



USAID
FROM THE AMERICAN PEOPLE



Community Health Financing as a Pathway to Universal Health Coverage: Synthesis of Evidence from Ghana, Senegal, and Ethiopia



Background

The World Health Organization (WHO) estimated that “150 million people globally suffer financial catastrophe each year and 100 million are pushed into poverty because of direct payments for health services” (WHO 2010). This level of poor financial risk protection disproportionately affects low- and middle-income countries, and even more disproportionately affects the poorest segment of the population in these countries (WHO, 2010). The financial burden of paying for health care is especially heavy on African households.

In about half of all countries in sub-Saharan Africa, 40 percent or more of the total health expenditure (THE) comes from household out-of-pocket payments. In fact, out-of-pocket health expenditure was less than 20 percent of THE in only 10 of 47 countries (Sambo et al., 2013). Against this backdrop, universal health coverage (UHC) has become a political priority in dozens of African countries, but political leaders are struggling with how to reach families in the informal sectors, which represent nine out of ten of jobs in rural and urban settings.

Community-based health insurance (CBHI) emerged in West Africa the 1990s as a grassroots response among rural and poor communities to fees charged by private and public clinics and hospitals. Three countries – Ghana, Senegal, and Ethiopia – have leveraged CBHI in different ways to expand publicly funded coverage to the informal sector in rural and urban settings. This paper synthesizes the experiences from these three countries to illustrate the role that CBHI can play in UHC. The lessons discussed should help answer the questions of countries striving to establish UHC:

Inside

<i>Background</i>	1
<i>Universal Health Coverage</i>	2
<i>CBHI As Pathway Toward UHC</i>	3
<i>Summary of CBHI Experiences in Ghana, Senegal, and Ethiopia</i>	5
<i>Lessons from the Three Countries</i>	8
<i>Conclusion</i>	10
<i>Methodology and Acknowledgements</i>	11
<i>References</i>	11

This brief was authored by Hailu N. Zelelew, Senior Associate, Abt Associates Inc, for the Health Finance and Governance Project.

- How can CBHI be a pathway toward UHC in low- and middle-income countries?
- How are CBHI schemes adapted or designed and implemented to cover the poor and informal sector?
- What are the challenges of CBHI initiatives and how can they be overcome?

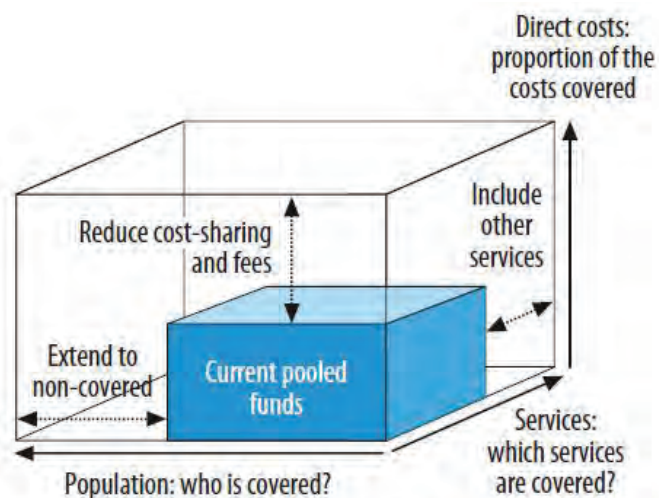
Universal Health Coverage

WHO defines UHC as “providing all people with access to needed health services of sufficient quality to be effective, without their use imposing financial hardship.” WHO states that the goal of UHC is “to ensure that all people obtain the health services they need – prevention, promotion, treatment, rehabilitation and palliation – without risk of financial ruin or impoverishment, now and in the future” (WHO 2010). In 2012, WHO Director-General Margaret Chan underlined that UHC “is the single most powerful concept that public health has to offer.”

UHC is measured along three dimensions as shown in the cube in Figure 1. The first dimension, the width of the cube, tells us what percentage of the population and who is covered, which reflects the degree of equity of accessing health care. The second dimension is the height of the cube, which shows what proportion of the cost is covered by the system. The third dimension is the depth of coverage in terms of which services are covered in the system. Coverage along all three dimensions is achieved through risk pooling, through health insurance and/or government-financed provision of services (the blue cube within the UHC cube). Thus, expansion of the blue cube is in any direction shows that the country is moving toward UHC.

