Chapter 8

Demand-Side Financing in Health in Low-Resource Settings

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Abstract

In this chapter, we discuss the use of demand-side financing (DSF) mechanisms as a way to increase access to health services and improve health outcomes. The discussion makes use of a range of evidence including a series of systematic reviews focused on low-resource settings and detailed experience of developing DSF for maternal health in Nepal.

1. Introduction

Public health systems traditionally focus efforts on extending population coverage through the supply side, boosting funding to public services, training staff and improving supply chains. The neglect of the demand side is recognized as a weakness in public health policy in high- and, particularly, low-resource contexts (Ensor and Cooper, 2004; O'Donnell, 2007). Study of the demand side has at least two components (Table 1). The first is a recognition that many barriers to accessing services operate before an individual arrives at a health facility. The three delays — the delay in deciding to seek care, delay in arriving at a health service and delay in obtaining treatment once at a facility — are well recognized in

Table 1. Supply- and demand-side barriers and financing.

	Example of barrier	Supply-side financing	Demand-side financing
Supply-side barrier	Lack of medicines/ staff at public facilities	Improved funding and better supply chain management	Payments/vouchers to patients to purchase services from alternative providers
Demand-side barrier	Difficulty in getting to a health facility	Patient transport systems	Vouchers or cash payments to patients for transport

the maternal health literature but equally applicable to most health care (Thaddeus and Maine, 1994; Ensor and Cooper, 2004). The first and second delays are substantially influenced by non-health service issues, including knowledge of services, proximity to a facility and cost of transport. All these might be considered as potential demand-side barriers.

The second component is that funding for public services is typically focused directly on the supply side rather than on increasing the purchasing power of individuals to demand services. Many barriers, whether associated with demand or supply, can be mitigated through action on the supply side. These typically address well-known market failures, including information asymmetries (individuals cannot judge service quality), natural monopolies and externalities (Donaldson and Gerard, 1993). Increasingly, health services introduce a separation between purchaser and provider to make it more likely that services match patient needs. Funding, however, still remains largely outside the control of individual patients. Consumer-led demand-side financing (DSF) is designed to put purchasing power into the hands of consumers in a controlled way that attempts to mitigate information asymmetry (Ensor, 2004). Providing consumers with the purchasing power to seek their own services in a controlled way has a number of potential advantages, including:

1. Greater choice and more competition — allowing consumers to buy from non-government providers that may offer better or closer services. This can be done in a regulated way through certification of those providers qualifying into the scheme.

2. Promoting behaviour change — providing consumers an incentive or “nudge” to encourage consumption of a service (merit good) that is deemed beneficial. This can be seen as a way of overcoming information asymmetries that would otherwise take considerable time to circumvent through other mechanisms such as improved general education.
3. Better targeting — supply-side actions often benefit all that use services. Evidence suggests that public services often disproportionately benefit the non-poor (Demery, 2000; Rannan-Eliya and Somanathan, 2006). At a minimum, supply-side funding can get diluted across many beneficiaries so that those that are least able to pay still end up contributing to the cost of their care. If the aim is to concentrate resources on the vulnerable, then it may be necessary to refocus resources on these groups.
4. Funding for demand-side costs — providing consumers with purchasing power to mitigate costs incurred outside the health service such as transport, time lost from work and costs incurred by those accompanying the patient.
5. Activity-based funding — funding follows the patient so in principle should have a more direct impact on service delivery. For health services, similar effects can be obtained through different provider payment systems including performance-based funding.

