

Impressions and attitudes of adult residents of Karachi towards a possible public health insurance scheme

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Abstract

Objective: To gauge the general population's knowledge and attitude towards a possible public health insurance scheme.

Methods: This descriptive, cross-sectional study was conducted at the Aga Khan University Hospital, Karachi, from April to May 2015, and comprised permanent residents of the city. Convenience sampling was used. Data was collected via questionnaires. SPSS 22 was used for data analysis.

Results: There were 340 participants in the study with an overall mean age of 32.9±12.4 years. Besides, 159(46.8%) participants were aware of the concept of medical insurance while the correct definition was identified by 160(50.5%) respondents. Overall, 256(75.3%) participants were willing to join a theoretical public health insurance scheme. Of all the respondents, 107(31.5%) had faced a catastrophic event in the past and consequently were more willing to join. Of those unsure or not willing to join, 33(37.9%) respondents identified lack of trust in government programmes as the main reason for their choice.

Conclusion: A large majority of adults had a favourable attitude towards the implementation of a possible public health insurance scheme.

Keywords: Public health insurance, Universal coverage, Pakistan, Karachi, Health-seeking behaviour, Out-of-pocket expenditure. (JPMA 67: 1460; 2017)

Introduction

Expenditure on healthcare continues to increase globally at a rapid pace. Unfortunately, the increase in expenditure is not accompanied by an equal increase in resources, a trend that is especially alarming for developing countries where the health expenditure per capita is steadily increasing.¹ A potential way to cover such costs is through public health insurance. Public health insurance aims at providing universal health coverage, which is a component of the World Health Organisation (WHO) Sustainable Development Goals 2015² whereby "all people can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship."

Germany is recognised as a pioneer of the public health insurance system with its advent in 1883. Starting from provision of basic services, it was continuously restructured to cover changing medical needs with 85%

of the population being covered.³ Likewise, Japan introduced its National Health Insurance scheme, which aims at providing insurance for "anyone, anywhere, any time" and caters to evolving medical challenges.⁴ However, while such systems have succeeded in developed nations, it does not necessitate success in developing nations.

Developing nations face a unique set of issues when it comes to public health insurance such as optimising coverage, improving health service utilisation and dealing with a lack of tertiary care facilities. Assessing Pakistan's current situation, we find that according to the World Bank, the overall out-of-pocket health expenditure was 86.8% in 2012-14 with an average household size of 6.41 with 1.93 earners. This poses a significant threat to public healthcare utilisation. In India, a country which closely parallels Pakistan in most issues, up to 28% of rural and 20% of urban population did not seek medical help due to out-of-pocket payment expenditures.⁵ Other factors like debt, distance and natural disasters further compound the problem.⁶

Innovative models such as district health insurance and community-based health insurance have been executed in countries such as Rwanda, Ghana and Vietnam to tackle

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the aforementioned issues.⁷ In Ghana, a scheme was introduced in 2003; by 2011, 33% coverage with a fortyfold increase in outpatient services utilisation was noted.⁸ Those insured under the 'Vietnamese Health Insurance' were also more likely to seek health care with the likelihood increasing progressively down the income strata.⁹ A study in Tanzania concluded that "health insurance is found to increase the probability of seeking care and reduce delays".¹⁰ A similar trend was found in Georgia.¹¹

However, the benefits have not been universal. A programme in Mexico, found a 23% reduction in catastrophic events, but found no effect on health outcomes or service utilisation.¹² In Estonia, an increase in service utilisation was noted but those with a favourable socio-economic status were more likely to utilise the services.¹³ Such variation in the outcomes of public health insurance in developing countries necessitates further study to delineate the factors involved.

The movement towards universal health coverage in Pakistan is in its infancy. In 2012, an article promoted a pilot health insurance model and explored the technicalities of structuring a public health insurance scheme in Pakistan.⁶ In 2015, a proposition to set up a pilot health insurance scheme in four of the most poverty-stricken districts of Punjab was put forward following a proclamation by the prime minister approving a national medical insurance scheme.¹⁴

Therefore, we believed that it was an opportune time to assess our population's knowledge about and attitude towards public health insurance. The current study was planned to evaluate the general population's perception of a potential public health insurance scheme in Pakistan and to extrapolate the hypothetical effect it could have on health-seeking behaviours.

Subjects and Methods

This descriptive, cross-sectional study was conducted at the Aga Khan University Hospital (AKUH), Karachi from April to May 2015, and comprised permanent residents of the city from 50 different residential areas. All participants were aged above 18 years. Convenience sampling was used with the sample population selected from Ocean Mall, a shopping centre in the posh Clifton area; and Sultanabad, a squatter settlement. The study sites were chosen to inculcate a diverse range of socio-economic, educational and occupational strata. Assuming an estimate of 31% initial enrolment to such a scheme based on previous studies⁶ with a 95% confidence interval (CI) and 5% precision, we required a sample size of at least 329 individuals.

