMENT

The authors acknowledge the Jodi Lee Foundation (www.jodileefoundation.org.au) for sponsoring this PhD research. The Foundation had no role in the study design or in collection, analysis and interpretation of the data, or in the submission of this manuscript. The authors also acknowledge statistical advice from Dr Richard Parsons, School of Pharmacy, Curtin University.

REFERENCES

1. Department of Health. Quarterly medicare statistics. Available from: <http://health.gov.au/internet/main/publishing.nsf/Content/Quarterly-Medicare-Statistics> (Accessed 20/06/2014)
2. Del Mar CB. Copayments for general practice visits. *Med J Aust* 2014; 200: 367.
3. Australian Medical Association. Patients and GPs to be left worse off by co-payment. Available from <https://ama.com.au/ausmed/patients-and-gps-be-left-worse-co-payment> (Accessed 20/06/2014)
4. Bijlenga D, Bonsel GJ, Birnie E. Eliciting willingness to pay in obstetrics: comparing a direct and an indirect valuation method for complex health outcomes. *Health Econ.* 2010; 20: 1392-1406.
5. Jiwa M, Sargant S, Hughes J, et al. Triaging consumers who present bowel symptoms to community pharmacies: a pilot study of two interventions. *Aust Pharm.* 2009; 28: 516-520.
6. Sriram D, McManus A, Emmerton L, et al. Development and validation of a clinical decision-making aid for screening bowel symptoms in community pharmacies. *J Eval Clin Pract*, 2014; 20: 260-266.
7. Caro FG, Ho T, McFadden D, et al. Using the internet to administer more realistic vignette experiments. *Soc Sci Comput Rev*, 2012; 30: 184-201.
8. Jiwa M, Spilsbury K, and Duke J, Do pharmacists know which patients with bowel symptoms should seek further medical advice? A survey of pharmacists practicing in community pharmacy in Western Australia. *Ann Pharmacother*, 2010; 44: 910-917.
9. Australian Bureau of Statistics. 2011 Census QuickStats. Available from: http://www.censusdata.abs.gov.au/census_services/getproduct/census/2011/quickstat/5?opendocument&navpos=220 (Accessed 20/06/2014)
10. Klose T. The contingent valuation method in health care. *Health Policy.* 1999; 47: 97-123.

11. Larson RA. Patients' willingness to pay for pharmaceutical care. *J Am Pharm Assoc.* 1999; 40: 618-624
12. Cohen J. *Statistical power analysis for the behavioural sciences.* New Jersey: Lawrence Erlbaum, 1988.
13. Tabachnik BGF, Fidell LS. *Using Multivariate Statistics.* 5th ed. Boston: Pearson/Allyn & Bacon 2007: 123.
14. Hong SH, Spadaro D, West D, et al. Patient valuation of pharmacist services for self care with OTC medications. *J Clin Pharm Ther.* 2005; 30: 193-199.
15. Bank West Curtin Economics Centre. *Sharing the boom, the distribution of income in Western Australia. Focus on Western Australia Report Series, No.1 February 2014.* Available from: <http://business.curtin.edu.au/local/docs/BCEC-Sharing-the-Boom.pdf> (Accessed 20/06/2014)

Table 1. Demographic characteristics of Willingness to pay Survey participants (n=175)

Demographic variable	Frequency (n)	Percent (%)
Gender		
Male	84	48.0
Female	91	52.0
Total	175	100
Employment status		
Unemployed	33	18.9
Employed full time	56	32.0
Employed part time	29	16.6
Student	10	5.7
Pensioner	32	18.3
Other	15	8.6
Total	175	100
Education level		
Year 12 and less	72	41.1
Trade certificate/ TAFE/ diploma	54	30.9
Tertiary	49	28
Total	175	100
Age Range (years)		
18-29	31	17.7
30-59	99	56.6
60+	44	25.1
Total	175	100
Annual Income (AUD)		
Less than \$40,000	36	20.6
\$41,000-\$80,000	60	34.3
\$81,000 - \$120,000	30	17.1
\$120,000 -\$160,000	20	11.4
More than \$1,60,000	8	4.6
I prefer not to answer this question	21	12.0
Total	175	100
Marital Status		
Single	36	20.6
Married	108	61.7
Separated	5	2.9
Divorced	14	8.0
Widowed	4	2.3
Never Married	8	4.6
Total	175	100.0

Table 2. Willingness to pay for the standard service vs the Quality-enhanced service (McNemar Test $P < 0.001$)

			Video 2 (Quality-enhanced service):Willing to pay?			Total
			Yes	No	Not sure	
Video1 (standard service): Willing to pay?	Yes	Count	16	2	1	19
		% of Total	9.1%	1.1%	0.6%	10.9%
	No	Count	24	72	25	121
		% of Total	13.7%	41.1%	14.3%	69.1%
	Not Sure	Count	9	5	21	35
		% of Total	5.1%	2.9%	12.0%	20.0%
Total	Count	49	79	47	175	
	% of Total	28.0%	45.1%	26.9%	100.0%	

FIGURE 1 - Willingness to Pay survey

1. Did you notice a difference in the way the man was dealt with in Video 1 compared to Video 2?
2. Which consultation do you think was longer?
3. In which video was the man offered more privacy?
4. Assuming that the man had the same problem in both the videos, which consultation do you think was more helpful in providing advice?
5. If you were the man in the video, which type of service/consultation would you prefer?
6. If you were the man in **Video 1**, would you be willing to pay for the service you received in the pharmacy? If yes, how much would you be willing to pay?
7. If you were the man in **Video 2**, would you be willing to pay for the service you received in the pharmacy? If yes, how much would you be willing to pay?