1.1. DSF in Nepal 1 barriers to maternal services and the need for DSF in Nepal

In the late 1990s, the maternal mortality ratio in Nepal was second only to Afghanistan in Asia¹ at around 550 (maternal deaths per 100,000 live births), compared to the average for South Asia of 388. Consequently, improvement of maternal and neonatal health has been a major focus of Nepalese health policy since the 1990s, aimed to achieve both national and international outcome targets (e.g. Millennium Development Goals (MDGs)). Substantial investment was undertaken in the supply of services

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¹The Maternal Mortality Ratio was 550 in Nepal in 2000 compared to the average for South Asia of 388, World Development Indicators, <http://databank.worldbank.org/data/>.

for pregnant women in communities and in hospitals. Despite these changes delivery with a skilled provider remained low, less than 10% in rural areas by 2001 (HMGN, 2001), and the cost of delivery care was identified as a persistent barrier to use of services. The Demographic and Health Survey (DHS) found that two-thirds of women suggested that “getting money for treatment” was a major problem in accessing health care for themselves or their children (HMGN, 2001). A study carried out in 2004 found that while the supply-side costs of a home or facility vaginal delivery were comparable, costs incurred by households of getting to a facility made the option of a facility birth much more expensive (Borghi *et al.*, 2006). Transport to a facility was found to make up more than 70% of the cost. For the poorest households, the cost, including transport, exceeded 3.5 times monthly cash household income.

While home delivery was chosen by most women for an expected normal delivery, the terrain in most parts of the country meant that later referral in the case of emergency would not be possible. Hence, a strategy to encourage as many women as possible to attend a facility for delivery was suggested that expanded the use of services beyond what investment in facilities had already achieved.

2. Demand-Side Financing Mechanisms

A number of mechanisms have been used in practice to increase the role of demand-side funding, including unconditional and conditional cash transfers, targeted transfers and vouchers. These mechanisms have a variety of goals although in practice it is not always clear which ones are thought of as most important in a specific context.

Unconditional and conditional cash transfers in cash or in kind are an increasingly popular way of boosting demand for health and other services. In high-income countries (HICs), transfers of funding to priority groups serve both to boost the overall disposable income of vulnerable groups and put the purchasing power in the hands of household members who have greater needs or are thought to be better able to manage household resources effectively (UK child benefit). There is evidence, for example, that women are more likely to buy welfare enhancing goods such as health care and education, and so transferring purchasing power

from men to women may boost spending on these items (Quisumbing and Maluccio, 2003; Pahl, 2008). Unconditional transfers to women increase the probability that at similar levels of income, a household will spend resources on items such as food particularly on children (Schady and Rosero, 2008; Yoong *et al.*, 2012).

Transfers that are conditioned on particular behaviors are justified on the basis that there are market failures occurring either in the delivery of services by government, by individuals in understanding their own needs or in the results of “imperfect altruism” where some household decision-makers (e.g. parents) take decisions on behalf of other members (e.g. children) (Fiszbein and Schaby, 2009, p. 2).

Conditional Cash Transfers (CCTs) are typically paid to families on condition that a package of services is consumed, usually including both education — for example, sending children to school regularly — and health — for example, attending for child health checks and vaccinations requirements. CCTs explicitly acknowledge that “embedding different outcomes in a package of services could increase demand for individual outcomes more than if they are provided as separate services” (Thomas, 2012). Payments may be withheld if attendance falls below a target level.

Targeted transfers are a type of cash transfer that are allocated for specific activity rather than a general target. Payments mitigate demand-side costs, help increase treatment compliance where the benefits are not clear to users and promote health behavior change. In high- and low-resource settings, for example, there is an extensive literature on the use of small financial and non-financial payments to adhere to tuberculosis (TB) chemotherapy which requires a regular, and to patients often unnecessary, regime of regular drugs that persist past the time disease symptoms appear to have disappeared. A variation on this idea is to provide an incentive to a treatment supporter such as a relative or community health worker (Kliner *et al.*, 2013). The latter is almost indistinguishable from supply-side performance-based financing (PBF) as an activity-based incentive paid to a health care provider.

