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Provider payment methods and health worker motivation in community-based health insurance: A mixed-methods study

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ABSTRACT

In a community-based health insurance (CBHI) introduced in 2004 in Nouna health district, Burkina Faso, poor perceived quality of care by CBHI enrollees has been a key factor in observed high drop-out rates. The poor quality perceptions have been previously attributed to health worker dissatisfaction with the provider payment method used by the scheme and the resulting financial risk of health centers. This study applied a mixed-methods approach to investigate how health workers working in facilities contracted by the CBHI view the methods of provider payment used by the CBHI. In order to analyze these relationships, we conducted 23 in-depth interviews and a quantitative survey with 98 health workers working in the CBHI intervention zone. The qualitative in-depth interviews identified that insufficient levels of capitation payments, the infrequent schedule of capitation payment, and lack of a payment mechanism for reimbursing service fees were perceived as significant sources of health worker dissatisfaction and loss of work-related motivation. Combining qualitative interview and quantitative survey data in a mixed-methods analysis, this study identified that the declining quality of care due to the CBHI provider payment method was a source of significant professional stress and role strain for health workers. Health workers felt that the following five changes due to the provider payment methods introduced by the CBHI impeded their ability to fulfill professional roles and responsibilities: (i) increased financial volatility of health facilities, (ii) dissatisfaction with eligible costs to be covered by capitation; (iii) increased pharmacy stock-outs; (iv) limited financial and material support from the CBHI; and (v) the lack of mechanisms to increase provider motivation to support the CBHI. To address these challenges and improve CBHI uptake and health outcomes in the targeted populations, the health care financing and delivery model in the study zone should be reformed. We discuss concrete options for reform based on the study findings.

Introduction

Community-based health insurance (CBHI) has been seen as a potential solution to the challenge of generating financial resources for the formal health sector in developing countries (Carrin, Waelkens, & Criel, 2005; Devadasan, Ranson, Van Damme, Acharya, & Criel, 2006; Ekman, 2004; Robyn, Sauerborn, & Bärnighausen, 2012). CBHI can potentially improve access to health care by reducing financial barriers to health services, empowering enrollees through increased involvement in decision making, and improving the quality of care by introducing contractual arrangements contingent on quality standards. CBHI is a strategy to improve access to health care in settings where other health financing approaches, such as national, social, or private insurance, may not be appropriate, such as in developing countries with a weak tax base, for informal sector workers, and in poor, remote rural areas (Bärnighausen, Liu, Zhang, & Sauerborn, 2007; Bärnighausen & Sauerborn, 2002; Criel & Waelkens, 2003; Fink, Robyn, Sie, & Sauerborn, 2013; Gnawali et al., 2009; Hsiao & Liu, 2001; Ranson, 2002; Wolfgang, Winkelmayer, & Kurth, 2004;

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World Bank, 2008). However, previous studies have identified several structural weaknesses of CBHI, such as high administrative costs, potential negative effects on quality, and the potential to be a regressive form of health financing (Carrin et al., 2005; Ekman, 2004).

In early 2004, a community-based health insurance, called *Assurance Maladie à Base Communautaire de Nouna (AMBC)*, was introduced in Nouna health district, Burkina Faso, with the objective to make health care more affordable and protect local communities from catastrophic health expenditures. Located in northwest Burkina Faso, the health district is predominantly rural, with the majority of the population engaged in small-scale farming (Sauerborn, Adams, & Hien, 1996; Sauerborn, Nougtara, Hien, & Diesfeld, 1996). Details of the implementation of the Nouna CBHI scheme and benefit package are described elsewhere (De Allegri et al., 2006; De Allegri et al., 2008; Gnawali et al., 2009). At the time of the study (April 2010) all 14 primary care facilities (CSPS - *Centre de Santé et Promotion Sociale*) within the CBHI implementation zone and the district hospital (CMA - *Centre Médical avec Antenne Chirurgical*) were contracted with the Nouna scheme. Since the inception of the CBHI scheme in Nouna, coverage has remained low, despite an upward trend over time. During the first year of operation (2004) coverage was 5%; by 2010, coverage had only increased to 9%. Enrollee drop-out rates have also remained high, despite a decline over time (the annual drop-out was 32% in 2004 and 16% in 2010). A study in 2006 found that the most common reasons for dropping out of coverage included poor perceived quality of care and undesirable health-worker attitudes and behaviors towards patients (Dong, De Allegri, Gnawali, Souares, & Sauerborn, 2009).

