

The impact of health insurance in Africa and Asia: a systematic review

Ernst Spaan,^a Judith Mathijssen,^b Noor Tromp,^a Florence McBain,^c Arthur ten Have^b & Rob Baltussen^a

Objective To evaluate the impact of health insurance on resource mobilization, financial protection, service utilization, quality of care, social inclusion and community empowerment in low- and lower-middle-income countries in Africa and Asia.

Methods A systematic search for randomized controlled trials, quasi-experimental and observational studies published before the end of 2011 was conducted in 20 literature databases, reference lists of relevant studies, web sites and the grey literature. Study quality was assessed with a quality grading protocol.

Findings Inclusion criteria were met by 159 studies – 68 in Africa and 91 in Asia. Most African studies reported on community-based health insurance (CBHI) and were of relatively high quality; social health insurance (SHI) studies were mostly Asian and of medium quality. Only one Asian study dealt with private health insurance (PHI). Most studies were observational; four had randomized controls and 20 had a quasi-experimental design. Financial protection, utilization and social inclusion were far more common subjects than resource mobilization, quality of care or community empowerment. Strong evidence shows that CBHI and SHI improve service utilization and protect members financially by reducing their out-of-pocket expenditure, and that CBHI improves resource mobilization too. Weak evidence points to a positive effect of both SHI and CBHI on quality of care and social inclusion. The effect of SHI and CBHI on community empowerment is inconclusive. Findings for PHI are inconclusive in all domains because of insufficient studies.

Conclusion Health insurance offers some protection against the detrimental effects of user fees and a promising avenue towards universal health-care coverage.

Abstracts in **عربي**, **中文**, **Français**, **Русский** and **Español** at the end of each article.

Introduction

Health insurance is attracting more and more attention in low- and middle-income countries as a means for improving health care utilization and protecting households against impoverishment from out-of-pocket expenditures. The health financing mechanism was developed to counteract the detrimental effects of user fees introduced in the 1980s, which now appear to inhibit health care utilization, particularly for marginalized populations, and to sometimes lead to catastrophic health expenditures.^{1–3} The World Health Organization (WHO) considers health insurance a promising means for achieving universal health-care coverage.⁴

Various types of health insurance are available. National or social health insurance (SHI) is based on individuals' mandatory enrolment. Several low- and middle-income countries, including the Philippines, Thailand and Viet Nam, are establishing SHI. Voluntary insurance mechanisms include private health insurance (PHI), which is implemented on a large scale in countries like Brazil, Chile, Namibia and South Africa,⁵ and community-based health insurance (CBHI), now available in countries like the Democratic Republic of the Congo, Ghana, Rwanda and Senegal.^{6–10} The various types of health insurance have different impacts on the populations they serve. For example, PHI is said to mainly serve the affluent segments of a population, but CBHI is often put forward as a health financing mechanism that can especially benefit the poor.^{11–16} Countries wishing to introduce health insurance schemes into their health systems should be aware of how their impact varies.

The impact of health insurance in low- and middle-income countries has unfortunately been documented only partially. Previous reviews have evaluated the performance

of CBHI in terms of enrolment, financial management and sustainability.^{12,17–19} A recent review²⁰ provides an overview of the scope and origin of CHI in low- and middle-income countries, with a particular focus on China, Ghana, India, Mali, Rwanda and Senegal, and also assesses CHI's performance in terms of population coverage, range of services included and reimbursement rate. The authors concluded that the picture in Africa and Asia is very patchy, with large heterogeneity in institutional designs and organizational models and enormous variation in population coverage, services covered and costs achieved. No systematic reviews are available on the impact of SHI and PHI, which limits a direct comparison of their options and limitations. Also, health insurance is known to have effects on domains beyond those reported in existing reviews, such as social inclusion.⁹ Furthermore, most reviews available on the rapid development of health insurance in low- and middle-income countries are somewhat outdated.

To address the gaps described, this paper provides an up-to-date review of the impact of SHI, PHI and CBHI on a comprehensive set of domains. Following the conceptual framework by Preker & Carrin,⁹ we evaluate whether the different types of health insurance can: (i) mobilize resources, i.e. generate sufficient and stable resources for adequate functioning of health services; (ii) provide financial protection to clients against catastrophic health expenditures; (iii) improve utilization of health-care services by all socio-economic groups; (iv) improve health care quality; (v) improve social inclusion, i.e. the provision of health services in alignment with the needs of various population groups, especially the poor and vulnerable; and (vi) improve community empowerment, i.e. involvement of the community in the organization of health services. Our review covers all low-

^a Department of Primary and Community Care, Radboud University Nijmegen Medical Centre, PO Box 9101, 6500HB Nijmegen, Netherlands.

^b Ecorys Research and Consulting, Rotterdam, Netherlands.

^c Centre for Development Research, University of Bonn, Bonn, Germany.

Correspondence to Ernst Spaan (e-mail: e.spaan@elg.umcn.nl).

(Submitted: 13 January 2012 – Revised version received: 16 May 2012 – Accepted: 23 May 2012 – Published online: 13 June 2012)

and lower-middle-income countries in Africa and Asia.

Methods

We carried out a systematic review of studies on the impact of SHI, PHI and CBHI in Africa and Asia that were published any year up to the end of 2011. Our search strategy is described in Box 1.

Studies were included if they: (i) were randomized controlled trials, cohort, case-control or cross-sectional studies, or qualitative descriptive case studies; (ii) studied the impact of health insurance on resource mobilization, service utilization, quality of care, financial protection, social inclusion or community empowerment; (iii) were carried out in a low- or lower-middle-income country either in 1987 or in 2007, to allow for changes in countries' income status over time²¹ (Appendix A, available at: <http://www.niche1.nl/publications>); and (iv) were written in English, French, Spanish or Portuguese. Studies were excluded if they: (i) were policy reviews, opinion pieces, editorials, letters to the editor, commentaries or conference abstracts; (ii) originated from a country on the American continent or (iii) were duplicate references from different databases.

