Out-of-pocket healthcare expenditure and chronic disease – do Australians forgo care due to the cost

Abstract

Background

While we do know that out-of-pocket healthcare expenditure is relatively high in Australia, little is known about what health conditions are associated with the highest out-of-pocket expenditure, and whether the cost of healthcare acts as a barrier to care for people with different chronic conditions.

Methods

Cross sectional analysis using linear and logistic regression models applied to the Commonwealth Fund International Health Policy survey of adults aged 18 years and over conducted in 2013.

Results

Adults with asthma, emphysema and COPD had household out-of-pocket healthcare expenditure 109% higher than those with no health conditions (95% CI: 50% – 193%); and adults with depression, anxiety and other mental health conditions had household out-of-pocket expenditure 95% higher (95% CI: 33% – 187%). People with chronic conditions were also more likely to forego care due to cost. People with depression, anxiety and other mental health conditions had odds 7.65 times as high of skipping healthcare (95% CI: 4.13 – 14.20), and people with asthma, emphysema and COPD had odds 6.16 times as high of skipping healthcare (95% CI: 3.30 – 11.50) compared to people with no health condition. People with chronic health conditions in Canada, the United Kingdom, Germany, France, Norway, Sweden and Switzerland were all significantly less likely to skip healthcare because of cost than people with a condition in Australia.

Conclusions

The out-of-pocket cost of healthcare in Australia acts as a barrier to accessing treatment for people with chronic health conditions, with people with mental health conditions being likely to skip care. Attention should be given to the accessibility and affordability of mental health services in Australia.

KEYWORDS: Patient contributions; chronic health conditions

Summary statement

What is known about this topic?

- Individuals contribute 17% of total healthcare spending in Australia.

What does this paper add?

- Individuals with chronic health conditions are more likely to forgo care due to the cost in Australia than many other countries.
- Individuals with mental health conditions are particularly likely to skip care, indicating a need to address potentially prohibitive costs in this area of care.

Introduction

Despite Australia having a universal healthcare system, individuals' out-of-pocket medical expenditure is reported by the Australian Institute of Health and Welfare to account for 17% of total health spending (Australian Institute of Health and Welfare 2014). This makes individuals the third largest contributor to health spending - only behind the Australian government, and the state and territory governments, and means they contribute more than double that paid by private health insurance companies (Australian Institute of Health and Welfare 2014). By way of comparison, individual out-of-pocket expenditure was reported to account for 9% of total health expenditure from all sources in the United Kingdom, 8% in France, and 13% in Germany but as high as 25% in Switzerland (Organisation for Economic Co-operation and Development (OECD) 2014) - based upon reported aggregate figures.

When broken down to the household's perspective, Australian's out-of-pocket expenditure on healthcare equated to an average of 9% of total household expenditure per year for an older household and 5% for a younger household (Yusuf and Leeder 2013). It is also known that out-of-pocket expenditure for those with certain chronic health conditions is particularly high. For example, individual stroke survivors reported spending an average of $1,110 per year on healthcare, however out-of-pocket expenditure ranged from $0 to $32,411 in the twelve months following their stroke (Dewey, Thrift et al. 2004); similarly, for an individual with arthritis, the mean out-of-pocket expenditure directly attributable to arthritis was $1,513 per year, but with a range of $49 to $20,527 (Lapsley, March et al. 2002) – both exclude health insurance premiums and only consist of expenses directly related to the specific condition. The expenditure by individuals in rural areas is even higher, with cancer patients treated in North Queensland spending an average $4,311 since diagnosis (interquartile range $563 – 6,231), while those who lived more than 100km from the hospital spent an average of $7,752

(Gordon, Ferguson et al. 2009). This high and heterogeneous out-of-pocket expenditure is mirrored in the international literature (Lehnert, Heider et al. 2011).

