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Factors that affect the uptake of community-based health insurance in low-income and middle-income countries: a systematic protocol

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ABSTRACT

Introduction: Many people residing in low-income and middle-income countries (LMICs) are regularly exposed to catastrophic healthcare expenditure. It is therefore pertinent that LMICs should finance their health systems in ways that ensure that their citizens can use needed healthcare services and are protected from potential impoverishment arising from having to pay for services. Ways of financing health systems include government funding, health insurance schemes and out-of-pocket payment. A health insurance scheme refers to pooling of prepaid funds in a way that allows for risks to be shared. The health insurance scheme particularly suitable for the rural poor and the informal sector in LMICs is community-based health insurance (CBHI), that is, insurance schemes operated by organisations other than governments or private for-profit companies. We plan to search for and summarise currently available evidence on factors associated with the uptake of CBHI, as we are not aware of previous systematic reviews that have looked at this important topic.

Methods: This is a protocol for a systematic review of the literature. We will include both quantitative and qualitative studies in this review. Eligible quantitative studies include intervention and observational studies. Qualitative studies to be included are focus group discussions, direct observations, interviews, case studies and ethnography. We will search EMBASE, PubMed, Scopus, ERIC, PsycInfo, Africa-Wide Information, Academic Search Premier, Business Source Premier, WHOLIS, CINAHL and the Cochrane Library for eligible studies available by 31 October 2013, regardless of publication status or language of publication. We will also check reference lists of included studies and proceedings of relevant conferences and contact researchers for eligible studies. Two authors will independently screen the search output, select studies and extract data, resolving discrepancies by consensus and discussion. Qualitative data will be extracted using standardised data extraction tools adapted from the Critical Appraisal Skills Program (CASP) qualitative appraisal checklist and put together in a thematic analysis where applicable. We will statistically pool data from quantitative studies in a meta-analysis; but if included quantitative studies differ significantly in study settings, design and/or outcome measures, we will present the findings in a narrative synthesis. This protocol has been registered with PROSPERO (ID=CRD42013006364).

Dissemination: Recommendations will be made to health policy makers, managers and researchers in LMICs to help inform them on ways to strengthen and increase the uptake of CBHI.

Strengths and limitations of this study

- The systematic review is non-commercial and is planned by a multidisciplinary team of specialists working in a middle-income country.
- To our knowledge, this is the first study that will attempt to use both quantitative and qualitative methods to assess and synthesise factors associated with community-based health insurance coverage in low-income and middle-income countries.
- The fusion of qualitative and quantitative evidence in this study will make it more relevant and robust, by maximising the findings and the ability of these findings to inform policy and practice.
- A potential limitation of the systematic review may be that eligible studies will differ substantially in study design and outcome measures. However, if that happens to be the case, we will conduct a narrative synthesis rather than a meta-analysis.

INTRODUCTION

The final goals of the health system as a whole as considered by the WHO are health equality, health status, responsiveness of the health system to the individual's non-medical expectation and fairness in financial

contribution.[1] Fairness in financial contribution for health occurs when healthcare expenditures of households are distributed in accordance with the ability to pay rather than the cost incurred as a result of illness. Therefore, a national health system should raise funds for healthcare in ways that ensure that people can use the needed healthcare services and are protected from impoverishment arising from having to pay for such services.[1] However, over the past two decades, many low-income and middle-income countries (LMICs) have found it progressively more difficult to maintain sufficient financing for healthcare. As a result, out-of-pocket (OOP) payments remain high, creating constraints to utilising essential health services[2] and pushing families deeper into poverty.[3 4] Among other factors, health insurance is set up to provide financial risk protection and to mobilise resources to avert impoverishment that may arise from paying OOP for healthcare. Health insurance has also the potential to increase utilisation and affordability of healthcare especially among the poor and vulnerable population. Through health insurance, risks are shared and financial inputs pooled by way of contributions, for example, from salaries or taxation.[5] However, health insurance coverage still remains very low in many LMICs, a situation which is compounded by the large informal sector workers and rural populace in these countries.[5] Increasing access to affordable healthcare is essential for achieving the Millennium Development Goals, which aim to eradicate poverty. Owing to the recent call for countries to ensure universal coverage of the population with essential healthcare services, the need arose to provide health insurance to the large informal sector in LMICs.[6] One of the ways to provide health insurance for the informal sector and the rural populace is through community-based health insurance (CBHI). CBHI (1) operates by risk pooling, (2) is financed through regular premiums and (3) is tailored to meet the needs of poor people who would otherwise not be able to take out large-scale health insurance.[7] CBHI, despite its problems relating to the extent of resource pooling, has been shown to facilitate and improve access to healthcare services especially among children and pregnant women.[8 9] Moreover, CBHI also addresses healthcare challenges faced specifically by the rural poor and informal sector workers.[10]

