THE DOUBLE-EDGED SWORD: FINANCIAL SOURCE OF HOUSEHOLD HEALTHCARE EXPENDITURE IN GHANA

Abstract

In many regions, some of the most formidable enemies of health are joining forces with the allies of poverty to impose a double burden of disease, disability and premature death in many societies. This paper takes a look at the main financial sources used by household to finance household healthcare. It examines the spatial and socio-economic dynamics and the challenges this poses to health and development. Data from the Ghana 2003 World Health Survey (WHS) are analyzed descriptively. Approximately 40% of households depend on more than one financial source with 88% depending on household income to finance household healthcare expenditure. The high dependency on household income will erode gains in the economic and health sector in the midst of global economic recession. Comprehensive reforms with national health insurance program that covers emerging disease conditions will mitigate the strain of the double burden of disease on households in emerging economies.

INTRODUCTION

According to recent World Health Organization (WHO) estimates, every year 25 million households (more than 100 million people) are forced into poverty by illness and the struggle to pay for healthcare (WHO 2005). Epidemiological transition in developing economies (also referred to as the "Global South" or the "Two-Third World") has resulted in mark increase prevalence of chronic non-communicable diseases that has put households under the strain of double burden of disease. Economic improvement, modernization and rapid urbanization in the developing world are accompanied by behavioral change and a resultant epidemiological transition (Agyei-Mensah 2007; Akinyele 2006; Omran 1971, 1996, 2005).

As indicated in the 2002 World Health Report, in many regions, some of the most formidable enemies of health are joining forces with the allies of poverty to impose a double burden of disease, disability and premature death in many societies. Developing countries have initiated economic and healthcare system reforms which endeavored to achieve development to improve the standard of living of the general population. Economic Recovery Program (ERP), Structural Adjustment Program (SAP) came with a paradigm shift in major economic and health policies. In Ghana, prior to the paradigm shift in the national health policy of the country in 1992, there were highly subsidized and free health care delivery services in public health care facilities.

The institutionalization of healthcare cost recovery (user-fee) means households which either before benefited from free healthcare have to locate resources to finance household healthcare expenditure. Conceptually, ill health condition is documented to cause biographical disruption. Bury's (1982) concept of 'biographical disruption' refers to the disruption chronic illness condition causes to both the biophysical body and life trajectory of the sufferer and the meanings ascribed to such disruption. Radley (1994) indicate the disruption disease causes to the physical body and life trajectory through the competing demands of bodily symptoms and society. This limits the ability of the infected person and in some cases affected persons to participate in income generation activities.

Illness and disease conditions are known to have huge negative economic impact as posited by Suhrcke et al. (2006). There is also evidence to point to the fact that the average income of ill health people is considerably lower than that of healthy population (Heijmens 2005; van Agt 2000). This reiterates and re-enforce the link between economic insecurity, poverty and biographical disruption especially in the case of chronic disease condition. Individuals combine medical care and other market goods with their own time to invest in their health

(Grossman 1972). Thus, decision to invest in healthcare is dependent on other external factors which are not mutual exclusive.

In the midst of economic recession and high health care cost, the author tries to identify and discuses the main financial sources used by households to finance health care expenditure and speculate the consequences of these financial sources to health and development in the midst of economic recession. Attention is made to the spatial and socio-economic dynamics of the population.

This paper takes a look at the main financial sources used by household to finance household health care expenditure. The author examines the spatial and socio-economic status (SES) dynamics of the financial source and the challenges this poses to health and development. By presenting this information, the author hopes to strengthen the argument that call for strategic and comprehensive health care and economic reforms that will guarantee greater access to resource to finance health care services. This should be a wake-up call to decision makers because financial source for household health care expenditure has major implication for the health and development agenda of the nation.

The article begins with a brief description of Ghana health care system. The next section presents introduction and description of data, variable measurement, method, and discussed limitations. Results and discussions are presented at the end.