Two pairs of independent reviewers (ES and NT, JM and FM) screened all titles and abstracts of the initially identified studies to determine if they satisfied the inclusion criteria. Any disagreement was resolved through consensus. Full text articles were retrieved for the selected titles. Reference lists of the retrieved articles, as well as previous review articles,^{12,17-19} were searched for additional publications (referred to as "snowballing").

Data extraction

The reviewers used a data collection form to extract the relevant information from the selected studies from Africa (ES and NT) and Asia (JM and FM). The data collection form included questions on qualitative aspects of the studies (such as date of publication, design, geographical origin and setting), health insurance scheme characteristics (such as type of scheme, starting year and target group), study characteristics (such as study design and period), and information on the reported impact domains, including reported strengths

Box 1. Search strategy employed in systematic review of studies on health insurance in Africa and Asia

We searched Medline; PubMed; PopLine; Arts and Humanities Citation Index; World Health Organization Library Information System; International Bibliography in Social Sciences; Cochrane Library; Health Care Management Information System; Journal Storage; ScienceDirect; CSA Sociological Abstracts; American Economic Association's electronic bibliography; National Bureau of Economic Research; Research Papers in Economics; Institute of Development Studies, Sussex; ELDIS/International Development Studies, United Kingdom (ID21); British Library of Development Studies; Database of *Institut de l'Information Scientifique et Technique*; *Banque de Données en Santé Publique* and the Institute of Tropical Medicine Antwerp online library.

We used combinations of text words and thesaurus terms that included *health insurance* [Mesh term], *health insurance* [Title/Abstract], *community-based health insurance* [Title/Abstract], *social health insurance* [Title/Abstract], *private health insurance* [Title/Abstract], *developing countries* [Mesh term] and *developing countries* [Title/Abstract]. For databases lacking a thesaurus system we used free text searches using similar search terms. Below is an example of the search syntax we used for MedLine:

Example of MedLine (exploded) search terms:

DEVELOPING COUNTRIES (MedLine Thesaurus Term) [Including: *developing countries; countries, developing; country, developing; developing country; under-developed countries; countries, underdeveloped; country, under-developed; under developed countries; under-developed country; third-world countries; countries, third-world; country, third-world; third world countries; third-world country; developing nations; developing nation; nation, developing; nations, developing; under-developed nations; nation, under-developed; nations, under-developed; under developed nations; under-developed nation; third-world nations; nation, third-world; nations, third-world; third world nations; third-world nation; less-developed countries; countries, less-developed; country, less-developed; less developed countries; less-developed country; less-developed nations; less developed nations; less-developed nation; nation, less-developed; nations, less-developed*] AND HEALTH INSURANCE (Thesaurus term) [Including: *insurance, health; health insurance; health insurance, voluntary; insurance, voluntary health; voluntary health insurance; group health insurance; health insurance, group; insurance, group health*].

Other examples of search syntax used:

PubMed: *insurance, health* [Mesh] AND *developing countries* [Mesh] AND ((*English*[lang] OR *French*[lang] OR *Spanish*[lang] OR *Portuguese*[lang]).

and weaknesses of schemes and main study conclusions. Reviewers graded the impact according to the following categories: positive effect (A); negative effect (B); no effect (C); inconclusive or not assessed.

Quality evaluation

The pairs of reviewers evaluated the quality of the included studies using a quality-grading protocol adapted from existing protocols known as the HIP study Review Protocol on Health Insurance.^{17,22,23} The protocol, which is available from the corresponding author on request, covers 19 indicators to assess rigour, bias, validity and generalizability of the studies, type of study (qualitative; quantitative), whether research question(s), concepts, methods, sampling, and data eliciting are adequately described, and whether the robustness of presented data and results is critically examined. For each item 0–2 points are given and these are added up to get an overall quality score (ranging from 0 to 38 points). Studies were categorized as low quality (0–14 points), medium quality (15–29) or high quality (≥ 30). One

in five studies was randomly selected for assessment by a second reviewer. Any disagreements on the quality evaluation between the pairs of reviewers were resolved through consensus.