However, the literature regarding out-of-pocket expenditure is fragmented – with studies only focusing upon one type of chronic health condition, one type of healthcare expenditure, or one particular population (for example, older people) (Lapsley, March et al. 2002, Dewey, Thrift et al. 2004, Gordon, Ferguson et al. 2009, Essue, Kelly et al. 2011, McRae, Yen et al. 2013). International comparisons have also been made for overall healthcare expenditure in Australian and other countries (Squires 2012), and the recent Senate Inquiry into Out-of-pocket Health Expenditure in Australia did report on patient contributions being a barrier to accessing care (Senate Standing Committees on Community Affairs 2014), but to date no studies have been able to investigate the reported out-of-pocket expenditure and the impact this has on decisions to access care for patients with specific health conditions for the Australian population.

Given the current heightened level of community discussion on increases to out-of-pocket healthcare expenditure (Duckett, Boxall et al. 2014, Bourke 2015, Owler 2015) associated with proposed General Practitioner co-payments (Bourke 2015), the Extended Medicare Safety Net (Department of Human Services 2014), and changes to Pharmaceutical Benefits Scheme co-payments (Department of Human Services 2014), it is imperative to understand current levels of out-of-pocket healthcare expenditure and whether the cost of healthcare may be discouraging people from accessing care. This paper aims to answer the following research questions: what level of out-of-pocket expenditure is associated with different health

conditions in Australia[1]? With which conditions are people more likely to forego healthcare due to the out-of-pocket cost compared to people with no conditions? How does Australia compare internationally, in terms of self-reported out-of-pocket expenditure, and having people with chronic health conditions forego healthcare due to cost?

Methods

The Commonwealth Fund International Health survey was conducted in 2013 by Social Science Research Solutions and country contractors, and consisted of computer-assisted telephone interviews of random samples of adults aged eighteen and older using a common questionnaire between February and June 2013 (Rapoport, Tipan et al. 2013). Samples were collected in Australia and 10 other sponsor countries including; Canada, Germany, France, Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom and the United States. In Australia, there were 2,200 respondents with assigned survey weights such that they would be representative of the age, gender, education and regional distribution of Australia. Of note, the state of New South Wales (NSW) being oversampled as the Australian sponsor of the survey was the NSW Bureau of Health Information, which makes the margin of sampling error for Australia +/- 3.4%, larger than other countries with similar sample sizes.

The Commonwealth Fund International Health Policy Surveys (The Commonwealth Fund 2013) have been conducted since 1998, with questions that have been tested and revised in many settings, over several cycles (Osborn, Moulds et al. 2014). The reported out-of-pocket

[1] This paper focuses upon household expenditure on the direct costs of care and does not cover any indirect costs of seeking health care, such as transport costs, carer costs and opportunity costs from spending time seeking care rather than engaging in other activities such as employment.

expenditure on the 2013 survey was validated by comparing mean values with administrative data (Table 1). The levels and order of magnitude correspond well.

Missing data

The survey asked respondents about their household expenditure on medical services with the following two questions:

1. In the past 12 months, about how much have you and your family spent out-of-pocket for medical treatments or services that were not covered by insurance? This would include what you paid for prescription medicines, medical and dental care.
2. If you can't recall exactly how much you and your family spent out-of-pocket for medical treatments or services, please provide your best estimate.

The first question was a continuous variable, with respondents able to record the dollar value of their expenditure. The second question was a categorical variable, with respondents able to select the following ranges: less than $100; $100 to less than $500; $500 to less than $1,000; $1,000 to less than $2,000; $2,000 or more.

Of the 2,200 respondents, there were 212 respondents who stated they were not sure how much their expenditure was or declined to answer to both questions. These were excluded from the analysis.