HEALTHCARE AND HEALTHCARE SYSTEM REFORM IN GHANA

Available statistics indicates that outpatient attendance per capita have progressively increased from 0.49 in 2001 to 0.69 in 2007. Similar trend is report in the case of hospital admission rate over the same period from 34.9 to 39.3 (CHIM/PPME-GHS). The top five causes of outpatient morbidity in the year 2007 according to MOH records, malaria

accounted for 41.6%, followed by upper respiratory tract infection (7.3%), skin diseases and ulcers (4.3%), hypertension (4.0%), diarrhea diseases (3.6%).

In 2005, the Ministry of Health (MOH) Ghana announced a paradigm shift from curative to preventive services and has since spearheaded a Regenerative Health and Nutrition (RHN) Program that aims to empower lay communities to adopt healthy lifestyles (MOH 2005, 2007). The initiative has since 2007 become a National Health Policy - "Crating Wealth through Health".

The World Health Report from 2006 estimates that Africa and Asia together lack more than 4 million health workers. The WHO-sponsored Global Health Work Alliance estimates that 1 in 4 doctors and 1 in 20 nurses will leave Africa to pursue higher-paying jobs abroad. In recent past, Ghana has seen improvement in the ratio between health personnel and population. Analysis of data from the Integrated Payroll Personnel Division (IPPD) of the Ministry of Health Ghana indicates that doctor-population ration have improved from 1:15,423 to 1:13,449 between the period 2006 and 2008. A similar trend was observed in the case of nurse-population ratio from 1:2,125 to 1:1,353 for the same period. This improvement is biased toward Accra and Kumasi as majority of the doctors' practice in these cities.

In 1992, user-fees were instituted in all public health facilities which sought to remove subsidies on all health services in the country (Agyepong 1999; Badasu 2000). Before, cost recovery for health care was instituted in 1983 and is becoming more comprehensive in coverage. Ghana's cost recovery ratio went from 7.9% in 1986 to 12.1% in 1987 and in 1983 the Government revised its 1983 cost recovery law mandating cost recovery for all government health-care institutions, and creating a uniform collecting and reporting system (Vogel 1988). The paradigm shift in the national health policy resulting in a decline in the percentage of the Government of Ghana (GOG) budget spent on health by 39 percent in 2003

(the year of the 2003 world health survey in Ghana) (MOH 2008) aggravated the already high healthcare burden on the household.

Introduction of healthcare cost recovery is documented not necessarily result in reduction in attendance. This because people will perceive the increased costs to be associated with improvements in the quality of the service provided, like availability of drugs or quality of care (Lavy and Germain 1995; Mwabu et al. 1993). Example, according to Ghana Ministry of Health statistics, there was improvement in total outpatient attendance of 3.5% between 1992 when the full cost recovery was introduced and 1995.

Cost recovery policies in Ghana have led to an increase in self-medication and other behaviors aimed at cost-saving (Asenso et al. 1998). Another health seeking behavior that may result from increase cost of health care services is healer shopping. Healer shopping is term use to describe the use of a second healer without referral from the first for a single episode of illness (Kroeger 1998).

There have been some phenomenon outside the control of household which have affected and influenced household income in Ghana. In the beginning of 2007, there were concerns over the electricity supply from the Akosombo Hydroelectric dam due to lower water levels in the Lake Volta reservoir. A situation attributed partly to climate change which has become a reality worldwide (Global warming). The situation in the Akosombo Hydroelectric power plant led to power rushing resulting in reduction in most industrial production. The resultant is layoff of employees all over the country and loss of income to many household particularly those in the lower income bracket. While urban households are affected by loss of jobs and employment opportunities, rural households are affected by loss of agricultural productivity.

Most African population is rural and in the case of Ghana, though there is rapid urbanization in recent period, 56.3 percent of the country's population are in rural settings according to the

2000 population and housing census (GSS 2005). The agrarian nature of rural economy in most developing economy coupled with the phenomenon of climate change, and high rate of post harvest due to inaccessibility to market, turns to exacerbate the income loss and income inequality between and within households. Spatial differential in distributions of healthcare facilities between urban and rural setting also turn to widen the already existing health inequality.