A systematic review published in 2012 found that the uptake of health insurance is less than optimal in Africa.[11] In an era when universal health coverage is more relevant than ever before, it is important to understand the reasons for low enrolment into health insurance schemes in Africa as well as other low-income and middle-income regions of the world. To the best of our knowledge, no previous systematic reviews have been specifically designed to summarise factors associated with uptake of CBHI.

Researchers studying the German experience with health insurance from the country's early phase of development of a health insurance system have recommended that "small, informal, voluntary health insurance schemes may serve as learning models for fund administration and solidarity, both of which will make introduction of larger, more formal, compulsory schemes an easier task."[12]

In addition, there are many studies, conducted in different settings, to evaluate the factors that determine enrolment into CBHI or people's willingness to pay (WTP) for CBHI. Potential factors include age, income, education and distance to health facility.[13 14] The association between age and WTP has been mixed in the literature. Respondent's age is found to have a positive effect on WTP in some studies, while in others it is the opposite.[15] Likewise, distance to the nearest health facility has been found to have a positive effect on WTP in some cases, in the sense that short distance increased the likelihood of WTP,[13 14] while in others it has had a negative effect.[15] Some studies have shown that household or income has a positive effect on WTP,[16 17] while others have not found such an effect.[13] Other factors that have been found to significantly influence WTP for CBHI programmes include education, household size, level of trust that households have in the management of the insurance programme, sex, knowledge of the CBHI programme and place of residence (urban vs rural).[16 18]

There is great need for a rigorous synthesis of current best evidence on factors that determine enrolment and WTP for CBHI programmes in LMICs. We therefore conceived this review to summarise all the currently available evidence around factors affecting the uptake of CBHI in LMICs. Such evidence would inform health policymakers and managers seeking to improve quality and access to healthcare services in such resource-constrained settings.

METHODS

Inclusion criteria of studies

Types of studies

We will include quantitative and qualitative studies in the review. Quantitative studies to be included are randomised control trials (RCTs), controlled before-and-after studies, interrupted time series designs, cohort studies, case–control studies, contingent valuation studies and cross-sectional surveys. Qualitative studies to be included are those that used known qualitative methods of data collection such as focus group discussions, interviews, direct observation, case studies, ethnography and action research; and known methods of qualitative analysis such as thematic analysis, grounded theory, coding and discourse analysis. This mixed-method approach offers an opportunity for complementary answers to research questions that cannot be answered completely by either the qualitative or quantitative method. This will help in making the review more relevant and robust, by maximising the findings and the ability of these findings to inform policy and practice. Thus, the fusion of

qualitative and quantitative evidence in this review will enhance its impact and effectiveness. Inclusion of both components would help identify priority research gaps and boost the relevance of the review for decision-makers. The mixed methods facilitate the incorporation of qualitative understanding from people's lives and robust quantitative estimates of benefits and harms.

Participants and interventions

We will include studies conducted in LMICs (as defined by the World Bank) on all types of health services that involve CBHI, community financing, mutual health organisations, community health funds, micro insurance or rural health insurance managed and operated by organisations other than governments or private for-profit companies.

Types of outcome measures

Primary outcomes

The primary outcomes of interest for this review are uptake of, or WTP for, community-based insurance schemes (as defined by the authors of the primary studies).

Secondary outcomes

The secondary outcomes include acceptability of insurance schemes, availability of health services, ability to pay, financial protection, fairness in financial contribution and utilisation of health services.