As Joseph Kutzin noted, “it is more useful to think of UHC as a direction rather than a destination” (Kutzin 2013). Indeed, some countries are farther along in the process than others or at least are moving in a right direction. However, most low- and middle-income countries are far from the goal of UHC. Countries also follow different approaches toward UHC based on their socio-economic and political contexts.

Figure 1: Three Dimensions of Universal Health Coverage



Source: World Health Organization (7) and Busse, Schreyögg & Gericke (13).

CBHI As Pathway Toward UHC

One approach to UHC is through CBHI. CBHI started in many Western African countries and elsewhere as small community responses to the introduction of user fees either to fully or partially cover cost of accessing health care at the time of sickness. These schemes usually were related to small income-generation or other community-based socio-economic activities, initiated either by the groups themselves or through support from non-governmental organizations or health service providers. They were characterized by small homogenous risk pools (same demographic, health, and socio-economic conditions), limited capacity to manage insurance, and high per capita operational costs. Members were relatively poor. Enrollment was voluntary, so the schemes were vulnerable to adverse selection (fewer healthy people are more likely to enroll). There was no government financing, so the schemes did not contribute to the broader solidarity objective of wealthier households subsidizing the poor. Also, small, voluntary, homogenous membership limited the degree to which the healthy subsidized the sick.

CBHI did succeed in increasing the use of priority health services. A systematic study of CBHI and social health insurance (SHI) in Africa and Asia concluded that CBHI and SHI improve service utilization (Spaan et al. 2012). In Ghana, since 2005, outpatient visits have increased by a factor of 23,

inpatient service by a factor of 29 (Schieber et al. 2012). The same study also revealed that insurance membership had the strongest effect on utilization of health facilities for the lowest quintile, particularly on utilization of hospitalization – 39 percent by insured compared to only 12 percent by uninsured. Insurance also reduced self-medication – only 7 percent of insured self-medicated compared to 32.5 percent of the uninsured. Insurance also helped reduce forgoing of treatment and increased health facility-based deliveries even among the lowest-income quintiles. An analysis by Sekyi and Domanban (2012) confirmed that health insurance improved health services utilization by insured members compared to uninsured. They also found that health insurance increased faster utilization of care, contributed to shifting of demand for care from the traditional to the modern health care services, and improved the efficient use of limited health resources.

CBHI also is proven to protect members financially by reducing their out-of-pocket expenditure (Spaan et al. 2012). Sekyi and Domanban (2012) concluded that in Ghana, membership in the National Health Insurance Scheme (NHIS) has a strong protective effect on the level of out-of-pocket expenditures for outpatient care. They also noted that “NHIS membership can protect households from the potentially catastrophic healthcare expenditures.” Table 1 summarizes the strengths and weaknesses of CBHI (Jakab and Krishnan 2004).

Table 1: Strengths and Weaknesses of Early CBHI Schemes

Strengths	Weaknesses
<ul style="list-style-type: none"> • Outreach penetration achieved through community participation 	<ul style="list-style-type: none"> • Low volume of premium revenues that can be mobilized from poor communities
<ul style="list-style-type: none"> • Financial protection against illness 	<ul style="list-style-type: none"> • Absence of subsidized premium for the poorest, effectively excluding them from participation
<ul style="list-style-type: none"> • Increase in access to health care by low-income rural and informal sector workers 	<ul style="list-style-type: none"> • Small size of the risk pool
	<ul style="list-style-type: none"> • Limited management capacity in rural and low income communities

The root cause of CBHI's weaknesses was increasingly recognized as CBHI's isolation from the more comprehensive benefits available by linking CBHI to formal health financing mechanisms and provider networks (Hsiao 2001). The governments of Ghana and Rwanda were the first in sub-Saharan Africa to proactively take steps to integrate CBHI into broader national health financing mechanisms. This evolution of CBHI is described as a three-step model (Figure 2), adapted from Wang and Pielemeier (2012).