Impact judgements

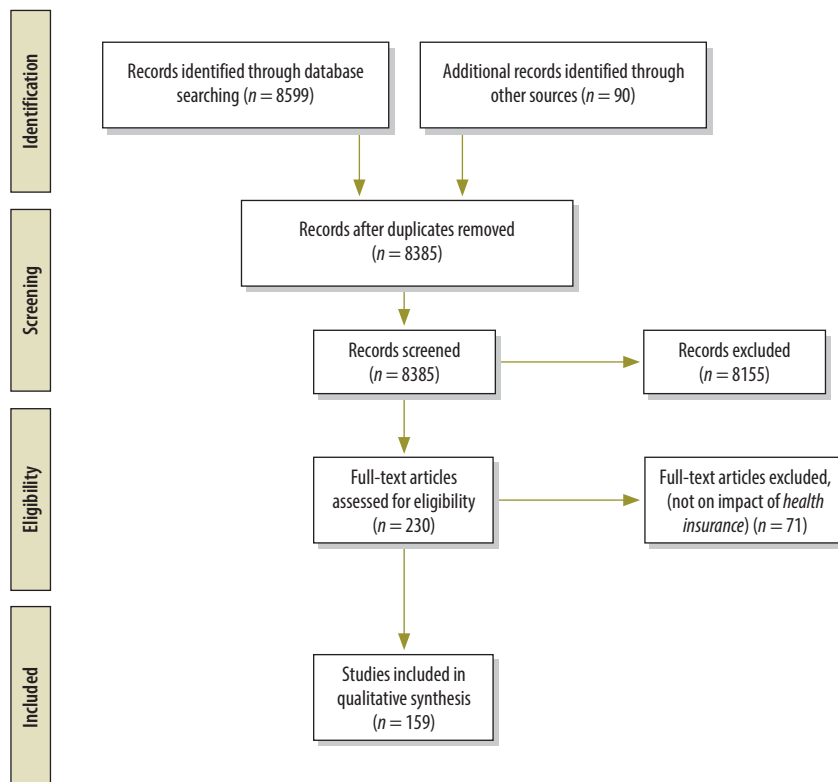
We formulated overall judgements on the impact of SHI, PHI and CBHI on the various domains if at least 10 studies of medium or better quality were performed in those domains. We judged the evidence as strongly positive if $A \div (A + B + C) \geq 60\%$; weakly positive if $A \div (A + B + C) \geq 30\%$ and $< 60\%$; strongly negative if $B \div (A + B + C) \geq 60\%$; weakly negative if $B \div (A + B + C) \geq 30\%$ and $< 60\%$; and inconclusive otherwise.

We adhered to PRISMA guidelines for the conduct of systematic reviews.²⁴

Results

From the initial search for peer-reviewed articles based on title (8689 references), 8459 references were excluded and 230 full text references were retained for further scrutiny. Detailed inspection of abstracts and texts resulted in 159

Fig. 1. Flow diagram showing study selection for systematic review of studies on health insurance in Africa and Asia



articles. This includes references found through screening reference lists in retrieved articles, snowballing and additional screening of organizational web sites (Fig. 1).

Characteristics of included studies

Table 1 shows the summary characteristics of the 159 included studies – 68 from Africa and 91 from Asia (Appendix B, available at: <http://www.niche1.nl/publications>). Some studies stem from the same reference but are listed here individually. In Africa, most of the studies stem from only seven countries: the Democratic Republic of the Congo, Ghana, Kenya, Rwanda, Senegal, Uganda and the United Republic of Tanzania. The majority of these studies reported on CBHI and were of relative high quality. Fewer studies were on SHI and PHI, and these were of lower quality. In Asia, almost all studies originate from five countries only: China, India, the Philippines, Thailand and Viet Nam. The majority of Asian studies were on SHI and were, on average, of medium quality. Fewer studies were on CBHI and only one on PHI. Most studies

used an observational design and only a few used a randomized controlled (4) or quasi-experimental design (20). The number of studies increased over time, with almost half of them published in 2005–2011.

Impact of health insurance

High and medium quality studies reported frequently on the impact of health insurance on financial protection (90), utilization (91) and social inclusion (65), but less often on resource mobilization (28), quality of care (21) or community empowerment (6). A full overview of the included studies and the detailed impact reported by each on the various domains is provided in Appendix B; the indicators employed in the included studies are listed in Appendix C (available at: <http://www.niche1.nl/publications>).

Table 2 shows that studies on the impact of CBHI on resource mobilization for health showed an overall positive effect. For example, studies in Bangladesh,²⁵ Cambodia,²⁶ the Democratic Republic of the Congo^{13,14,20,27–29} and India²⁶ reported improved cost recovery ratios after implementation of CBHI.

Still, other schemes in countries such as Rwanda¹³ and Uganda³⁰ showed weak financial sustainability because of low renewal rates, high claims-to-revenue ratios and high operational costs. There is no conclusive evidence that SHI or PHI affects, positively or negatively, resource mobilization for health.

There is, however, strong evidence that CBHI and SHI provide financial protection for their members in terms of reducing their out-of-pocket expenditures, and that they improve utilization of inpatient and outpatient services. Weak evidence suggests that both SHI and CBHI have a positive impact on the quality of care. To illustrate this, CBHI schemes in Kenya, Uganda and the United Republic of Tanzania were found to improve service quality in health facilities, increase essential drug availability and shorten waiting times. Another study on a CBHI scheme in Burundi reported that health workers discriminated against card holders and provided preferential treatment to patients paying in cash.³¹

There is weak evidence that both SHI and CBHI have a positive impact on social inclusion as indicated by enrolment and utilization patterns among vulnerable groups. Health insurance schemes undertake various initiatives to reach the vulnerable segments of the populations, such as discount cards, exemption schemes or free enrolment for vulnerable populations. For example, targeted policies of the National Health Insurance Program in the Philippines^{32–34} and the Thai universal coverage scheme³⁴ increased the number of insured indigents and poor. In other countries, social inclusion is not achieved to the same extent, and in Cameroon,³⁵ Guinea³⁶ and Senegal,³⁷ to name a few examples, premiums that the poor cannot afford are reportedly the main reason. Both SHI and CBHI yield inconclusive findings on community empowerment, primarily because very few studies have been carried out. Findings for PHI are inconclusive on all domains because of insufficient studies.