The improved statistics on some health indicators is not indicative of improve health and well being of the general population. Increased cost of living, widen health inequality due to limited access, and the global financial crisis have put many households under the strain of the double burden of disease. Households have to make a decision on the use of the limited available financial resources to access basic healthcare. With increasing healthcare cost and emerging new disease conditions, it is eminent on households to locate and use more than a single resource to finance healthcare expenditure.

DATA AND METHODOLOGY

Data are drawn from the 2003 Ghana World Health Survey (WHS) initiated and conducted by the World Health Organization in 70 countries including Ghana. The World Health Survey comprises two parallel surveys, household and individual survey using standard survey instruments. Information obtained are on three areas of health: the health status of the population and related health risks, the responsiveness of the health system to peoples' expectations, and out-of-pocket health expenses that must be borne by households.

The national survey in Ghana included 5,662 households from all ten administrative regions, sampled without replacement using a stratified sampling frame based on primary, secondary, tertiary and quaternary sampling units. At each household, one person was interviewed, which yielded 4,005 individuals from the general population aged 18 years or older.

Respondents per household were selected through a random selection procedure using the Kish table method. The response rates were 73 percent for households and 97 percent for individuals.

Variables are drawn from the household survey and descriptive analytic framework used to analyze the data. The variables examine are the main financial source of household healthcare expenditure, total household health care expenditure, setting (type of place of residence) and household income quintile. Total household health expenditure is the summation of all health care treatment and services cost to the household in the last 4 weeks preceding the survey. The cost items are - care that required staying overnight in a hospital or health facility; care by doctors, nurses, or trained midwives that did not require an overnight stay; care by traditional or alternative healers; dentists; medication or drugs; health care products such prescription glasses, hearing aids, prosthetic devices, etc.; diagnostic and laboratory tests such as X-rays or Blood tests; and any other health care products or services that were not included above.

The world health survey had some inherent data limitations needed to be set forth. Data limitation is centered on non-response or missing cases in the data set from 6.3% in household income quintile, 9.3% in financial source of household health expenditure and 9.7% in total household monthly health expenditure variables. This is a cross-sectional data and limited that ability to measure period and factor in historical event. This paper excluded information of health insurance scheme as the data was collected before the introduction of the Nation Health Insurance Scheme in 2004. The localized community mutual health insurance scheme that existed accounted for 0.5% of financial source of household health care expenditure in the sample.

RESULTS

In the household survey, information was solicited on household healthcare expenditure from adult household members aged 18 years or older. The information is based on how much the household spend on healthcare services and product during the last 4 weeks preceding the survey. Other information was on the main financial source of household healthcare expenditure during the last 12 months preceding the survey. This is a multiple response variable and respondents mentioned all applicable financial sources used by the household to finance household healthcare expenditure(s). The distributions are presented in this section.

The mean household size is 5.1 persons. Household head characteristics indicates a mean age of household head is 47 years (SE 0.31), percentage of female headed household 29.3% (SE 0.92) and median educational level of household head primary education. Household health expenditure was affected by some degree of memory lapse which result in 9.7% missing cases with 16.8%t of the household reporting no health care expenditure in the last 4 weeks preceding the survey.

The maximum amount of health cost incurred by households that incurred health care cost in the last 4 weeks preceding the survey is GH□500 (US$442,25)[1] and a mean of GH□11.09 ($9.81). Due to the skewed (8.394) nature of the distribution of this variable (total household health expenditure) the median GH□3.50 (US$3.10) is reported. The relatively lower direct costs of illness in terms of cost of treating illness condition in developing countries are because of a lack of medical options which tend to be associated with a significant increase in indirect costs (Adeyi et al. 2007).

[1] Bank of Ghana exchange rate as at December, 2003: GH□1=US$0.8845
National minimum daily wage 2003 = GH□0.92

The result of the distribution of the financial source of healthcare expenditure is presented in Table 1. This is a multiple responses and the result indicates that 4 in 10 households use more than one source to finance household health expenditure. Current income of household is the most mentioned source (88.1%), followed by family members or friends from outside the household (16.4%) and then borrowed from someone other than a friend or family (13.5%).