Wang and Pielemeier define three models of CBHI:

1. Generic model

- Pure grassroots, community-initiated, and managed models
- Usually small and fragmented
- Without legal and operational support and guidance from the government

2. Enhanced model

- Recognized and supported by the government, but not well articulated as part of the broader government health finance policy/strategy

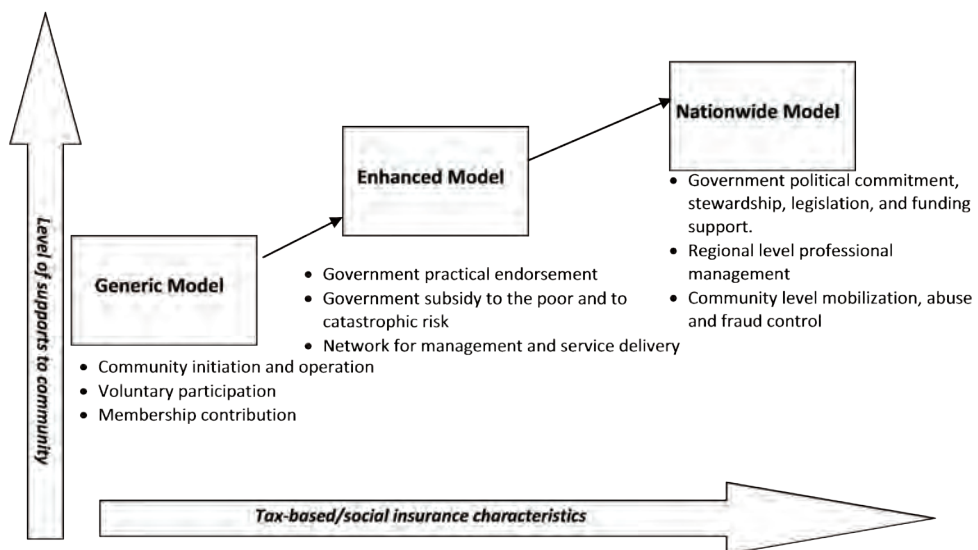
- Government resources injected into these schemes to include the poor
- Better networking among schemes (e.g., a federation)
- Better capacity in negotiating and dealing with service providers

3. Nationwide model

- Strong government commitment that brings stewardship, legislation, and funding support
- Professional support and control of abuse and fraud
- National coverage
- Schemes are linked with other risk pooling and other national financing mechanisms
- Examples: China, Ghana, Rwanda, and Thailand

The experiences in Ghana, Senegal, and Ethiopia illustrate three different ways that CBHI can transition toward the third model.

Figure 2: CBHI Development Framework



Source: Adapted from Wang and Pielemeier (2012)

Summary of CBHI Experiences in Ghana, Senegal, and Ethiopia

Ghana

In Ghana, CBHI flourished following the introduction of user fees for health care, otherwise known as the “cash and carry” system, as part of the country’s structural adjustment program in 1980s. By 2002, there were more than 140 schemes in Ghana. However, these schemes covered less than 2 percent of the population. The fragmented community and/or provider-based CBHI initiative transformed following the 2000 election that made health insurance the center of the political agenda during the election campaign. The winning party and president pursued their policy of evolving the fragmented CBHI initiative that covered little of the population: In 2003, the Ghanaian government passed the National Health Insurance Act (NHIA), which transformed the CBHI schemes into the ‘National Health Insurance Scheme’ (Blanchet 2014). Since then, Ghana has been moving from fragmented CBHI schemes with low geographic and population coverage to a national scheme, covering all districts by establishing a District Mutual Health Insurance Scheme (DMHIS) in each and every district. Though Ghana is still far from UHC – only about 40 percent of the population is covered under the NHIS and the country needs to do more to expand coverage to all Ghanaians – the current level of coverage and the achievements made are impressive. Ghana’s CBHI experience is an important learning model for many other countries seeking to scale up financial protection to the general population despite a large segment of that population depending on the informal economy.

Senegal

Senegal introduced payroll-based mandatory SHI for public sector employees in 1961 that was extended to cover all formal sector workers in 1975 (Mbengue et al. 2014). In addition, Senegal, like other West African countries, has a long history of CBHI – the first schemes were established in the 1980s. However, the coverage under the CBHI schemes remained very low, accounting for less than 4 percent of the total population (Tine et al. 2014), even though 80 percent of Senegalese are dependent on the informal sector and potentially eligible to be CBHI scheme members (Mbengue et al. 2014). Overall, the estimation is that only 25-30 percent of Senegalese are covered under all financial risk protection mechanisms including through payroll-based SHI (Tine et al. 2014).

Senegal realized that the fragmented, small schemes could not do much to help to the country’s effort to provide financial protection to all. In fact, health insurance became a major political issue in the 2012 presidential election, and the election of President Macky Sall brought strong political support that jumpstarted the CBHI initiative.