Data was collected using a self-administered questionnaire, available in both English and Urdu. All participants gave written or verbal informed consent before filling the questionnaire. In cases where participants were unable or unwilling to fill in the questionnaire themselves, an interview-based format was used.

The questionnaire was developed using samples from other studies.^{15,16} Five questionnaires in Urdu and English were pre-tested separately to evaluate any potential issues that could be faced when conducting the research. An issue of how many options could be picked per question was detected and was duly rectified. The Cronbach's alpha for all items on our Likert scale was 0.82, achieving acceptable inter-reliability. The questionnaire consisted of four sections. The first section included demographics, the second section inquired about the participant's healthcare seeking behaviour, the third focused on the participant's knowledge, awareness and opinions about public health insurance, and the last section dealt with private medical insurance.

Confidentiality was maintained by ensuring that questionnaires were promptly transported by the principal author to the research centre and kept under lock. Data entry was done on site and no personal identifiers were recorded.

Data was analysed using SPSS 22. The participants' characteristics were calculated as frequencies for qualitative variables or means with standard deviations for quantitative variables. The 5-point Likert scale to measure willingness was categorised into 3 groups. Favourable consisted of responses 'very likely' and 'likely'; neutral included 'remained unchanged' and unfavourable included the responses 'unlikely' and 'very unlikely'. The variables out-of-pocket expenditure, family size, total earning members, education and monthly income were categorised using information from the Household Integrated Economic Survey (HIES) 2011-12.¹⁷

The institutional ethics review committee approved the study. Permission for data collection was obtained from the community leader and the head of the Urban Health Programme in Sultanabad as well as the administration in Ocean Mall. Informed consent was taken from every participant and confidentiality was maintained throughout.

Results

There were 340 participants in the study with an overall mean age of 32.9 ± 12.4 years. The mean number of family members per household was 6.7 ± 4 and mean number of

Table-1: Characteristics of participants included in the study (n=340).

Characteristics	n	%
Gender		
Male	200	58.8
Female	140	41.2
Education		
None	38	11.2
Primary School	47	13.9
Matriculation	66	19.5
Intermediate	78	23
Undergraduate	57	16.8
Postgraduate	53	15.6
Total Monthly Household Income (PKR)		
Less than 15,000	62	18.2
15,000-20,000	73	21.5
20,000-50,000	78	22.9
More than 50,000	127	37.4
Income Prioritisation		
Food	147	43.2
Rent	47	13.8
Education	113	33.2
Health	22	6.5
Entertainment	2	0.6
Travel	3	0.9
Others	6	1.8

earners per household was 1.96 ± 1.12 . Respondents had a varied educational background. Moreover, 213(62.6%) belonged to a group earning a combined household income of less than Rs50,000 per month. Expenditure on food accounted for the greatest fraction of monthly

spending with 147(43.2%) participants while health was identified by 22(6.5%) (Table-1).

Medications 169(49.7%) and outpatient hospital services 72(21.2%) constituted the greatest portion of health expenditure for participants. As for disease aetiology, 186(54.7%) identified acute infectious diseases to be responsible for most of their health expenditure, followed by non-communicable diseases 103(30.3%) and chronic infectious diseases, namely tuberculosis, hepatitis C and human immunodeficiency virus (HIV) 24(7.1%). Also, 239(70.3%) respondents utilised the private healthcare sector. Comparing the utilisation of private and public healthcare amongst income groups, we found that those in the higher income group (>Rs50,000 per month) almost exclusively utilised the private sector 116(93.5%), whereas those in the lower income group were also more likely to utilise the private sector 124 (63.5%), albeit by a considerably lower margin. Catastrophic health events in the last 5 years that had led to debt were reported by 107(31.5%) respondents.