Search methods for identification of studies

We will perform a comprehensive and extensive search of the peer-reviewed and grey literature with the help of an information specialist, to identify all appropriate studies available by 31 October regardless of publication status (published and unpublished) with no language restriction.

Electronic databases

The following electronic databases and platforms will be searched for primary studies: PubMed, Excerpta Medica Database Guide (EMBASE), Cochrane Central Register Controlled trials (CENTRAL), Cumulative Index to Nursing and Allied Health Literature (CINAHL), Education Resources Information Centre (ERIC), PsycINFO, Humanities international, International Bibliography of the Social Sciences (IBSS), Sociological abstracts, Social online, Africa-Wide Information, Academic Search Premier, Business Source Premier, WHO library databases. We will develop a comprehensive search strategy for each database or platform, consisting of both medical subject headings and free-text words (as appropriate), for example, determinants, factors, enrolment, uptake, WTP, community-based insurance, community health insurance, voluntary health insurance, community health plan, mutual health organisation, mutual health insurance, community-based health financing, rural health insurance and micro health insurance. In online supplementary appendices 1 and 2 we provide the search strategy for PubMed and search outputs from the databases, respectively.

Searching other resources

We will also search the proceedings of relevant conferences conducted in the past 10 years, such as the International Health Economics Association conference, and contact key researchers, organisations and companies working in the area of healthcare financing for potentially eligible unpublished studies.

Reference lists

We will obtain reference lists of relevant studies identified, and the full-text articles reviewed for inclusion in the review will be checked for additional information.

Data collection and analysis

Internationally recognised methodology for data collection and analysis will be used based on the guidance of the Cochrane Handbook of Systematic Reviews for Interventions.[19]

Selection of studies

We will develop and pilot a study selection guide using the inclusion criteria described above to make sure that the criteria are clear and can be applied consistently by all review authors. Two authors will independently screen the titles and abstracts obtained from the search and retrieve the full text of records deemed potentially eligible by at least one of the two authors.

Two authors will independently screen the titles and abstracts of the records obtained from the search, compare their results and obtain the full text of any study deemed potentially eligible by at least one of them. The two authors will then independently review the full text of each potentially eligible study, compare their results and resolve any discrepancy by discussion and consensus. If a decision is not reached, a third review author will be consulted.

Data extraction and management

Two authors will independently extract data from included studies using standardised forms. For each study, we will extract the following information: citation, study design and methodology, geographical setting, nature of CBHI, outcomes, types of analysis performed and findings. The two authors will compare the extracted data and resolve discrepancies by discussion and consensus, failing which a third author will arbitrate.

Assessment of methodological quality

We will assess the methodological quality of all included studies in duplicate using the appropriate quality assessment tool: for example, the Newcastle-Ottawa Scale for non-randomised studies and the Cochrane risk of bias tools for RCTs. We will provide a thorough description

of the missing data and dropouts for each included study, and the extent to which these missing data could have influenced the results of the study. The authors will compare their results and resolve any differences by discussion and consensus, failing which a third author will arbitrate.

Data synthesis

We will present a table of included studies (clearly describing the methods, participants, type of CBHI, outcome measures and other relevant notes) and another table of studies that were considered to be potentially eligible but which ended up being excluded, with reasons for exclusion. If relevant quantitative studies that report similar outcomes are included, we will perform a random-effects meta-analysis by statistically pooling quantitative data from the studies. We will then assess statistical heterogeneity between study results using the χ^2 test of homogeneity (with significance defined at the 10% α-level) and quantify any between-study heterogeneity using the I^2 statistic.[20] If the included studies differ significantly in design, settings, outcome measures or otherwise, we will summarise the findings in a narrative format. For qualitative studies, designs such as phenomenology, grounded theory and ethnography will be considered. For the latter, data will be extracted using standardised data extraction tools adapted from the Critical Appraisal Skills Program (CASP) qualitative appraisal checklist and put together in a thematic analysis.[21] This will involve the synthesis of findings using three steps: (1) assembling the findings according to their quality; (2) categorising these findings on the basis of similarity in meaning and (3) subjecting these categories to produce a single comprehensive set of synthesised findings.