Provider payment and health worker satisfaction and motivation

Roberts, Hsiao, Berman, and Reich (2008) define provider payment as "the methods for transferring money to health care providers (doctors, hospitals, and public health workers), such as fees, capitation, and budgets" (Roberts et al., 2008). Payment methods in turn create incentives, which influence how providers behave. Provider payment can be "passive" (when resource allocation follows pre-determined budgets without consideration of incentive effects) or "strategic" (when policy makers use resource allocation to incentivize health workers to achieve particular health systems outcomes) (World Health Organization, 2000). Provider payment methods in community-based health insurance have usually been strategic, i.e., intended to influence health worker behavior (Robyn, Sauerborn, & Barnighausen, 2013).

Health worker motivation is commonly understood as the mental processes that account for an individual's intensity, direction and persistence of effort towards attaining a goal (Robbins, 2001). Health worker motivation is inextricably linked to job satisfaction, which can be defined as "the attitude towards one's work and the related emotions, beliefs, and behaviour" (Peters, Chakraborty, Mahapatra, & Steinhardt, 2010). Health worker job satisfaction and motivation are critical to the retention and performance of health workers and patient outcomes (Kivimaki, Voutilainen, & Koskinen, 1995; Mbindyo, Blaauw, Gilson, & English, 2009; Tzeng, 2002). According to public choice theory (Shughart II, 2008), financial incentives can have a strong influence on health worker motivation, in particular when health workers' levels of income affect their ability to fulfill their primary needs (Cordaid – SINA Health, 2013). For the strategic use of provider payment it is thus essential to understand the relationship between the different payment methods and health worker job satisfaction and motivation.

Provider payment methods of the Nouna CBHI

At the time of the study, primary-care facilities and the district hospital were contracted with the Nouna CBHI scheme and were paid by the CBHI on an annual capitation basis, i.e., the facilities received a flat payment per individual enrolled in the scheme. Capitation payments were only intended to cover the cost of drugs prescribed to enrollees by health facility personnel. Consultation and service fees were not included in this reimbursement, nor were they paid by enrolled patients. Premiums paid by households who enrolled were collected during the annual enrollment campaign (January–June each year). At the end of the enrollment period, the CBHI Management Unit calculated the level of capitation payments that would be made to primary care and secondary care facilities. Health facility capitation payments were based on the number of individuals who enrolled in the catchment areas of each primary care facility. Once the total premium revenue for each facility was calculated, 10% of funds were set aside for operational costs of the scheme. For the remaining 90% of premium collections, 75% was allocated to the contracted primary-care facilities and 25% to the district hospital as capitation payments.

Pharmacy registers were provided to each primary care facility and the district hospital, and were used to track drugs prescribed to CBHI enrollees over the length of the calendar year. At the end of each calendar year, the total costs incurred through enrollee prescriptions were calculated. If the annual total exceeded the sum allocated through the initial capitation payments, the financial deficit was reimbursed by an external fourth party (since 2005, a philanthropic German foundation). While reimbursements were supposed to be paid during the first quarter of the following year, payments were usually made with significant delays of up to six to nine months (Table 1).

In the 1990s, following the Bamako Initiative, the Burkina Faso Ministry of Health set in place a model of health care financing under which health facilities in the country acquired funds through two general sources: (i) financing provided by the Ministry of Health for particular health care resources described in annual health facility action plans, and (ii) revenues generated from service fees and drug sales (Ridde, 2003, 2008). These locally generated revenues were used for both minor facility investments and restocking of essential medicines and supplies, with a significant proportion (20–22%) of service fee revenue reserved for health worker bonuses (known as *ristournes*) paid on a quarterly basis. In this system individual health workers had several sources of income, including their monthly salary and the abovementioned quarterly bonus. In adopting capitation as the provider payment mechanism, the CBHI scheme intended to control treatment costs and promote the provision of preventative care. Yet the introduction of the capitation-based payment method under CBHI was a radical departure from the fee-for-service payment public sector health facilities were accustomed to.

Under the Nouna CBHI financing and payment method, revenue generated through premium collections was insufficient to cover enrollee prescription costs. Between 2004 and 2010 the annual deficit for drug prescriptions grew each year (Fig. 1). While in 2004 drug prescription costs only amounted to 90% of capitation payments, by 2010 prescription costs reached 251% of capitation payments. Facilities would then have to wait until the following year to be paid the remaining amount.

Research objectives

The objectives of this study were to understand how health workers perceive the current CBI provider payment methods, the meaning health workers bring to the payment methods, and how