Further, 103(30.3%) respondents admitted to having compromised on their health expenses for other expenditures. Besides, 151(44.5%) reported that they did not seek healthcare in the past when they thought they were sick. Out of them, most quoted lack of affordability as the major barrier to seeking healthcare 81(50.6%) followed by distance to the nearest health centre 28(17.5%). Also, 54(15.9%) respondents reported having private medical insurance, out of which 37(74.0%) believed having medical insurance increased their

Table-2: Knowledge and attitudes regarding Public Health Insurance.

n%		
Awareness of the concept of Public Health Insurance		
Yes	159	46.8
No	160	47.1
Not Sure	21	6.2
Understanding of Public Health Insurance		
Covering the costs of health services to protect users from financial hardship	160	50.5
Covering some of the costs of health services as a predefined package	91	28.7
Covering the costs of health services when they cannot be afforded by the users	66	20.8
Primary reason to join Public Health Insurance		
It will decrease my expenditure on health	91	34.1
It will provide security from ill health in the future	141	52.8
It will help others	34	12.7
Other	1	0.4
Primary reason to not join Public Health Insurance		
I do not have major health expenses	15	17.2
I do not understand the concept of insurance very well	9	10.3
I do not trust government programmes	33	37.9
I do not want to seek health services from public hospitals	15	17.2
I do not know	4	4.6
Other	11	12.6

Table-3: Comparison of different characteristics for willingness to join and out-of-pocket expenditure.

Variable	Willing n=256 n (%)	Neutral n=50 n (%)	Non-Willing n=34 n (%)	Low OOPe n=260 n (%)	High OOPe n=79 n (%)
Family Size					
<7	190 (74.2)	36 (72.0)	27 (79.4)	190 (76.2)	55 (69.6)
>7	66 (25.8)	14 (28.0)	7 (20.6)	62 (23.8)	24 (30.4)
Earning Members					
<2	188 (73.4)	36 (72.0)	25 (73.5)	197 (75.8)	51 (64.6)
>2	68 (26.6)	14 (28.0)	9 (26.5)	63 (24.2)	28 (35.4)
Monthly Income					
<50,000	169 (66.0)	30 (60.0)	14 (41.2)	182 (70.0)	30 (38.0)
>50,000	87 (34.0)	20 (40.0)	20 (58.8)	78 (30.0)	49 (62.0)
Out of pocket expenditure on health					
<5000	197 (77.3)	39 (78.0)	24 (70.6)		
>5000	58 (22.7)	11 (22.0)	10 (29.4)	N/A	N/A
Education					
Intermediate	178 (69.8)	33 (66.0)	18 (52.9)		
Undergraduate	77 (30.2)	17 (34.0)	16 (47.1)	N/A	N/A
Catastrophic Event					
Yes	91 (36.7)	11 (23.4)	5 (14.7)	N/A	N/A
No	157 (63.3)	36 (76.6)	29 (85.3)		
Expenditure on health Issues					
Non-communicable diseases				73 (28.1)	29 (36.7)
Other	N/A	N/A	N/A	187 (71.9)	50 (63.3)
Expenditure on health service					
Medicines				122 (46.9)	46 (58.2)
Other	N/A	N/A	N/A	138 (53.1)	33 (41.8)

Willing: Willingness to join a public health insurance scheme

OOPe: Out-of-pocket expenditure.

willingness to seek healthcare.

Moreover, 159(46.8%) participants were aware about medical insurance. The correct definition was identified by 160(50.5%) respondents. Besides, 141(52.8%) participants identified protection from ill health in the future as the reason for joining, whereas 91(34.1%) claimed it would decrease current expenditure on health. Of those unsure or not willing to join, most identified a lack of trust in government programmes as the main reason for their abstenteesm 33(37.9%) (Table-2).

Overall, 282(82.9%) respondents were in favour of seeing a public health insurance system implemented, and 256(75.3%) were willing to join such a system for themselves. Prescription medications 127(37.4%) and inpatient services 121(35.6%) were identified as the most important components that should be covered under a public health insurance scheme.

We found that of those willing to join a public health insurance scheme, 188(73.4%) had less than 2 earning family members, 169(66.0%) had a monthly income of less

than Rs50,000 and 178(69.8%) had not received an undergraduate degree. Furthermore, 91(36.7%) had encountered a catastrophic event. Individuals with increased out-of-pocket expenditures (>Rs5,000 per month) were more likely to have a higher monthly income (Table 3).

Discussion

Our results showed that less than half of all participants were aware of medical insurance to begin with or were able to identify correctly what universal health coverage entails. Half of the participants identified with a model that contained complete free-of-cost health services ensuring financial protection, while 28.7% felt a predefined package covering certain components with the most economic brunt would be effective. While a scheme with all healthcare needs free-of-cost would be ideal, a model covering certain healthcare needs that financially burden people the most seems an employable model.