…….Table 1 Financial source of household healthcare expenditure

The spatial dichotomy of the financial source used by households to finance household health care expenditure indicate a selective choice of source based on the spatial differences in economy, social ties and organization. The urban economy is predominantly formal while the rural economy is mostly informal with agriculture dominating the economic activities. The differential in economic activities poses a challenge to source of health financing.

Rural households are about 65 percentage points more likely to use current income of household than their urban counterparts (Table 2). Use of savings (bank account) among urban households is about twice in the case of rural households. The selling of household assets (e.g. furniture, animals, jewelry), support from family members or friend outside the household and borrowed from someone other than a friend or family to finance household health care expenditure is relatively high in rural household than in urban households. This supports the finding in a rural-urban study of diabetes experiences that showed that many poor rural people living with diabetes relied on financial support from their immediate and distant family members (de-Graft Aikins 2005).

…. ..Table 2 Financial source of household health expenditure by type of place of residence

In terms of socio-economic status (SES) measure here by household income quintile, and its influence on financial source of household healthcare expenditure presented in Table 3, the data indicates that households in the lower income quintiles are relatively more likely than

those in the upper income quintile to use current income of household, sale household assert, depend on support from family members or friends outside the household, and borrow from someone other than a friend or family.

Households in the upper income quintile depend on savings to finance household health care expenditure. This indicates that while rich households have are able to put aside resources in the form savings that they depend on to finance household health care expenditure, poor households have to fall on external means which they have relatively no control to finance household health care.

…….Table 3 Financial source of household health expenditure by household income quintile

DISCUSSIONS

This paper argues that with economic recession and increasing healthcare cost, the over dependent on current household income to finance household healthcare expenditure will result in a mark economic and health implications. These implications will have far reaching consequences on the attainment of the Millennium Development Goals (MDGs) as it has the potential to erode gains in the areas of economic and health sectors in the country. The double-edged sword of the financial source of household healthcare expenditure is its negative impact on health and development.

The first research question on identifying the main financial sources of household healthcare expenditure, the data indicate a high dependent on current household income with 40% of the households' using more than one financial source. This is an indication that with a decline in Government of Ghana (GoG) budget allocation to the health sector (PPME) and increase healthcare cost, no single source can adequately finance household healthcare expenditure. Family members and friends were other means used by households to finance healthcare

expenditure. The implications of this are that in times of economic insecurity, these becomes very unreliable and may led to some psychosocial and health strains on the household.

The spatial and socioeconomic dynamics and its influence on financial source of household healthcare expenditure show how the differential in economic activity and wealth affect the type of financial source use by households. While urban household use savings the same as households in upper income bracket, rural and households in lower income quintile use current income and family members, friends and borrowing to finance household healthcare.

The high dependence on current household income to finance healthcare expenditure will limit the ability of the household to save and invest. With the paradigm change in Ghana's health policy that shifts healthcare costs to persons and households, and increasing prevalence of NCDs coupled with high healthcare cost, households are at the disadvantage. There is evidence to point to the fact that the average income of people with chronic illness is considerably lower than that of healthy population (van Agt et al. 2000; Heijimans et al. 2005). Greater proportion of household budget goes into health financing resulting in low capital formation and accumulation. Such situation perpetuate the already existing vicious cycle of poverty in the developing world.

With loss of household income due to economic recession, access and utilization of health care services will be dependent on availability of financial resources to the household. The trade-off will be the use of other alternative forms of health treatment. Self-medication as identified by Asenso et al. (1998) and health shopping (de-Graft Aikins 2005) becomes a means of cost-saving. The health implications are well documented with major negative effect like drug resistance. These turn to affect the health and the well being of not only the infected persons but the affected persons (in this case the whole household unit).