For the respondents who stated they were unsure of the exact amount of their expenses in the first question, but were able to identify which category their expenses fell into in the second question, we assigned a continuous dollar value of expenditure based upon imputation from the balance of the sample. For people with valid responses to questions 1 and 2, the mean value of continuous household expenditure for those who stated in question 2 that they spent less than $100; $100 to less than $500; $500 to less than $1,000; $1,000 to less than $2,000;

$2,000 or more was identified, as shown in Table 2. Respondents who were unsure of the continuous value of their expenditure but were able to identify the range of their expenditure, were assigned the average value shown in Table 2.

Exchange rates and currency

For all analysis that focuses only on Australia, Australian dollars are used as the currency. For all analysis involving international comparison, United States dollars are used, with the exchange rate set at $1.04 US dollars to 1 Australian dollar, which was the exchange rate at the time of the survey.

Australian Healthcare System

Australia does have a universal health care system, Medicare, which provides the population with access to essential healthcare services at no charge to the end user or for a subsidised fee (Department of Human Services 2015). In some areas of Australia many services are 'bulk billed', meaning that the full cost of treatment is billed directly to Medicare and the patients do not face any up-front or out of pocket charges. However, many services do have an 'out of pocket' charge that is paid for by the patient, this occurs when the fee charged by the service provider is higher than the rebate paid by Medicare. Similarly, for services that are not covered by Medicare, or services which have a capped number of uses in a given time period, the patient may have to pay the full fee.

Statistical methods

Initial univariate analysis was undertaken to document the distribution of stated out-of-pocket healthcare expenditure in Australia. A series of logistic regression models were then constructed to estimate the adjusted odds ratios of having any out-of-pocket healthcare expenditure for people with different reported health conditions, compared to those with no

health conditions and adjusted for age, sex and highest level of education attainment (secondary education or less; greater than secondary). As it was possible for respondents to select multiple health conditions, separate models were constructed for each health condition.

The analysis was then limited to those who stated they had more than $0 of healthcare expenditure, and a series of linear regression models were then constructed on log transformed data to estimate the adjusted difference of stated out-of-pocket expenditure for people who reported having different health conditions, individually and in combination, compared to those with no health conditions. The model was adjusted for age, sex and highest level of education attainment.

The proportion of people who stated they skipped healthcare due to healthcare cost was then compared between adults who had long term health conditions and those with no health conditions. A series of logistic regression models were then constructed to assess the odds of skipping care due to cost for those with each health condition compared to those with no health conditions also adjusting for age, sex and highest level of education attainment.

To provide international context, the variation in reported expenditure on healthcare for Australia and Canada, France, Germany, the Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom, and the United States is also provided. A logistic regression model was constructed to compare the odds of skipping care due to the costs of healthcare for all countries compared to Australia.

Results

There were 1,988 adults aged 18 and over from Australia with valid responses regarding household out-of-pocket healthcare expenditure. Of these, 52% were female, 45% were aged under 45 and 53% had more than a secondary level of education attainment (Table 3). When

asked if they had ever been told by a doctor they had: hypertension or high blood pressure, heart disease, including heart attack, diabetes, asthma or chronic lung disease such as chronic bronchitis, emphysema or chronic obstructive pulmonary disease, depression, anxiety or other mental health problems, cancer, arthritis, or high cholesterol nearly half (49%) of the adult population had at least one of these long term health conditions

Respondents reported spending an average of $986 per year on household out-of-pocket healthcare expenditure (median = AU$250, range = $0 - $40,000). Table 4 shows the range of expenditure per year. Around one quarter of people reported no out-of-pocket healthcare expenditure, and a similar proportion reported between AU$100 and AU$500. Fourteen percent reported expenditure over AU$2,000.

Table 5 shows the distribution of this expenditure by gender, age and number of chronic health conditions. Adults with one or more health conditions reported average expenditure around double that reported by those who had no long-term health condition. Those in the older age groups reported lower amounts of expenditure, as did those with multiple co-morbidities.