An outstanding 31.5% of respondents were found to have

faced a catastrophic health event that led to debt. This statistic impresses the need for universal coverage particularly since there is evidence that public health insurance may decrease such catastrophic events incurring debt.¹² This phenomenon might also explain why 41.5% identified financial security in times of ill health in the future as their primary motive to be willing to join. A study done in Pakistan evaluating microfinance covering health insurance substantiates our claims by concluding that catastrophic events tend to be a main financial stressor.¹⁸

One would expect, with the rising costs of healthcare and the increasing incidence of non-communicable diseases, that health would comprise a significant proportion of monthly expenditure for most families. However, the fact that only 6.5% of participants identified health as their major expenditure coupled with the fact that food was the primary expenditure for most families highlights the possibility of gross underutilisation of healthcare services. Our participants further exemplified this as most of them had not sought healthcare when they were sick due to financial constraints. However, the reason for underutilisation of health services does not seem to be only financial. Around 70% of our respondents utilised the private healthcare system, close to the Pakistan Social and Living Standards Measurement Survey (2004-05) where 67.4% used private healthcare. Moreover, 37.9% of our participants cited mistrust in government-based services and another 17.2% refused to seek healthcare from public hospitals. This means that over half of our participants would be unwilling to seek healthcare from a public hospital even if given the opportunity. It is important to explore the reasons behind the mistrust and aversion of public hospitals; the Pakistan Social and Living Standards Measurement Survey (2013-14) found that treatment for diarrhoea was not sought from public hospitals due to distance, lack of medicines and doctors, and unhelpful attitude of staff. We believe that once these factors are accounted for and corrected, public health insurance could go a long way to increasing healthcare utilisation. Not only is this exemplified in our own study by the fact that most of our participants who had private insurance were more willing to seek healthcare, but an increase in health care utilisation was also observed in other developing countries with the introduction of public health insurance, such as Ghana, Vietnam and Tanzania.⁸⁻¹⁰ Financial constraint is a major determinant of barriers to seeking healthcare in Pakistan, but it is not the only one. A significant number of participants stated that distance to the nearest healthcare centre restricted them. Such barriers are not limited to Pakistan but other developing countries as well who have health insurance systems in

place, where transport was found to be a significant barrier.¹⁹

Even though higher income groups were spending more on healthcare, it must be noted that this is not a reflection of what proportion of the income earned is being spent on health, which could be considerably higher for lower income groups. However, this finding coupled with constrained expenditure does question whether all the healthcare needs of lower income groups are sufficiently catered to. Lower income groups' greater willingness to join a public health insurance scheme supports the thought of inadequate acquisition of healthcare services. This was demonstrated by 'The World Health Report 2000: Health Systems: Improving Performance', a WHO report which showed out-of-pocket payments in Pakistan were regressive, such that the proportion of the financial burden was higher on lower-income groups. Further, in these groups it was more likely healthcare was not sought due to an inability to pay.

The participants' mistrust in government programmes - a fact highlighted by Gallup Pakistan's survey²⁰ — will be a major hindrance for the national or provincial authorities in the implementation of any public health insurance scheme. The reluctance to seek help from public hospitals, possibly due to less patient satisfaction,²¹ further emphasises that there are a number of obstacles to overcome before such interventions can be successful and sheds light on the reasons for gross under-utilisation of public health services.

Overall, we found a relatively high percentage of our study participants willing to join and expressing their approval of implementation of such a scheme, suggesting feasibility and acceptability of such a programme if implemented and its favourable effect on possibly increasing healthcare service utilisation.

The study site, Karachi, is a megacity with a culturally, ethnically, and socially diverse population that is polarised into multiple social classes, in only one province of Pakistan of which only a sliver was investigated; we do not assume that our results are applicable to the various populations of Pakistan. Studies in different areas of Pakistan, including larger studies in Karachi, would be required in order to formulate a public health insurance scheme applicable to Pakistan. In any case, cognisance of the regressive situation of out-of-pocket expenditure in Pakistan is important and the effect that insurance designs like flat premiums could have willingness to join in the future.

Our study, though small, is an endeavour into researching

a dire healthcare needs in Pakistan. We believe it could serve as a basis for further similar studies to be done in different areas and highlight the importance of public health insurance and the benefits it could confer.

It is imperative to first identify the factors involved in the underutilisation of public health services and rectify them. Mistrust in government programmes seems to be one such factor and launching awareness campaigns to build public trust prior to the establishment of any public health scheme could prove essential to its success.

We stress the need to identify area-specific components according to the public's demands based on the findings of future large-scale studies in different rural and urban areas to formulate tailor-made schemes. Prescription medications and inpatient care are likely to be important components to be included.

Further, to ensure universal coverage, progressive premiums should be established to encourage greater enrolment, especially of economically marginalised groups.

Conclusion

There was a positive attitude towards the implementation of a government health insurance scheme. Many participants were aware of universal health coverage, however, information dissemination and clarification would be prudent.

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