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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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