We will report the methods, findings and implications of the findings of this review according to the PRISMA guidelines, including the extended guidance on reporting equity-focused systematic reviews.[22 23] We provide the proposed timeline for the review in online supplementary appendix 3. This protocol has been registered with PROSPERO (ID=CRD42013006364).

DISCUSSION

Expected significance of the review

The findings of this systematic review will have policy, practice and research implications for LMICs. Our results will present evidence of factors that influence the uptake of CBHI schemes among the poor in the urban and rural populace. Such information will be useful to decision-makers, programme managers and implementers alike. In addition to providing policy and programmatic insights, the review will also provide a management and organisational framework of community financing.

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Contributors All authors contributed to the conception and design of the review and will be involved in data acquisition. All authors were involved in the drafting of this protocol and have given their permission for publication. EFA and KTL will conduct study selection, data extraction and analyses, with input from all coauthors. All authors will contribute in the interpretation of the results and the writing of the review.

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REFERENCES

1. Carrin G. Community based health insurance schemes in developing countries: facts, problems and perspectives. Discussion Paper Number 1–2003. WHO EIP/FER/DP.E.03.1.
2. Ekman B. Community-based health insurance in low-income countries: a systematic review of the evidence. *Health Policy Plan* 2004;19:249–70.
3. Jacobs B, Bigdeli M, Pelt Mv, *et al*. Bridging community-based health insurance and social protection for health care—a step in the direction of universal coverage? *Trop Med Int Health* 2008;13:140–3.
4. McIntyre D, Thiede M, Dahlgren G, *et al*. What are the economic consequences for households of illness and of paying for health care in low- and middle-income country contexts? *Soc Sci Med* 2006;62:858.
5. Carrin G, Waelkens M, Criel B. Community-based health insurance in developing countries: a study of its contribution to the performance of health financing systems. *Trop Med Int Health* 2005;10:799–811.
6. Evans DB, Etienne C. Health systems financing and the path to universal coverage. *Bull World Health Organ* 2010;88:402–3.
7. Churchill C. *Protecting the poor: a microinsurance compendium*. International Labour Organization, 2006.
8. Dror DM, Preker AS. *Social reinsurance: a new approach to sustainable community health financing*. World Bank Publications, 2002.
9. Shaw RP, Griffin CC. *Financing health care in Sub-Saharan Africa through user fees and insurance*. World Bank, 1995.
10. Jütting JP. Do community-based health insurance schemes improve poor people's access to health care? Evidence from rural Senegal. *World Dev* 2004;32:273–88.
11. Acharya A, Vellakkal S, Taylor F, *et al*. *Impact of national health insurance for the poor and the informal sector in low-and middle-income countries*. London, UK: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London,

12. Bärnighausen T, Sauerborn R. One hundred and eighteen years of the German health insurance system: are there any lessons for middle- and low-income countries? *Soc Sci Med* 2002;54:1559–87.
13. Asenso-Okyere WK, Osei-Akoto I, Anum A, *et al*. Willingness to pay for health insurance in a developing economy. A pilot study of the informal sector of Ghana using contingent valuation. *Health Policy* 1997;42:223.
14. Asgary A, Willis K, Taghvaei AA, *et al*. Estimating rural households' willingness to pay for health insurance. *Eur J Health Econ* 2004;5:209–15.
15. Dong H, Kouyate B, Cairns J, *et al*. Willingness-to-pay for community-based insurance in Burkina Faso. *Health Econ* 2003;12:849–62.
16. Ataguba J, Ichoku EH, Fonta W. Estimating the willingness to pay for community healthcare insurance in rural Nigeria. SSRN 1266163. Rochester, NY, USA: Social Science Research Network, 2008.
17. Donfouet HPP, Makaudze E, Mahieu P, *et al*. The determinants of the willingness-to-pay for community-based prepayment scheme in rural Cameroon. *Int J HealthCare Finance Econ* 2011;11:209–20.
18. Onwujekwe O, Okereke E, Onoka C, *et al*. Willingness to pay for community-based health insurance in Nigeria: do economic status and place of residence matter? *Health Policy Plan* 2010; 25:155–61.
19. Higgins JP, Green S. eds *Cochrane handbook for systematic reviews of interventions. Versions 5.1.0 [updated March 2011]*. The Cochrane Collaboration, 2011.
20. Higgins JP, Thompson SG, Deeks JJ, *et al*. Measuring inconsistency in meta-analyses. *BMJ* 2003;327:557.
21. Norman GR, Shannon SI. Effectiveness of instruction in critical appraisal (evidence-based medicine) skills: a critical appraisal. *Can Med Assoc J* 1998;158:177–81.
22. Moher D, Liberati A, Tetzlaff J, *et al*. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Ann Intern Med* 2009;151:264–9.
23. Welch V, Petticrew M, Tugwell P, *et al*. PRISMA-Equity 2012 Extension: reporting guidelines for systematic review with a focus on health equity. *PLoS Med* 2012;9:e1001333.