Adults with different chronic health conditions had consistently higher average yearly household out-of-pocket healthcare expenditure than those with the no chronic conditions. People with Asthma, emphysema and COPD reported an average of AU$1,642 per year in household out-of-pocket healthcare expenditure, and those with high cholesterol reported an average of AU$1,423 per year (Table 6).

Australian adults with asthma, emphysema and COPD, depression, anxiety and other mental health conditions, heart disease, hypertension and high cholesterol were all significantly more likely to report any out-of-pocket expenditure compared to people with no chronic health conditions (Table 6). People with Asthma, emphysema and COPD had 3.97 times the odds of

reporting out-of-pocket healthcare expenditure (95% CI: 2.21 – 7.14) and people with heart disease had 3.93 times the odds (95% CI: 1.73 – 8.93) of reporting out-of-pocket healthcare expenditure than people with no health condition, after adjusting for age, sex and education attainment.

Looking only at people who had out-of-pocket expenditure, people with arthritis, asthma, emphysema and COPD, depression, anxiety and other mental health conditions, diabetes, hypertension and high cholesterol all had significantly higher out-of-pocket healthcare expenditure than those with no health conditions, after adjusting for age, sex and education attainment. People with asthma, emphysema and COPD had out-of-pocket healthcare expenditure 109% higher than those with no health conditions (95% CI: 50% – 193%); and people with depression, anxiety and other mental health conditions had out-of-pocket expenditure 95% higher (95% CI: 33% – 187%).

Table 7 shows the proportion of people who stated they skipped healthcare treatment because of the cost. An estimated 9% of Australians without a health condition stated they skipped healthcare treatment because of the cost. Amongst those with one or more health conditions, over 40% of people with depression, anxiety and other mental health conditions, and over one third of people with asthma, emphysema and COPD stated they skipped healthcare treatment because of the cost. After adjusting for age, sex and education attainment, people with depression, anxiety and other mental health conditions had 7.65 times the odds of skipping treatment (95% CI: 4.13 – 14.20), and people with asthma, emphysema and COPD had odds of skipping care 6.16 times as high (95% CI: 3.30 – 11.50) as people with no health condition.

Table 8 shows the average yearly reported household healthcare expenditure, in United States dollars, for different countries. The average estimated yearly household healthcare

expenditure in Australia was US$1,026, in the United States average spending was US$1,844, and in the United Kingdom average spending was US$216 per year. Table 7 also shows the odds ratio of skipping care due to costs amongst people with a chronic health condition in different countries. People with chronic health conditions in Canada, the United Kingdom, Germany, France, Norway, Sweden and Switzerland were all significantly less likely to skip healthcare because of costs than people with chronic conditions in Australia. People in the United States with conditions had twice the odds of skipping healthcare due to costs compared to those in Australia (95% CI: 1.51 – 2.57). Figure 1 also shows the reported annual expenditure of people with different numbers of co-morbidities across the different countries.

Discussion

The Commonwealth Fund International Health Policy survey data provides a unique opportunity to gain insights on the out-of-pocket healthcare expenditure of Australians, and also allows comparisons with other countries to be made. The results of this analysis have shown that respiratory disease (asthma, emphysema and COPD), mental health conditions (depression, anxiety and other mental health conditions) and diabetes are the conditions with high out-of-pocket healthcare expenditure in Australia (relative to people with no conditions). For example, people with asthma, emphysema or COPD reported household spending of $1,600 per year on healthcare on average. The distribution analysis that shows people with, multiple chronic conditions have lower out-of-pocket expenditure may be explained by a cohort effect, where people with more chronic conditions are both more likely to be older and more likely to receive some of their care in places where care is provided without an out-of-pocket fee (such as within public hospitals as an inpatient, outpatients clinics, and Emergency Departments). It could be a patient's trajectory to face significant expenditure for a condition when followed in primary healthcare settings only and then see a reduction of costs, even for

that first disease, as more intense care is provided in parts of the hospital system. Similar finding have been reported in other countries where older patients, once they got much sicker with multiple chronic diseases, were returning to the public sector, not able to afford private care anymore (Levesque 2008).