Discussion

This study is the first systematic review to broadly examine the impact of different types of health insurance schemes in low- and lower-middle-income countries in Africa and Asia on various domains. Our review points to an

Table 1. Key characteristics of studies included in systematic review of studies on the impact of health insurance in Africa and Asia

Study site	No. of observations	Type of article		Quality (% of observations)			Study design			Year of publication				
		Peer-reviewed	Grey	Low	Medium	High	RCT	Quasi-experimental	Observational	1990–1994	1995–1999	2000–2004	2005–2009	2010–2011
Africa (n = 68)														
Social health insurance	18	7	11	33	44	22	0	1	17	2	2	4	6	4
Private health insurance	9	6	3	67	11	22	0	0	9	1	1	2	3	2
Community-based health insurance	50	24	26	30	48	22	2	3	45	4	10	17	16	3
Total	77	38^a	30^a	-	-	-	2	4	71	7	13	23	25	9
Asia (n = 91)														
Social health insurance	68	48	17	21	59	21	0	12	56	1	9	15	29	6
Private health insurance	1	1	0	0	0	100	0	0	1	0	1	0	0	0
Community-based health insurance	30	22	8	17	60	23	2	4	24	2	4	10	14	2
Total	99	70^a	21^a	-	-	-	2	16	81	3	14	25	49	8

RCT, randomized controlled trial.

^a Some articles refer to more than one study, and the number of articles can therefore be less than the number of studies.

incomplete evidence base. Despite an increasing volume of studies, especially in recent years, the generated knowledge is patchy and of variable quality.

Despite the above, the available evidence clearly demonstrates that health insurance can be an alternative to user fees as a health financing mechanism. The strong evidence that CBHI and SHI can improve financial protection and enhance service utilization patterns is especially critical in this respect, but the weaker evidence that CBHI and SHI can foster social inclusion is also important. Although this type of impact is not unexpected in the case of CBHI because of its community orientation,³⁸ it is more surprising in the case of SHI, which some claim underrepresents the informal sector.³⁹ Yet targeted policies in the Philippines and Thailand have shown that SHI can reach this sector. Our findings thereby support the view of entities such as WHO that consider prepaid health financing mechanisms an important alternative capable of mitigating the detrimental effects of user fees,⁴⁰ as well as a promising means for achieving universal coverage.⁴ The review is inconclusive concerning any impact of PHI because very few studies have been conducted. Hence, the absence of evidence of impact does not mean that PHI has no impact.

There is very little evidence on the impact of health insurance on quality of care and community empowerment, and no (strong) conclusions can be drawn in this regard. Nonetheless, these domains are of critical importance to the performance of health insurance schemes. Many believe that health insurance schemes, through increased utilization patterns and subsequent income generation, can improve the quality of care, and that this, in turn, can lead to higher health insurance enrolment.⁴¹ Research is needed to explore this mutual reinforcement. The lack of evidence on the impact of CBHI schemes on community empowerment is especially disappointing. Such schemes have large potential to explicitly involve the community in the organization of health services, and whether this actually happens is a question deserving more attention.

The findings of the review should be interpreted with caution and obviously should not be taken as a basis for implementing any type of health insur-

Table 2. Strength of the evidence on the impact of different types of health insurance on certain domains in Africa and Asia^a

Health insurance type	Resource mobilization		Utilization		Financial protection		Quality of care		Social inclusion		Community empowerment	
	Proportion ^b	Judgement	Proportion	Judgement	Proportion	Judgement	Proportion	Judgement	Proportion	Judgement	Proportion	Judgement
Social health insurance	-5/9	Inconclusive	+29/47	Strongly positive	+34/57	Strongly positive	+6/13	Weakly positive	+10/22	Weakly positive	+1/1	Inconclusive
Community-based health insurance	+13/19	Strongly positive	+30/42	Strongly positive	+23/29	Strongly positive	+3/8	Weakly positive	+21/42	Weakly positive	+1/5	Inconclusive
Private health insurance	0/0	Inconclusive	+1/2	Inconclusive	+2/4	Inconclusive	0/0	Inconclusive	+1/1	Inconclusive	0/0	Inconclusive

^a Only includes studies of medium quality or higher. See text for more detail on quality assessment.

^b This proportion represents net number of negative or positive studies over the total number of included studies on a certain domain.

ance anywhere. Whether SHI and CBHI have the same potential impact in settings other than those where the studies were conducted is highly dependent on a particular country's socioeconomic, cultural and political context.^{2,12,38,42-44} This is illustrated by the few studies that showed negative impacts of SHI and CBHI on certain domains. Similarly, the review does not provide an answer to the question of whether SHI, CBHI or PHI is the optimal type of health financing mechanism, or of how it compares with tax-based systems – this is also highly dependent on context. Different types of health insurance can also coexist in the same country and serve different populations (e.g. CBHI and PHI in India)⁴⁵ or they can follow each other in succession (e.g. CBHI and SHI in Ghana).⁴⁶

We observed that only a small proportion of all health insurance schemes in Africa and Asia have ever been subjected to impact analysis, and as such included in our review. For example, an overview of CBHI schemes in francophone western Africa in 2006³⁸ identified 625 functional schemes in 12 countries, while we only included studies on 47 schemes (half of them in western Africa) in our analysis. Experiences from Chad, Guinea, Niger and Togo are absent in the literature, despite the fact that CBHI schemes are present in these countries. Likewise, countries like Kenya, Nigeria and Tunisia are experimenting with or implementing SHI, but we did not identify studies of these cases in our review. We also failed to find studies on PHI in countries like South Africa and Zimbabwe, even though PHI schemes exist in these countries. This suggests a certain bias in reporting on health insurance schemes, possibly driven by national government, donor or research priorities, data availability and difficulty in publishing negative impact results. Despite the reporting bias, we observed that studies on SHI were predominantly carried out in Asia, while those on CBHI were largely carried out in Africa. To some extent this reflects the prevalence of both types of health insurance in the two regions.