Dependent on family members and friends to finance health expenditure will have health and social implication on developing economies like Ghana. The effect of any economic recession is felt across all spectrum of the society. Depending on family member and friends whose financial position may have worsened will mean unreliable financial source. In some cases, as identified by de-Graft Aikins (2007), the dependent on immediate family member and friend to finance healthcare often led to family abandonment. The resultant effect of such abandonment is the breakdown of social and support network and onward social isolation.

The high dependent on household income as a source to finance household health care expenditure in rural areas will force most rural household to turn to healer shopping and non utilization of modern medical health systems. The challenge to household is the non-availability of a comprehensive national health insurance program that covers emerging disease conditions (chronic non-communicable diseases and injury). For the health systems in Ghana, the greatest challenges lie in correcting structural deficiencies that impinge on access and healthcare service utilization. Emphasis on deprived sub-populations and geographical areas should be central in any strategic intervention at the national and local levels.

REFERENCE

Adeyi, O., O. Smith, and S. Robles, (Eds). 2007. *Public policy and the challenge of chronic non-communicable disease.* The World Bank 1818 H Street, NW Washington, DC 20433

Agyei-Mensah, S. and A. de-Graft Aikins. *Epidemiological transition and the double burden of disease in Accra*. 2007.(Paper submitted to 2007 UAPS conference; available at http://uaps2007.princeton.edu/abstractViewer.aspx?submissionId=70383)

Agyepong, I.A. 1999. "Reforming Service Delivery at District Level: The Perspective of a Ghanaian District Medical Officer". *Health Policy and Planning* 14: 59-69.

Akinyele, I. 2006. Epidemiological and Nutritional Transition: Evolving Trends and Impacts in the Developing Countries (II). Paper presented at the 2nd Africa Nutrition Epidemiology Conference. Ghana Institute of Management and Professional Studies. August 15- 18 2006.

Asenso-Okyere, W. K., A. Anum, I. Osei-Akoto, and A. Adukonu, 1998. "Cost recovery in Ghana: are there any changes in health care seeking behavior?" *Health Policy and Planning;* 13: 181-188. Oxford University Press.

Badasu, D.M. 2000. "Implementation of Ghana's Health User Fee Policy and the Exemption of the Poor: Problems and Prospects. Population and Poverty in Africa". *African Population Studies.* Supplement A 19: 285- 302.

Bury, M. 1982, "Chronic illness as biographical disruption". *Sociology of Health and Illness*; 4:167–182.

Centre for Health Information Management/Policy Planning Monitoring and Evaluation-Ghana Health Service

de-Graft Aikins, A. 2005. "Healer-shopping in Africa: new evidence from a rural-urban qualitative study of Ghanaian diabetes experiences". *British Medical Journal;* 331, 737.

-------- 2007. "Ghana's neglected chronic disease epidemic: a developmental challenge". *Ghana Medical Journal,* 41:154-159.

Ghana Statistical Service, 2005. *Population Data Analysis Report, Socio-Economic and Demographic Trends Analysis* Vol.1.

Grossman, M. 1972. "On the Concept 0f Health Capital and the Demand for Health." *Journal of Political Economy* 80:135-416

Health Statistics Unit, Ministry of Health, Ghana.

Heijmans, M. J.W. M., P. Spreeuwenberg, and P. M. Rijken. 2005. Kerngegevens Maatschappelijke situatie 2004. Patie¨ntenpanel Chronisch Zieken [Core data Social situation 2004. Panel of Patients with Chronic Diseases]. Utrecht, The Netherlands: NIVEL. Cited in Rijken, M. and P. P. Groenewegen 2008 "Money does not bring well-being, but it does help! The relationship between financial resource and life

satisfaction of the chronically ill mediated by social deprivation and loneliness". *Journal of Community & Applied Psychology.,*18:39-53

Kroeger A. 1983. "Anthropological and socio-medical health care research in developing countries". *Social Science and Medicine*;17:147-61.

Lavy, V., and J. Germain, 1995. Trade offs in costs, Quality and Accessibility in Utilization of Health Facilities: Insight from Ghana. In: Shaw RP and Ainworth M (Eds.) Financing Health Services through user fees and insurance. Case studies from Sub-Saharan Africa. World Bank Discussion Paper No.294, African Technical Department, World Bank, Washington, DC.