A high percentage of people with chronic conditions in Australia choose to forgo care because of the cost. Even amongst those *without* a chronic health condition, 9% chose to forgo care. However, the percentage of people who have a chronic health condition that stated they are skipping care due to the cost is much greater. Over 40% of people with depression, anxiety and other mental health conditions stated they skip treatment due to the cost. Arthritis and asthma, emphysema and COPD were the other conditions with a high percentage of people forgoing care due to the cost.

Those with mental health conditions were shown to have particularly large out-of-pocket expenditure and be restively more likely to forgo care, which indicates that the costs of mental health services may be prohibitively high. Other studies have noted that the Medicare rebates for mental health are particularly low relative to the fees charged by mental health practitioners (Farag, Sherrington et al. 2013). Other studies have also found that patients with mental health problems were more likely to access GP services (which have lower out of pocket charges on average) than mental health services (Lucas, Bayer et al. 2013). However, this study was not able to specifically identify the exact treatments or services that were foregone.

This study only reported the actual amount people spent on healthcare, and did not capture the amount they would have spent had they been able to afford it. Given that a large proportion of people with chronic conditions do forgo treatment and care due to the cost, their

actual healthcare expenditure could have been much higher but their household incomes may have curtailed this.

Other studies have demonstrated that accessing healthcare and good condition management are effective means for maintaining labour force participation amongst people with chronic health conditions – particularly people with arthritis, diabetes and depression (Claxton 1999, Yelin, Katz et al. 2001, Passey, Shrestha et al. 2012). The findings of this study show that, ironically a large proportion of people with some chronic health conditions – particularly people with depression and arthritis – are likely to forgo care due to the cost of healthcare. Cost of healthcare has been an overlooked barrier to accessing healthcare, with previous studies within Australia showing that lack of available services are a common barrier to accessing care (Humphreys 2009). As such, policies aiming to promote affordable healthcare to at risk and vulnerable populations (NSW Health 2015) are of vital importance to ensure that out-of-pocket cost is not a barrier to treatment and do no widen the gap in health status between those of high and low socioeconomic status.

It is well documented that people with chronic health conditions within Australia, and internationally, have lower incomes, less wealth and are more likely to be in income poverty, likely due to the impact that chronic health conditions have on ability to participate in the labour force (Schofield, Shrestha et al. 2008, Schofield, Kelly et al. 2010, Callander, Schofield et al. 2011, Hunter, Schofield et al. 2014). While the lower income of individuals with chronic health conditions may act as a barrier to care, the out-of-pocket expenditure on healthcare that people with chronic health conditions are able to afford will also add to the financial burden of chronic illness leaving less disposable income available for other expenses. Past studies assessing the disposable income of households with members who have a chronic health condition have not taken into account the additional out-of-pocket

healthcare expenditure demonstrated in this study, which further reduces the actual disposable income available to individuals with chronic conditions.

By way of international comparison, estimated self-reported out-of-pocket healthcare expenditure in Australia is higher than other countries included in this analysis, with the exception of the United States. This example demonstrates the caution that is need for the interpretation of these international comparisons in light of the differences in healthcare systems. People with chronic health conditions within Australia were also significantly more likely to forgo care compared to most other countries. These findings are consistent with administrative data for Australia showing 17% of all healthcare expenditure was attributed to individuals' out-of-pocket expenditure in 2012-13, which is second only to Switzerland. While those in the United States do have high out-of-pocket healthcare costs, total spending on healthcare in the United States from all sources is also very high, and as a proportion of all expenditure on healthcare, individuals from Australia and Switzerland contribute the highest proportion of total expenditure (Bureau of Health Information 2014).