The review revealed a large variation in study design and quality. Very few studies used experimental or quasi-experimental study designs, and most

relied on observational analysis to compare, for example, patterns of utilization among insured individuals with those in a control group (perhaps the same individuals but formerly insured, or different individuals without prior insurance) – a design that can introduce a selection bias and affect results. Relatively few studies reported on resource mobilization and community empowerment, and those that did were of poor quality, which illustrates the challenges involved in measuring impact in these domains. Overall, our review shows the need to develop more rigorous study designs and impact indicators for health insurance scheme impact evaluations. It also suggests the potential usefulness of developing guidelines for appropriately measuring impact.

Limitations of the review

Our study has several limitations. First, we observed a large variety of study designs and indicators for assessing the impact of health insurance and their interpretation was not always straightforward. For those studies that used a control group, the use of self-selected controls in many cases may have biased the results and we carefully considered this in discussions among the pairs of reviewers. Second, we arbitrarily defined strength of the evidence on the basis of study quality, number of studies and percentage of positive findings. While this seems reasonable, the use of other parameters could have led to different review findings.

Summary

There is strong evidence that CBHI improves resource mobilization for health and that both CBHI and SHI improve health service utilization and provide financial protection for members in terms of reducing their out-of-pocket expenditure. There is weak evidence suggesting that both SHI and CBHI have a positive impact on the quality of care and social inclusion. Findings for both SHI and CBHI are inconclusive on community empowerment. Those for PHI are inconclusive on all domains because of insufficient studies.

Conclusion

CBHI and SHI hold strong potential to improve financial protection and en-

hance utilization among their enrolled populations, and they can also foster social inclusion. This underscores the importance of health insurance as an alternative health financing mechanism capable of mitigating the detrimental effects of user fees, and as a promising means for achieving universal health-care coverage. ■

Acknowledgements

We gratefully acknowledge the support of the Dutch Platform for Health Insurance for the Poor (HIP) for this research.

Funding: The study was funded by the Dutch Platform for Health Insurance for the Poor (<http://www.hip-platform.org/>). The funding body had no role

in study design, data collection and analysis, interpretation of outcomes, decision to publish, or preparation of the manuscript.

Competing interests: None declared.

ملخص

أثر التأمين الصحي في أفريقيا وآسيا: استعراض منهجي

الدراسات قائمة على الملاحظة؛ وأربع منها عشوائية ذات بيئة خاضعة للمراقبة و20 منها ذات تصميم شبه تجريبي. وكانت مواضيع الحماية المالية والاستخدام والاندماج الاجتماعي أكثر شيوعاً من تعبئة الموارد أو جودة الرعاية أو تمكين المجتمع المحلي. وتشير بيانات قوية إلى أن التأمين الصحي المجتمعي والتأمين الصحي الاجتماعي يحسنان من استخدام الخدمات وحماية الأفراد مالياً من خلال خفض الإنفاق المباشر كما تشير أيضاً إلى أن التأمين الصحي المجتمعي يحسّن من حشد الموارد. وتشير بيانات ضعيفة إلى التأثير الإيجابي لكل من التأمين الصحي الاجتماعي والتأمين الصحي المجتمعي على جودة الرعاية والاندماج الاجتماعي، كما أن تأثير التأمين الصحي الاجتماعي والتأمين الصحي المجتمعي على تمكين المجتمع المحلي غير حاسم، وكذلك نتائج التأمين الصحي الخاص في جميع المجالات نظراً لعدم كفاية الدراسات. الاستنتاج يوفر التأمين الصحي بعض الحماية من الآثار الضارة للرسوم المفروضة على المستخدمين ويتيح سبيلاً واعداً باتجاه تغطية شاملة للرعاية الصحية.

الغرض تقييم أثر التأمين الصحي على تعبئة الموارد والحماية المالية واستخدام الخدمات وجودة الرعاية والاندماج الاجتماعي وتمكين المجتمع المحلي في البلدان منخفضة الدخل والشرحية الدنيا من البلدان متوسطة الدخل في أفريقيا وآسيا. الطريقة تم إجراء بحث منهجي للتجارب العشوائية التي تم تنفيذها في بيئة خاضعة للمراقبة، والدراسات شبه التجريبية والقائمة على الملاحظة التي تم نشرها قبل نهاية عام 2011 في 20 قاعدة بيانات وقوائم مراجع للدراسات ذات الصلة، ومواقع الإنترنت، والمنشورات غير الرسمية. وتم تقييم جودة الدراسة باستخدام بروتوكول تدرج الجودة. النتائج لبت 159 دراسة معايير الإدراج - 68 في أفريقيا و91 في آسيا. ووردت تقارير من معظم الدراسات الأفريقية عن التأمين الصحي المجتمعي (CBHI) وكانت ذات جودة عالية نسبياً؛ وكانت دراسات التأمين الصحي الاجتماعي (SHI) في أغلبها آسيوية وذات جودة متوسطة. ولم تتعامل سوى دراسة آسيوية واحدة مع التأمين الصحي الخاص (PHI). وكانت معظم

摘要

非洲和亚洲医疗保险的影响：系统性回顾

目的 评估在非洲和亚洲的低收入和中等偏下收入国家中医疗保险对资源动员、财政保护、服务利用、护理质量、社会包容和社区营造的影响。

方法 在20个文献数据库、相关研究参考文献、网站和灰色文献中对在2011年底之前发表的随机对照试验、准实验和观测研究进行系统搜索。使用质量分级方案评估研究质量。

结果 符合纳入标准的研究有159项——非洲68项，亚洲91项。大多数非洲国家报告的是以社区为基础的医疗保险 (CBHI)，质量相对较高；社会医疗保险 (SHI) 研究大多来自亚洲，质量中等。只有一个亚洲研究是关于 PHI