MOH (Ghana). *Creating Wealth Through Health*.2005. Minister's Press Briefing, Accra: MOH. Cited in de-Graft Aikins 2007. "Ghana's neglected chronic disease epidemic: a developmental challenge", *Ghana Medical Journal,* 41:154-159

MOH (Ghana). *The Ghana Health Sector 2007Programme of Work*. 2007. Accra: MOH

Mwabu, G., M. Ainsworth, A. Nyamete, 1993. "Quality of medical care and choice of medical treatment in Kenya: an empirical analysis", *Journal of Human Resources*; 28:838-62.

Omran, A. R. 1971. "The epidemiologic transition. A theory of the epidemiology of population change". *Milbank Memorial Fund Quarterly*; 49 509–38.

-------- 1996. *The Epidemiologic transition in the Americans*. Washington, Pan American Health Organization.

--------- 2005. "The Epidemiologic transition: A theory of epidemiology of population change". *The Milbank Quarterly,* 83 (4), 731-757. Reprinted from The Milbank Memorial Fund Quarterly, 49(4): Pt. 1, 1971 pp. 509-38.

Planning and budget unit (PPME), Ministry of Health Ghana –http://www.moh-ghana.org/moh/facts_figures/; date accessed 30th June, 2008.

Radley, A. 1994. *Making sense of illness*. London: Sage Publications.

Suhrcke, M., Nugent, R. A., Stuckler, D., & Rocco, L. 2006. *Chronic Disease: An Economic Perspective* (Oxford Health Alliance, London.

van Agt, H. M. E., K. Stronks, and J. P. Mackenbach, 2000. "Chronic illness and poverty in The Netherlands". *European Journal of Public Health* 10: 197-200.

Vogel R. J. 1988. *Cost recovery in the health care sector: selected country studies in West Africa,* Washington, D.C., The World Bank, 126-58. (World Bank Technical Paper No. 82)

WHO (World Health Organization). *The World Health Report 2002: Reducing Risks, Promoting Healthy Life.* Geneva: World Health Organization; 2002.

World Health Report 2005. *Make every mother and child count.* Geneva: World Health Organization; 2005

Table 1: Financial source of household health care expenditure

Source	Responses		Percent
	N	Percent	of cases
Current income of household	3,160	62.8	88.1
Savings	296	5.9	8.3
Sold items	324	6.4	9.0
Family members	587	11.7	16.4
Borrowed from someone	484	9.6	13.5
Others	183	3.6	5.1
Total	5,034	100.0	140.4

Source: WHS, Ghana 2003 Note: Multiple response variable. This is based on sources used by household in the last 12 months prior to the survey.

Table 2: Financial source of household health expenditure by type of place of residence

Source	Setting (%)		Total
	Urban	Rural	
Current income of household	37.8	62.2	3,160
Savings (e.g. bank account)	65.5	34.5	296
Sold items	25.6	74.4	324
Family members or friends	46.7	53.3	587
Borrowed from someone	36.8	63.2	484
Others	33.3	66.7	183
Total	38.6	61.4	3,585

Source: WHS, Ghana 2003 Note: Multiple response variable. This is based on sources used by household in the last 12 months prior to the survey.

Table 3: Financial source of household health expenditure by household income quintile

Source	Income quintile					Total
	Poorest	Poor	Middle	Rich	Richest	
Current income of household	20.5	20.1	20.3	19.8	19.2	2,993
Savings (e.g. bank account)	2.2	8.6	13.3	23.3	52.7	279
Sold items	21.3	25.1	24.8	16.6	12.2	319
Family members	20.7	19.6	21.0	19.9	18.8	542
Borrowed from someone	23.1	21.6	21.8	19.2	14.4	464
Others	18.0	22.1	18.0	19.8	22.1	172
Total	20.5	20.2	20.1	19.7	19.5	3,382

Source: WHS, Ghana 2003 Note: Multiple response variable. This is based on sources used by household in the last 12 months prior to the survey.