Senegal has worked aggressively on CBHI since 2012. In the second half of that year, CBHI was piloted in three departments and expanded to 11 more in 2014, with one scheme per district. In September 2013, Senegal launched UHC with CBHI prioritized as the vehicle toward UHC. In 2013 and 2014, networks of mutuelles were established in Louga, Kaolack, Kolda, and Refisque departments, and the plan was to establish such networks in the remaining departments late in 2014 or early 2015.

Ethiopia

In the past 15 years, Ethiopia has instituted health financing and other health care reforms. It has made remarkable progress in expansion of health care services focusing on primary health care and creating access to health to the large segment of rural population. However, health service utilization remained low and the most recent National Health Accounts study found household out-of-pocket expenditure accounting for more than one-third of THE (FMOH 2014). Ethiopia does not have any history and experience of community-based health insurance, but it has strong tradition of other forms of social solidarity organizations. As part of its effort to reach UHC, the Ethiopian government is introducing health insurance.

In 2008, Ethiopia launched a comprehensive health insurance strategy aimed at covering all Ethiopians: Ethiopians working in the formal economy would be covered through payroll-based SHI while CBHI would be introduced for the over 80 percent of citizens in the rural agricultural and informal urban sectors. Starting in 2011, CBHI was successfully piloted in 13 districts in the four country's largest regions; by August 2014, a total of 157,553 households (52 percent of eligible households) and over 700,000 household members had joined CBHI schemes. The early success of that pilot led to CBHI being expanded to 190 additional districts, and a scale-up strategy is being developed to cover the remaining 800-plus districts (Feleke et al. 2015).

Transitioning of CBHI to National Model

The evidence to date from the three countries is promising in terms of the impact of linking CBHI to formal health financing mechanism (Table 2). CBHI in Ghana and Senegal started with the basic model (Figure 2). In both countries, recognition and limited support from the government and development partners transitioned CBHI to enhanced model in some regions and districts. CBHI transitioned to the

national model in Ghana in 2002 with launching of Ghana NHIS. This transition is underway in Senegal following the 2012 election. Ethiopia followed a different path. CBHI was started as a government initiative. It was piloted in 13 districts and then expanded to additional 161 districts, and national scale-up to cover the remaining over 800 districts is well underway. Thus, Ethiopia jumped to the national model without going through the basic or enhanced models. The three countries illustrate how differently CBHI can evolve as part of the pathway to UHC.

Table 2: Results to Date from the National Models of CBHI

Country	Increased Use of Services and Commodities	Financing to Cover Poor and Informal Sector	Financial Protection for Members
Ghana – National Model	Since 2005, outpatient visits have increased by a factor of 23, inpatient service by a factor of 29 (Schieber et al. 2012).	Value added tax (VAT) provides approximately 75% of total NHIS revenue.	HS20/20 and GHS evaluation of NHIS in Ghana revealed that insured patients paid less out of pocket than the uninsured for outpatient, hospital and maternal services (HS20/20 and Ghana NHS, 2009). Analysis of evidence from Nkoranza and Offinso districts revealed that having NHIS significantly reduced the probability of catastrophic OOP payment on health services (Nguyen et al. 2011).
Senegal – Enhanced Model	Use of services and health commodities since enhanced CBHI coverage has not yet been conducted. However, it is believed that health service utilization by those covered under CBHI has substantially increased.	Government contribution for CBHI is significant.	No financial protection evidence or literature available since recent policy move towards UHC.
Ethiopia – Enhanced Model	Outpatient visit rate by CBHI beneficiaries has reached 0.7 per capita visit per year in the 13 pilot districts (almost one per year per beneficiary) compared to 0.3 per capita visit average for the country.	Almost 50% of the funding for CBHI pilot schemes came from targeted and general subsidies. Over 15% of CBHI member households are indigents selected by the community to have their membership paid by the local government. The federal and regional levels provide general subsidy for CBHI schemes.	The risk of falling below a defined poverty line due to out-of-pocket health expenditure is 7% for CBHI members compared to 19% for non-members in cases where health expenditures were 15% of household's non-food expenditures.

Source: EHIA (2015). CBHI Pilot Evaluation Report.

Lessons from the Three Countries

1. Political leadership is critical for adequate public financing of CBHI to expand coverage of poor and informal sector: In all three countries reviewed here, political will and commitment was critical for setting ambitious goals and championing social solidarity to enable public subsidies of the poor and informal sector through CBHI.