的。大多数研究是观测性研究；4个具有随机对照，20个具有准实验设计。较之资源动员、护理质量或社区营造，资金保障、利用率和社会包容是更为普遍的主题。强有力的证据表明，CBHI和SHI可以通过减少现款开支提高服务利用率并在资金上为成员提供保护，CBHI改善了资源动员情况。SHI和CBHI对护理质量和社会包容的积极作用证据较弱。SHI和CBHI对社区营造的影响不确定。因为没有足够的研究，PHI对所有领域的影响尚无定论。

结论 医疗保险针对用户收费的不利影响提供了一定的保护，并带来一条通向全民医疗保健覆盖的希望之路。

Résumé

L'impact de l'assurance maladie en Afrique et en Asie: une étude systématique

Objectif Évaluer l'impact de l'assurance maladie sur la mobilisation des ressources, la protection financière, l'utilisation des services, la qualité des soins, l'inclusion sociale et l'autonomisation des communautés dans les pays à faible revenu et à revenu intermédiaire de la tranche inférieure, en Afrique et en Asie.

Méthodes Une recherche systématique d'essais contrôlés randomisés, d'études quasi expérimentales et observationnelles publiées avant la fin de l'année 2011 a été effectuée dans 20 bases de données de publications, des listes de références ou des études pertinentes, sur des

sites Web et dans la littérature grise. La qualité des études a été évaluée au moyen d'un protocole de classement de la qualité.

Résultats Les critères d'inclusion ont été remplis par 159 études - 68 en Afrique et 91 en Asie. La plupart des études africaines se rapportaient à l'assurance maladie communautaire (AMC) et étaient de qualité relativement élevée; les études de l'assurance maladie sociale (AMS) étaient pour la plupart des études asiatiques de qualité moyenne. Seule une étude asiatique traitait de l'AMP. La plupart des études étaient observationnelles; 4 d'entre elles disposaient de contrôles randomisés

et 20 avaient une conception quasi expérimentale. La protection financière, l'utilisation des services et l'inclusion sociale étaient des sujets beaucoup plus communs que la mobilisation des ressources, la qualité des soins ou l'autonomisation des communautés. Il existe des preuves solides que l'AMC et l'AMS améliorent l'utilisation des services et protègent financièrement les membres, en réduisant leurs paiements directs, et que l'AMC améliore aussi la mobilisation des ressources. De faibles preuves indiquent un effet positif de l'AMS et de l'AMC sur la

qualité des soins et l'inclusion sociale. L'effet de l'AMS et de l'AMC sur l'autonomisation des communautés n'est pas concluant. Les résultats de l'AMP ne sont pas concluants dans tous les domaines, car les études sont insuffisantes.

Conclusion L'assurance maladie offre une certaine protection contre les effets néfastes des frais d'utilisation et une voie prometteuse vers l'accès à une couverture de soins de santé universelle.

Резюме

Влияние медицинского страхования в Африке и Азии: систематический обзор

Цель Оценить влияние медицинского страхования на мобилизацию ресурсов, финансовую защиту, использование услуг, качество медицинского обслуживания, социальную интеграцию и обеспечение возможностей для развития общества в странах Африки и Азии с низким и ниже среднего уровня доходами.

Методы Систематический поиск рандомизированных контролируемых, квазиэкспериментальных и неэкспериментальных исследований, опубликованных до конца 2011 г., проводился по 20 базам данных информационных источников, спискам ссылок соответствующих исследований, веб-сайтам и неофициальным изданиям. Качество исследования оценивалось в протоколе уровня качества.

Результаты Критериям включения соответствовало 159 исследований – 68 в Африке и 91 в Азии. Большинство африканских исследований было посвящено территориальному медицинскому страхованию (ТМС) и имело относительно высокое качество; исследования по социальному страхованию (СС), главным образом, проводились в странах Азии и были среднего качества. Только одно азиатское исследование посвящалось государственному медицинскому страхованию (ГМС).

Большинство исследований имело экспериментальный характер; 4 исследования были рандомизированными контролируемыми и 20 было отнесено к квазиэкспериментальным. Финансовая защита, использование услуг и социальная интеграция были гораздо более частыми предметами исследований, чем мобилизация ресурсов, качество медицинского обслуживания или обеспечение возможностей для общества. Убедительные доказательства указывают на то, что ТМС и СС улучшают использование услуг и защищают их членов в финансовом плане посредством сокращения их наличных расходов, а также на то, что ТМС улучшает мобилизацию ресурсов. Неубедительные доказательства указывают на благоприятный эффект СС и ТМС на качество медицинского обслуживания и социальную интеграцию. Влияние СС и ТМС на обеспечение возможностей для развития общества является недоказательным. Результаты для ГМС являются недоказательными во всех сферах из-за недостаточных исследований.

Вывод Медицинское страхование обеспечивает некоторую защиту от негативных последствий расходов пациентов и является перспективным путем к единому страховому покрытию населения.

Resumen

El impacto de los seguros médicos en África y Asia: un examen sistemático

Objetivo Evaluar el impacto de los seguros médicos en la movilización de recursos, la protección financiera, el uso de los servicios, la calidad de la atención, la inclusión social y el empoderamiento de la comunidad en países de ingresos bajos y medios de África y Asia.

Métodos Se llevó a cabo una búsqueda sistemática de ensayos aleatorios controlados, estudios cuasiexperimentales y de observación publicados antes de finalizar el año 2011 en 20 bases de datos bibliográficas, listas de referencia de estudios relevantes, páginas web y literatura gris. La calidad de los estudios se evaluó por medio de un protocolo de clasificación por calidad.