This study has a number of limitations that need to be acknowledged. First the study population is designed to be representative of age, sex, regional and education based populations of Australia. It is not designed to represent people with chronic conditions. Therefore, it may under or over cover specific disease or population groups. Compared to prevalence estimates from a national survey for the population Arthritis (15%), Asthma (10%) and Diabetes (4%) estimates for the population are comparable but slightly lower than the estimates for adults aged 18 and over from this international survey (17%, 12% and 9% respectively) (Australian Institute of Health and Welfare 2014). In addition, older adults living in nursing homes and other facilities were not sampled. This would reduce the representativeness of the population with chronic conditions. Secondly, the survey did not specifically ask respondents about over the counter medication, or aids and equipment, travel

for treatment, or health insurance premiums or excess amounts as a part of the question regarding healthcare expenditure. As such, the figures represented in this study may underestimate of the total amount spent by households on healthcare. Furthermore, the large number of people stating they were unsure about the exact amount they spent on healthcare indicates the difficulty individuals have with recalling exact amounts of expenditure, particularly when the estimates are for an annual time period. There is no way to know how these limitations influence international comparisons.

Despite these limitations, this study has shown the impact out-of-pocket healthcare expenditure has on individuals with chronic health conditions within Australia, and that the cost of healthcare does act as a barrier to receiving treatment, particularly those with mental health conditions. This is the first time comparisons have been made to estimate the relative amount of out-of-pocket expenditure between people with certain health conditions and people without conditions, and has demonstrated that people with depression, anxiety and other mental health conditions face particularly large costs, and are particularly deterred from accessing care due to the cost. These findings come at a vital time when there has been much discussion about the possibility of raising the cost of healthcare to individuals.

Conflict of interest

None.

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1 Table 1: Comparison of reported out-of-pocket costs from the Commonwealth Fund survey with
2 administrative data

	HEALTHCARE EXPENDITURE PAID BY INDIVIDUALS OUT-OF-POCKET ($ AUD PPP) SOURCE: OECD HEALTH STATS, 2013, AIHW) TOTAL HEALTHCARE EXPENDITURES PAID BY INDIVIDUALS DIVIDED BY NUMBER OF PEOPLE ALL AGES.	MEAN HOUSEHOLD OUT-OF-POCKET HEALTHCARE EXPENDITURE (AU$) PPP) SOURCE: CWF SURVEY 2013 - BASED ON ADULTS 18+ BUT RESPONSES FOR 'FAMILY' IN THE PAPER
AUSTRALIA	1,185	990
CANADA	947	1160
FRANCE	421	550
GERMANY	987	720
NETHERLANDS	410	510
NEW ZEALAND	639	750
UNITED KINGDOM	488	330

3

Table 2: Average value of annual household out-of-pocket healthcare expenditure corresponding to each expenditure group, from Commonwealth Fund International Health Policy Survey, Australia, 2013

Response category of annual household out-of-pocket healthcare expenditure	**Average continuous value of annual household out-of-pocket healthcare expenditure (US$)**
less than $100	$46
$100 to less than $500	$249
$500 to less than $1,000	$587
$1,000 to less than $2,000	$1,196
$2,000 or more	$4,969

Table 3: Demographic and health characteristics of the weighted respondent population, Australia, 2013

Characteristic		N	%
		1988	
Sex	Female	1057	52
	Male	931	48
Age	under 45	883	45
	46 to 64	724	37
	65 plus	381	18
Education	Secondary or less	854	47
	More than secondary	1107	53
	Missing	27	
Chronic health conditions[a]	Arthritis	316	17
	Asthma, COPD or chronic lung disease	237	12
	Cancer	85	5
	Mental health	226	12
	Diabetes	150	9
	Heart disease	129	6
	High blood pressure	409	19
	High cholesterol	384	18
	Yes, has any chronic condition	981	49

[a]respondents may be in multiple categories of chronic conditions.