Appendix 1: Search strategy used for PubMed database

	Query
#10	#3 AND #9
#9	#4 OR #5 OR #6 OR #7 OR #8
#8	developing countries[MeSH Terms]
#7	(Low income country OR lower income country OR third world country OR middle income country)
#6	(Angola OR Republic of Angola OR Albania OR Republic of Albania OR Algeria OR The People's Democratic Republic of Algeria OR American Samoa OR Argentina OR Azerbaijan OR Belarus OR Belize OR Bosnia and Herzegovina OR Bosnia-Herzegovina OR Bosnia OR Botswana OR Brazil OR Federative Republic of Brazil OR Bulgaria OR China OR People's Republic of China OR Colombia OR Costa Rica OR Fiji OR Gabon OR Gabonese Republic OR Grenada OR Hungary OR Islamic Republic of Iran OR Persia OR Iran OR Iraq OR Jamaica OR Jordan OR Hashemite Kingdom of Jordan OR Kazakhstan OR Lebanon OR Lebanese Republic OR Libya OR State of Libya OR Macedonia OR Republic of Macedonia OR Malaysia OR Maldives OR Republic of the Maldives OR Maldive Islands OR Marshall Islands OR Republic of the Marshall Islands OR Palau OR Republic of Palau OR Panama OR Republic of Panama OR Peru OR Romania OR Serbia, OR the Republic of Serbia OR Seychelles OR the Republic of Seychelles OR South Africa OR Saint Lucia OR Saint Vincent and the Grenadines OR Suriname OR Thailand OR Kingdom of Thailand OR Tonga OR Kingdom of Tonga OR Tunisia OR Turkey OR Turkmenistan OR Turkmenia OR Cuba OR Dominica OR Commonwealth of Dominica OR The Dominican Republic OR Ecuador OR Mauritius OR Mexico OR United Mexican States OR Montenegro OR Namibia OR Tuvalu OR Ellice Islands OR Venezuela OR the Bolivarian Republic of Venezuela)
#5	(Armenia OR armenia OR Bhutan OR Kingdom of Bhutan OR Bolivia OR Plurinational State of Bolivia OR Cameroon OR Republic of Cameroon OR Republic of Cameroun OR Cape Verde OR Republic of Cape Verde OR Cote D'ivoire OR Ivory Coast OR Republic of Cote D'ivoire OR Djibouti OR Republic of Djibouti OR Arab Republic of Egypt OR Egypt OR El Salvador OR Georgia OR Ghana OR Republic of Ghana OR Guatemala OR Republic of Guatemala OR Guyana OR Co-operative Republic of Guyana OR Honduras OR Republic of Honduras OR Spanish Honduras OR Republic of Indonesia OR Indonesia OR India OR Republic of India OR Kiribati OR Republic of Kiribati OR Kosovo OR Kosovo and Metohija OR Laos OR Lao Lao People's Democratic Republic OR Lesotho OR Kingdom of Lesotho OR Mauritania