Resultados De los estudios analizados, 159 reunieron los criterios de inclusión, 68 de ellos en África y 91 en Asia. La mayoría de estudios africanos informaron acerca de los seguros médicos basados en la comunidad y presentaban una calidad relativamente muy alta; los estudios acerca de seguros sociales de enfermedad fueron en su mayoría asiáticos y de calidad media. Sólo un estudio asiático se ocupó de los seguros médicos permanentes. La mayoría de estudios fueron de observación; cuatro de ellos presentaban controles aleatorios y 20 tenían un diseño de investigación cuasiexperimental. La protección financiera,

el uso y la inclusión social fueron temas mucho más comunes que la movilización de recursos, la calidad de la atención o el empoderamiento de la comunidad. Existen pruebas importantes de que los seguros médicos basados en la comunidad y los seguros sociales de enfermedad mejoran el uso del servicio y ofrecen una protección financiera para los socios porque reducen sus gastos directos y que los seguros médicos basados en la comunidad también mejoran la movilización de los recursos. Por el contrario, hay pruebas poco sólidas acerca del efecto positivo sobre la calidad de la atención y la inclusión social de los seguros sociales de enfermedad y los seguros médicos basados en la comunidad. El efecto de los seguros sociales de enfermedad y los seguros médicos basados en la comunidad en el empoderamiento de la comunidad no es concluyente. Los resultados para los seguros médicos permanentes son inconcluyentes en todos los campos porque los estudios son insuficientes.

Conclusión Las ofertas de los seguros médicos ofrecen cierta protección contra los efectos perjudiciales de las cuotas de usuarios y son un camino prometedor hacia la cobertura sanitaria integral.