Table 4: Annual household out-of-pocket expenditure on healthcare (AU$), Australia, 2013

Annual household out-of-pocket healthcare expenditure ranges by year (AU$)	**N**	**Percent**
None	490	26
$1 to less than $100	110	5
$100 to less than $500	531	27
$500 to less than $1,000	322	17
$1,000 to less than $2,000	238	11
$2,000 or more	297	14

Table 5: Annual out-of-pocket healthcare expenditure (AU$) for Australians by age, gender and long term health condition

Characteristic	**N**	**Mean annual household out-of-pocket healthcare expenditure (AU$)**	**Median annual household out-of-pocket healthcare expenditure (AU$)**
	1990	990	250
Gender			
Male	930	690	250
Female	1060	1260	400
Age group			
Under 45	880	840	250
45 to 64	720	1110	480
65 and over	380	1100	300
Long term health condition			
No condition	960	660	200
Yes, has a condition	980	1340	500
Not sure/decline	40	730	100
Number of conditions			
One	440	1520	520
Two	280	1410	520
Three or more	260	1150	420

Table 6: Percentage difference in annual household out-of-pocket healthcare expenditure (AU$) for Australians by chronic health condition

Long term health condition (with or without another condition)	Any expenditure (of 1,988 respondents who responded to expenditure question)					Of the 1,498 respondents with expenditure greater than zero		
	N	Mean per year ($)	Median per year ($)	Adjusted odds ratio of having any out-of-pocket expenditure*		N	% Difference in healthcare expenditure compared to reference group ^	
				OR (95% CI)	p-value		% difference (95% CI)	p-value
No health condition	964	660	200	REFERENCE		614	REFERENCE	
Arthritis	316	1,220	500	1.92 (0.93 – 3.96)	0.0786	270	59% (15 – 120)	0.0051
Asthma, emphysema, COPD	237	1,640	590	3.97 (2.21 – 7.14)	<.0001	206	109% (50 – 193)	<.0001
Cancer	85	810	250	0.86 (0.26 – 2.82)	0.8046	76	30% (-16 – 100)	0.2424
Depression, anxiety and other mental health conditions	226	1,350	590	2.34 (1.14 – 4.82)	0.0207	200	95% (33– 187)	0.0007
Diabetes	150	1,220	300	1.14 (0.58 – 2.22)	0.1382	124	53% (7 – 120)	0.0197
Heart disease	129	890	500	3.93 (1.73 – 8.93)	0.0011	115	21% (-29 – 107)	0.4799
Hypertension	409	1,030	400	2.12 (1.21 – 3.74)	0.0091	347	42% (6 – 91)	0.0186
High cholesterol	384	1,420	500	2.57 (1.39 – 4.71)	0.0025	338	50% (7 – 111)	0.02

Note: Respondents can have multiple conditions, each condition row represents a separate model, comparing people with that condition, with or without other conditions, to those with no condition.* adjusted for age, education and condition

^ adjusted for age, education and condition. Limited to those who had more than $0 in health expenditure

Table 7: Percentage of Australian adults skipping healthcare treatment due to cost, by type of chronic health condition

Condition	**Percentage skipping care due to cost**	**Adjusted odds of having skipped care due to cost***	
		OR (95% CI)	**p-value**
No health condition	9%	REFERENCE	
Arthritis	25%	5.35 (2.73 – 10.46)	<.0001
Asthma, emphysema, COPD	32%	6.16 (3.30 – 11.50)	<.0001
Cancer	21%	1.84 (0.81 – 4.16)	0.1451
Depression, anxiety and other mental health conditions	44%	7.65 (4.13 – 14.20)	<.0001
Diabetes	27%	4.28 (2.05 – 8.92)	0.0001
Heart disease	21%	3.88 (1.82 – 8.28)	0.0004
Hypertension	22%	3.45 (2.01 – 5.91)	<.0001
High cholesterol	22%	3.51 (1.96 – 6.26)	<.0001

* Each condition is modelled separately compared to people with no health conditions, with odds ratios adjusted for age, education and presence of that condition, with or without other conditions.