In Ghana, CBHI was major political campaign agenda for the 2000 election, and the winning political party and its president took a “big bang” approach to transform the fragmented CBHI schemes into the NHIS. Though Senegal had more than three decades of experience with establishing and operating CBHI schemes, coverage was very low, only 20 percent of eligible households by 2012. In 2012, the new president renewed the country’s political commitment to CBHI with the ambitious target of increasing coverage from 20 percent to 75 percent by 2017. He continues to champion the national CBHI movement.



In Ethiopia, CBHI is a continuation of the wide range of health financing and other health sector reforms that increased health service quality and availability but did not adequately increase utilization and achieve the country’s aspiration to UHC. As noted earlier, out-of-pocket spending was found to account for more than one-third of THE, which is unsustainable, and prohibitive and potentially catastrophic for most households. Thus, the then minister of health championed introduction of health insurance – SHI for the formal sector and CBHI for the rural and urban informal sectors – and secured strong support for it from the then prime minister and the country’s entire political establishment.

Strong government support is needed for all components of CBHI establishment and operations: legislation that recognizes schemes as legal entities, regulation, financing, subsidization if needed, organizational support, and auditing and fraud protection. At time of financial distress, government may need to protect the schemes from collapse by serving as final reinsurer. Also needed are balancing government leadership and support and community ownership and readiness to adjust as new evidence is gathered and lessons are learned.

2. Community sensitization and continued communication matters to reach target households and maintain national support for subsidies: There are two critical, distinct communication challenges. One is to reach people in the poor and informal sector to promote their participation despite the fact that they are likely to be less educated and lack access to mass media and cell phones. The second communication challenge in most countries is promoting broad national support for government financing of CBHI that is benefiting the poor.

In Ghana, as the health insurance issue was part of the political campaign, the community was sensitized and brought on board very well. The new government continued to inform the public about the health insurance initiative. Upon its establishment, the NHIA extensively worked on sensitization at the community level and through mass media and other channels. Receipts for VAT payments highlight customer financial contributions to the NHIS.

Similar to Ghana, health insurance was a top political issue during Senegal's national election in 2012. President Sall won the election with the promise of expanding health insurance to cover all Senegalese. Senegal is also aggressively working on community mobilization and sensitization to institutionalize UHC with CBHI used as a vehicle toward that goal.

In Ethiopia, promotion of CBHI, community mobilization and sensitization were made the political and administrative responsibility of local authorities at district and kebele (village) levels. The then USAID bilateral Health Sector Financing Reform project assigned one or two CBHI coordinators and facilitators to work mainly on community mobilization in the CBHI pilot districts. Because of this, community mobilization was strong and initial enrollment and premium collection was impressive. However, sustaining the initial momentum after project support ended has been a challenge.

As alluded to in the country examples, another important lesson of communication is that it should not be a one-time campaign. There is a need to conduct communications as routine and regular process. Early enrollees can give testimony about the benefits they gained from CBHI membership to attract non-members to the scheme. Information and timely communication is also critical to enable members to renew their memberships and to make their premium payment on time.



3. Bring together technicians and political stakeholders: Designing or adapting CBHI to be part of national health financing requires specialized technical work to ensure that political commitments are financially viable. There is a strong need for generation of unbiased evidence on a timely basis. Technical experts must design CBHI schemes and accurately project resource needs to ensure financial sustainability of the schemes. CBHI schemes should cover relatively large and diverse segments of the population to have adequate risk pooling, and safeguards against inherent insurance problems such as moral hazard both from beneficiaries and health service providers.

However, technical experts need to be responsive to the political reality and urgency, and realize that "...technical recommendations must accomplish both political and technical objectives" (Rajkotia 2007). The Ghanaian experience shows there was an imbalance between the political urgency and the more conservative pace of the technicians. To facilitate technicians' ability to be politically responsive, political leaders should assess

the political landscape and share findings with the technical team. However, in such policy changes, it is normal that despite efforts made to accommodate different opinions, there will always be some opposition and resistance to the change. Technicians and communications experts should be part of working groups that address opposition opinions and concerns.