	OR Islamic Republic of Mauritania OR Micronesia, Fed. Sts. OR Federated States of Micronesia OR FSM OR Moldova OR Republic of Moldova OR Mongolia OR Morocco OR Kingdom of Morocco OR Nicaragua OR Republic of Nicaragua OR Nigeria OR Federal Republic of Nigeria OR Pakistan OR Islamic Republic of Pakistan OR Papua New Guinea OR Independent State of Papua New Guinea OR Paraguay OR Republic of Paraguay OR Philippines OR Republic of the Philippines OR Samoa OR Independent State of Samoa OR Sao Tome and Principe OR Democratic Republic of Sao Tome and Principe OR Senegal OR Republic of Senegal OR Solomon Islands OR Sri Lanka OR Democratic Socialist Republic of Sri Lanka OR Sudan OR Republic of the Sudan OR North Sudan OR Swaziland OR Kingdom of Swaziland OR Ngwane OR Yuwatini OR Syrian Arab Republic OR Syria OR East Timor OR Timor-leste OR Democratic Republic of Timor-leste OR Ukraine OR Uzbekistan OR Republic of Uzbekistan OR Vanuatu OR Republic of Vanuatu OR Vietnam OR the Socialist Republic of Vietnam OR West bank and Gaza OR Yemen OR Yemeni Republic OR Zambia OR Republic of Zambia.)
#4	(Afghanistan OR Islamic Republic of Afghanistan OR Bangladesh OR People's Republic of Bangladesh OR Benin OR Dahomey OR Republic of Benin OR Burkina Faso OR Burkina OR Republic of Upper Volta OR Burundi OR Republic of Burundi OR Cambodia OR Kingdom of Cambodia OR Central African Republic OR Chad OR Republic of Chad OR Comoros OR Union of the Comoros OR Democratic Republic of the Congo OR DR Congo OR Congo-Kinshasa OR DRC OR Zaire OR Eritrea OR State of Eritrea OR Ethiopia OR Federal Democratic Republic of Ethiopia OR The Gambia OR Republic of the Gambia OR Guinea OR Republic of Guinea OR Guinea-Conakry OR Guinea-Bissau OR Republic of Guinea-Bissau OR Haiti OR Republic of Haiti OR Kenya OR Republic of Kenya OR North Korea OR Democratic People's Republic of Korea OR Kyrgyz Republic OR Kyrgyzstan OR Liberia OR Republic of Liberia OR Madagascar OR Republic of Madagascar OR Malawi OR Republic of Malawi OR The Warm Heart of Africa OR Mali OR Republic of Mali OR Mozambique OR Republic of Mozambique OR Myanmar OR Burma OR Republic of the Union of Myanmar OR Nepal OR Democratic Republic of Nepal OR Niger OR Republic of Niger OR Rwanda OR Republic of Rwanda OR Sierra Leone OR Republic of Sierra Leone OR Somalia OR Federal Republic of Somalia OR South Sudan OR Republic of South Sudan OR Tajikistan OR Republic of Tajikistan OR Tanzania OR United Republic of Tanzania OR Republic of Tanganyika and Zanzibar OR Togo OR Togolese Republic OR Uganda OR Republic of Uganda OR Zimbabwe OR Republic of Zimbabwe OR Rhodesia)

#3	#1 AND #2
#2	“community based” OR “rural” OR “mutual” OR “micro” OR “community” OR “group”
#1	"health insurance"[MeSH Terms]

Appendix 2: Summary of the search outputs for the different databases

Name of database	Number of records retrieved
PubMed	968
Academic Search Premier via EBSCO	2979
Africa-Wide Information via EBSCO	126
Business Source Premier via EBSCO	4235
Sociological abstracts	239
CINAHL	227
EconLit via EBSCO	286
ERIC via EBSCO	419
Humanities	42
PsycInfo via EBSCO	764
SocIndex via EBSCO	600
Scopus	4428
Africa Index Medicus	35
Cochrane (Trials and economic evaluation)	438
LILACS	272
IndMED	2
Social care online	165
Web of Science	812
Academic onefile	523
JSTOR	139

Appendix 3: Proposed timeline for the review

Activity	Start date	End date
Protocol development	2 January 2013	31 October 2013
Registration in Prospero and submission of protocol for publication	1 September 2013	30 November 2013
Electronic database search	1 November 2013	5 November 2013
Screening and study selection	6 November 2013	28 February 2014
Data extraction	1 March 2014	30 April 2014
Data analysis and write up	1 May 2014	31 May 2014
Submission of review for publication	1 June 2014	30 June 2014