Table 8: Estimated yearly household expenditure on healthcare, Australia and 10 countries, 2013 (US$)

Country	Mean household out-of-pocket healthcare expenditure (AU$) ppp)	Mean household out-of-pocket healthcare expenditure (US$)	Median household out-of-pocket healthcare expenditure (US$)	Percentage with a chronic health condition skipping care due to costs	Odds Ratio (95% CI) of skipping care due to costs amongst those with a chronic health condition	p-value
Australia	990	1030	260	25%	REFERENCE	
Canada	1160	760	200	17%	0.54 (0.41 – 0.70)	<.0001
New Zealand	750	490	170	23%	0.81 (0.57 – 1.17)	0.2632
United Kingdom	330	220	0	5%	0.16 (0.09 – 0.27)	<.0001
United States	2800	1840	500	42%	1.97 (1.51 – 2.57)	<.0001
Germany	720	480	130	18%	0.69 (0.49 – 0.97)	0.0327
Netherlands	510	340	260	23%	0.89 (0.63 – 1.25)	0.5068
France	550	360	130	20%	0.71 (0.52 – 0.98)	0.0348
Norway	1260	830	340	11%	0.34 (0.22 – 0.53)	<.0001
Sweden	470	310	150	8%	0.27 (0.19 – 0.38)	<.0001
Switzerland	1310	860	270	16%	0.57 (0.40 – 0.82)	0.0021

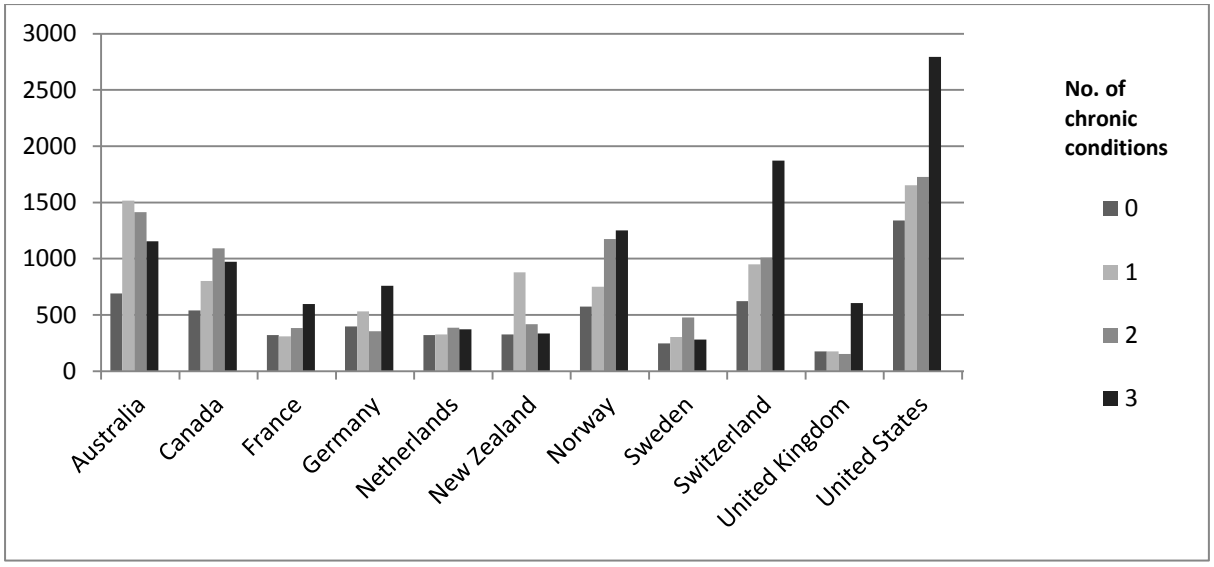

Figure 1: Out of pocket expenditure by number of chronic conditions