4. Establish appropriate accountability and interface with health facilities: Physical access to quality health care is as important as financial protection. People are more likely to enroll in an insurance scheme when they believe it will give them access to health services that they find acceptable. In Ethiopia, enrollment is universal in one urban scheme where services are better than in other schemes. Part of improving the quality of health services means putting in place an appropriate accountability structure and creating a platform for client-provider interface. In the Nkoranza Community Health Insurance Scheme in Senegal, lack of community ownership was cited as a problem, as the scheme was managed and run by the hospital that had established the scheme. In Ethiopia, the CBHI pilot evaluation revealed a strong need to establish the client-provider interface to improve providers' responsiveness and, thus, service users' satisfaction (EHIA, 2015).

5. Sustained technical assistance is crucial: Transition of CBHI to the enhanced and national models requires technical and managerial support from donors, government, and other stakeholders. This is a consistent, universal lesson. Government-supported and -led CBHI schemes, including the most successful ones like those of Rwanda and the three countries covered in this synthesis, have received continued technical support. In Ghana, the earlier CBHI schemes received technical support from DANIDA, USAID, and other organizations, and while the NHIS is a mature program and the NHIA has a relatively strong structure and capacity, Ghana is still receiving technical support from

USAID and other partners. Though Senegal has a long history of establishing and operationalizing CBHI schemes, the government led rapid scale-up is underway with technical assistance from USAID bilateral project. Ethiopia's CBHI initiative is progressing very well with technical support from subsequent USAID bilateral and global projects as well as continued support from other partners.

Conclusion

In all the three countries, CBHI is considered part of the overall UHC effort and the broader health financing system. The lessons above echo recommendations from the WHO Commission for Macroeconomics and Health (2001), which recognized the importance of CBHI to increase financial protection to those in the informal sector. The Commission proposed the following public policy measures to improve the effectiveness of community involvement in health care financing:

1. Increased and well-targeted subsidies to pay for the premiums of low-income populations;
2. Use of insurance to protect against expenditure fluctuations and use of reinsurance to enlarge the effective size of small risk pools;
3. Use of effective prevention and case-management techniques to limit expenditure fluctuations;
4. Technical support to strengthen the management capacity of local schemes; and
5. Establishment and strengthening of links with the formal financing and provider networks.

By building on the strengths of CBHI schemes and addressing their weaknesses through policies, legislation, institutional, and financial support, countries can extend insurance coverage to the populations that need it most but are difficult to reach.

Methodology and Acknowledgements

This brief was prepared as synthesis of three case studies on CBHI schemes in Ethiopia, Ghana and Senegal, and the author is grateful to the writers of the three case studies. The author also reviewed relevant literature on the area of CBHI. The brief benefited from technical reviews and comments from Tesfaye D. Ashagari and Catherine Connor, and the author is thankful for their reviews. The brief took its current shape because of editorial support by Linda Moll and formatting by Maria Claudia De Valdenebro.



References

- Blanchet, Nathan J. and Osei B. Acheampong. 2014. *Building on Community-based Health Insurance to Expand National Coverage: The Case of Ghana*. Bethesda, MD: Health Finance and Governance Project, Abt Associates.
- Chan, Margaret. May 2012. *Address to the Sixty-fifth World Health Assembly*. Geneva, Switzerland; May 21, 2012. http://www.who.int/dg/speeches/2012/wha_20120521/en/index.html (accessed Sept 3, 2012).
- Ethiopia Federal Ministry of Health (FMOH) (2014). *Ethiopia's Fifth National Health Accounts, 2010/2011*. Addis Ababa, Ethiopia.
- Ethiopian Health Insurance Agency (EHIA). May 2015. *Evaluation of Community-Based Health Insurance Pilot Schemes in Ethiopia: Final Report*. Addis Ababa, Ethiopia.
- Feleke, Solomon, Workie Mitiku, Hailu Zelelew, and Tesfaye D. Ashagari. January 2015. *Ethiopia's Community-based Health Insurance: Step on the Road to Universal Coverage*. Bethesda, MD: Health Finance and Governance Project, Abt Associates.
- Hsiao, William C. September 2001. *Unmet Health Needs of two Billion: Is Community Financing a Solution?* HNP Discussion Paper # 28882. Washington, DC: The World Bank.
- Health Systems 20/20 Project and Research and Development Division of the Ghana Health Service. September 2009. *An Evaluation of the Effects of the National Health Insurance Scheme in Ghana*. Bethesda, MD: Health Systems 20/20 project, Abt Associates Inc.
- International Labor Office (ILO). 2009. *The informal economy in Africa: Promoting transition to formality: Challenges and strategies*. Geneva.
- Jakab, Melitta and Chitra Krishnan. 2004. *Review of the Strengths and Weaknesses of Community Financing*. In Alexander S. Preker and Guy Carrin, eds. *Health Financing for Poor People Resource Mobilization and Risk Sharing*, Washington, DC: The International Bank for Reconstruction and Development /The World Bank.