References

- Devadasan N, Criel B, Van Damme W, Ranson K, Van der Stuyft P. Indian community health insurance schemes provide partial protection against catastrophic health expenditure. *BMC Health Serv Res* 2007;7:43. doi:10.1186/1472-6963-7-43 PMID:17362506
- Hsiao W, Shaw RP, editors. *Social health insurance for developing nations*. Washington: The World Bank; 2007.
- McIntyre D, Thiede M, Dahlgren G, Whitehead M. 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;62:858–65. doi:10.1016/j.socscimed.2005.07.001 PMID:16099574
- World health report 2010 - Health systems financing: the path to universal coverage*. Geneva: World Health Organization; 2010.
- Smith PC. Provision of a public benefit package alongside private voluntary health insurance. In: Preker AS, Scheffer RM, Bassett MC, editors. *Private voluntary health insurance in development: friend or foe?* Washington: The World Bank; 2007.
- Bennett S, Creese A, Monasch R. *Health insurance schemes for people outside formal sector employment* (ARA Paper No. 16). Geneva: World Health Organization; 1998.
- Lagarde M, Palmer N. *Evidence from systematic reviews to inform decision making regarding financing mechanisms that improve access to health services for poor people*. A policy brief prepared for the International Dialogue on Evidence-Informed Action to Achieve Health Goals in Developing Countries (IDEAHealth). Geneva: Alliance for Health Policy and Systems Research; 2006.
- McIntyre D. *Learning from experience: health care financing in low- and middle-income countries*. Geneva: Global Forum for Health Research; 2007.
- Preker A, Carrin G, editors. *Health financing for poor people: resource mobilization and risk sharing*. Washington: The World Bank; 2004.
- Ranson MK. Reduction of catastrophic health care expenditures by a community-based health insurance scheme in Gujarat, India: current experiences and challenges. *Bull World Health Organ* 2002;80:613–21. PMID:12219151
- Criel B. The Bwamanda hospital insurance scheme: effective for whom? A study of its impact on hospital utilization patterns. *Soc Sci Med* 1999;48:897–911. doi:10.1016/S0277-9536(98)00391-8 PMID:10192557
- Carrin G, Waelkens MP, 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. doi:10.1111/j.1365-3156.2005.01455.x PMID:16045467
- Criel B. *District-based health insurance in sub-Saharan Africa: part 2: case studies*. Antwerp: Instituut voor Tropische Geneeskunde, Departement Volksgezondheid; 1998.
- Moenis F. Design, implementation, and evaluation of a community financing scheme for hospital care in developing countries: a pre-paid health plan in the Bwamanda health zone, Zaire. *Soc Sci Med* 1990;30:1319–27. doi:10.1016/0277-9536(90)90312-G PMID:2367877
- Smith KV, Sulzbach S. Community-based health insurance and access to maternal health services: evidence from three West African countries. *Soc Sci Med* 2008;66:2460–73. doi:10.1016/j.socscimed.2008.01.044 PMID:18362047
- Atim C. *Contribution of mutual health organizations to financing, delivery and access to health care: synthesis of research in nine west and central African countries*. Bethesda: Abt Associates Inc.; 1998.
- Ekman B. Community based health insurance in low-income countries: a systematic review of the evidence. *Health Policy Plan* 2004;19:249–70. doi:10.1093/heapol/czh031 PMID:15310661
- Extending social protection in health through community-based health organizations: evidence and challenges*. Geneva: International Labour Office; 2002.
- Jakab M, Krishnan C. Review of the strengths and weaknesses of community financing. In: Preker A, Carrin G, editors. *Health financing for poor people: resource mobilization and risk sharing*. Washington: The World Bank; 2004. pp. 53–117.
- Soors W, Devadasan N, Durairaj V, Criel B. *Community health insurance and universal coverage: multiple paths, many rivers to cross* (World Health Report 2010 Background Paper 48). Geneva: World Health Organization; 2010.
- The World Bank [Internet]. How we classify countries. Washington: World Bank; 2012. Available from: <http://data.worldbank.org/about/country-classifications> [accessed 25 May 2012].
- Systematic reviews: CRD's guidance for undertaking reviews in health care*. York: Centre for Reviews and Dissemination, University of York; 2008.
- Van de Voorde C, Leonard C. *Search for evidence and critical appraisal: health services research*. Brussels: Belgian Health Care Knowledge Centre; 2007.
- Moher D, Liberati A, Tetzlaff J, Altman DG; The PRISMA Group. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *PLoS Med* 2009;6:e1000097. doi:10.1371/journal.pmed.1000097 PMID:19621072
- Desmet M, Chowdhury AQ, Islam MK. The potential for social mobilisation in Bangladesh: the organisation and functioning of two health insurance schemes. *Soc Sci Med* 1999;48:925–38. doi:10.1016/S0277-9536(98)00393-1 PMID:10192559
- McCord M. Health care microinsurance – case studies from Uganda, Tanzania, India and Cambodia. *Small Enterprise Dev* 2001;12:25–38. doi:10.3362/0957-1329.2001.006
- Criel B, Kegels G. A health insurance scheme for hospital care in Bwamanda district, Zaire: lessons after 10 years of functioning. *Trop Med Int Health* 1997;2:654–72. doi:10.1046/j.1365-3156.1997.d01-349.x PMID:9270733
- Ilunga TB, Contandriopoulos AP, Fournier P. How was a prepayment plan for health care in Bwamanda (Zaire) established? *Soc Sci Med* 1995;40:1041–52. doi:10.1016/0277-9536(94)00173-Q PMID:7597458
- Shepard S, Vian T, Kleinau EF. *Health insurance in Zaire* (Policy, Research and External Affairs Working Papers). Washington: The World Bank, Africa Technical Department, Population, Health and Nutrition Division; 1990.
- McCord M, Osinde S. *Reducing vulnerability: the supply of health microinsurance in east Africa*. Appleton: Micro Insurance Centre, LLC; 2003.
- Arhin DC. The health card insurance scheme in Burundi: a social asset or a non-viable venture? *Soc Sci Med* 1994;39:861–70. doi:10.1016/0277-9536(94)90048-5 PMID:7973882
- Obermann K, Jowett MR, Alcántara MO, Banzon EP, Bodart C. Social health insurance in a developing country: the case of the Philippines. *Soc Sci Med* 2006;62:3177–85. doi:10.1016/j.socscimed.2005.11.047 PMID:16406248
- Jowett M, Hsiao WC. The Philippines: extending coverage beyond the formal sector. In: Hsiao WC, Shaw RP, editors. *Social health insurance for developing nations*. Washington: The World Bank; 2007. pp. 81–104.
- Sidorenko A, Butler J. Financing health insurance in Asia Pacific countries. *Asia Pac Econ Lit* 2007;21:25–54.
- Atim C. Social movements and health insurance: a critical evaluation of voluntary, non-profit insurance schemes with case studies from Ghana and Cameroon. *Soc Sci Med* 1999;48:881–96. doi:10.1016/S0277-9536(98)00390-6 PMID:10192556
- Criel B, Waelkens M. Declining subscriptions to the Maliando Mutual Health Organisation in Guinea-Conakry (West Africa): what is going wrong? *Soc Sci Med* 2003;57:1205–19. doi:10.1016/S0277-9536(02)00495-1 PMID:12899905
- Jütting JP. Do community-based health insurance schemes improve poor people's access to health care? Evidence from rural Senegal. *World Dev* 2003;32:273–88. doi:10.1016/j.worlddev.2003.10.001
- Ndiaye P, Soors W. Editorial: A view from beneath: community health insurance in Africa. *Trop Med Int Health* 2007;12:157–61. doi:10.1111/j.1365-3156.2007.01814.x PMID:17300621
- Wagstaff A. Social health insurance reexamined. *Health Econ* 2010;19:503–17. PMID:19399789
- World health report 2000. Health systems: improving performance*. Geneva: World Health Organization; 2000.
- Schellekens O, Lindner ME, Lange MA, van der Gaag J. *A new paradigm for increased access to health care in Africa*. Washington: International Finance Corporation; 2007. Available from: [http://www.ifc.org/ifcext/essaycompetition.nsf/AttachmentsByTitle/silver_Healthcare_in_Africa/\\$FILE/Silver_Healthcare.pdf](http://www.ifc.org/ifcext/essaycompetition.nsf/AttachmentsByTitle/silver_Healthcare_in_Africa/$FILE/Silver_Healthcare.pdf) [accessed 25 May 2012].
- Drechsler D, Jütting J. Different countries, different needs: the role of private health insurance in developing countries. *J Health Polit Policy Law* 2007;32:497–534. doi:10.1215/03616878-2007-012 PMID:17519475
- Jehu-Appiah C, Aryeetey G, Spaan E, Agyepong I, Baltussen R. Household perceptions and their implications for enrolment in the National Health Insurance Scheme in Ghana. *Health Policy Plan* 2012;27:222–33. doi:10.1093/heapol/czr032 PMID:21504981
- Preker AS, Carrin G, Dror D, Jakab M, Hsiao W, Arhin D. Effectiveness of community health financing in meeting the cost of illness. *Bull World Health Organ* 2002;80:143–50. PMID:11953793
- Reddy KS, Patel V, Jha P, Paul V, Kumar A, Dandona L; Lancet India Group for Universal Healthcare. Towards achievement of universal health care in India by 2020: a call to action. *Lancet* 2011;377:760–8. doi:10.1016/S0140-6736(10)61960-5 PMID:21227489
- Agyepong IA, Adjei S. Public social policy development and implementation: a case study of the Ghana National Health Insurance scheme. *Health Policy Plan* 2008;23:150–60. doi:10.1093/heapol/czn002 PMID:18245803