About HFG

A flagship project of USAID's Office of Health Systems, the Health Finance and Governance (HFG) Project supports its partners in low- and middle-income countries to strengthen the health finance and governance functions of their health systems, expanding access to life-saving health services. The HFG project is a five-year (2012-2017) global health project. To learn more, please visit www.hfgproject.org.

The HFG project is a five-year (2012-2017), \$209 million global project funded by the U.S. Agency for International Development.

The HFG project is led by Abt Associates Inc. in collaboration with Avenir Health, Broad Branch Associates, Development Alternatives Inc., Johns Hopkins Bloomberg School of Public Health, Results for Development Institute, RTI International, and Training Resources Group, Inc.

Agreement Officer Representative Team:

Scott Stewart (GH/OHS)
ssewart@usaid.gov
Jodi Charles (GH/OHS)
jcharles@usaid.gov



Abt Associates Inc.
www.abtassociates.com
4550 Montgomery Avenue,
Suite 800 North, Bethesda, MD 20814

DISCLAIMER

The author's views expressed here do not necessarily reflect the views of the U.S. Agency for International Development or the U.S. Government.

Kutzin, Joseph. 2013. *Health financing for universal coverage and health system performance: Concepts and implications for policy*. WHO Bulletin 91:602-611.

Lagomarsino, Gina, and Sapna Singh Kundra. 2008. *Overcoming the Challenges of Scaling: Voluntary Risk Pools in Low-Income Settings*. Technical partner paper 6 under The Rockefeller Foundation–Sponsored Initiative on the Role of the Private Sector in Health Systems in Developing Countries. Results for Development Institute.

Mbengue, Cheikh S.A., Mbaye Sene and Matar Camara. 2014. *Political Winds Blow a New Life into Senegal's Mutuelles de Santé*. Bethesda, MD: Health Finance and Governance Project, Abt Associates.

Nguyen, Ha TH, Yogesh Rajkotia and Hong Wang. 2011. *The financial protection effect of Ghana National Health Insurance Scheme: evidence from a study in two rural districts*. International Journal for Equity in Health 2011, 10:4 doi: 10.1186/1475-9276-10-4: <http://www.equityhealthj.com/content/10/1/4>

Rajkotia, Yogesh. November 2007. *The Political Development of the Ghanaian National Health Insurance System: Lessons in Health Governance*. Bethesda, MD: Health Systems 20/20 project, Abt Associates Inc.

Sambo, Luis Gomes, Joses Muthuri Kirigia and Juliet Nabyonga Orem. 2013. *Health financing in the African Region: 2000–2009 data analysis*. International Archives of Medicine 6:10. <http://www.intarchmed.com/content/6/1/10>.

Schieber, George, Cheryl Cashin, Karima Saleh, and Rouselle Lavado. 2012. *Health Financing in Ghana*. Washington, DC: World Bank.

Sekyi, Samuel and Paul B. Domanban. May 2012. *The Effects of Health Insurance on Outpatient Utilization and Health Care Expenditure in Ghana*. International Journal of Humanities and Social Science 2(10, Special Issue).

Spaan, Ernst., Judith Mathijssen, Noor Tromp, Florence McBain, Arthur ten Have, and Rob Baltussen. 2012. *The Impact of Health Insurance in Africa and Asia: A Systematic Review*. Bulletin of the World Health Organization, 2012; 90:685–692A | doi:10.2471/BLT.12.102301

Tine, Justin, Sophie Faye, Sharon Nakhimovsky, and Laurel Hatt. April 2014. *Universal Health Coverage Measurement in a Lower-Middle-Income Context: A Senegalese Case Study*. Bethesda, MD: Health Finance & Governance Project, Abt Associates Inc.

Wang, Hong and Nancy Pielemeier. 2012. *Community-Based Health Insurance: An Evolutionary Approach to Achieving Universal Coverage in Low-Income Countries*. Journal of Life Sciences 6: 320-329.

WHO. 2010. *The world health report: health systems financing: the path to universal coverage*. Geneva.

WHO Commission on Macroeconomics and Health Report. December 2001. *Investing in Health for Economic Development: Report of the Commission on Macroeconomics and Health*. Geneva.