Targeted transfers may be in cash or in kind. Examples include the Jani Suraksha Yojana (JSY) programme in India which provides a cash payment to women to deliver in a facility, snack and subway vouchers given to TB patients in New York in return for treatment compliance,

incentives in cash and in kind to accept male circumcision to reduce HIV transmission in countries of Sub-Saharan Africa and preferential loans given to villagers for selecting long-lasting (particularly permanent) contraceptive methods in Thailand (Weeden *et al.*, 1986; Davidson *et al.*, 2000; Lim *et al.*, 2010; Ensor *et al.*, 2019). Payments to patients remain controversial partly because there is a fine line between offsetting a patient's demand-side cost of treatment and actively providing incentives to obtain care. The issue has stirred an active debate among ethicists and the general public about whether such incentives are likely to lead to harms and unintended consequences that exceed the benefits from increase in service use (Burns, 2007; Shaw, 2007). In LMICs, discussion of perverse incentives in the context of mechanisms focusing on maternal health often focus on inducements to women to increase fertility. In practice, such outcomes are rare with one meta-analysis finding an overall neutral effect on fertility with only one country showing a statistically significant although very small increase (Glassman *et al.*, 2013).

Voucher programmes are generally suitable only for services that have a high probability of being needed by the target population, otherwise efforts will be wasted in distributing them to a population the majority of whom will make no use of them. Examples include vouchers for delivery care in Bangladesh, China and India targeted at women in antenatal clinics, bed-nets aimed at pregnant women in Tanzania and vouchers for Sexually Transmitted Infection (STI) treatment in Nicaragua targeted at adolescents in Managua (Marchant *et al.*, 2002; Meuwissen *et al.* 2006; Brody *et al.*, 2013). For more uncertain services, vouchers are only appropriate if they can be cashed in for a general insurance entitlement. In Georgia, for example, the market-focused government of Saakashvili distributed vouchers to the poor that could be redeemed for insurance coverage with a private insurance company (Gotsadze *et al.*, 2015).

2.1. DSF in Nepal 2: The government's policy response

The Government of Nepal's response to the findings on the cost of delivery care, particularly high cost of transport, was rapid for a number of reasons. Imminent elections meant that the government wanted something that was publicly popular, development partners were keen to

act and finance action to improve dismal maternal health indicators, and a number of senior officials and other influential citizens acted as powerful advocates for the development of policy (Ensor *et al.*, 2008). Initial plans to develop an intervention that could be tested in pilot areas focusing mainly on the poorer people and regions before a general rollout were scrapped in favor of a national scheme that would immediately benefit the entire country and electorate.

The policy comprised demand-side payments to women for attending a facility for a delivery and supply-side payments to facilities and skilled birth attendants for deliveries at home. The payments to women were envisaged to reduce but not fully cover travel costs since there was sensitivity about seeing the payments as incentives or payments to treat. Costs were shown to be the highest for those living in mountain areas. In 2005, a graduated payment known as the Maternal Incentive Scheme (MIS) was introduced, paying 1,500 Nepali Rupees (NPR) to women delivering at facilities in mountain, NPR 1,000 in hills and NPR 500 in the tarai (flat) areas Table 2). Supply-side payments to hospitals were also introduced in 2006 in the 25 most deprived districts, as assessed by a country version of the Human Development Index (HDI), including all mountain and some hill areas. Smaller payments of NPR 200 were made

Table 2. DSF policies for maternal health in Nepal.

	Maternal incentive scheme (June 2005)	Safe delivery incentive programme (July 2006)	Aama programme (January 2009)
Tarai	NPR 500 transport payment	NPR 500 transport payment	NPR 500 transport payment + free delivery**
Hill (High HDI)	NPR 1,000 transport payment	NPR 1,000 transport payment	NPR 1,000 transport payment + free delivery**
Hill (Low HDI)	NPR 1,000 transport payment	NPR 1,000 transport payment + free delivery*	NPR 1,000 transport payment + free delivery**
Mountain	NPR 1,500 transport payment	NPR 1,500 transport payment + free delivery*	NPR 1,500 transport payment + free delivery**

Notes: * Enabled by a fixed payment to facilities of NPR 1,000 per delivery (vaginal, instrumental and surgical).

** Enabled by fixed payments of NPR 1,000–1,500 for a normal delivery, NPR 3,000 for instrumental delivery and NPR 7,000 for a caesarean section.

to birth attendants undertaking deliveries in homes. These latter payments for home deliveries in some ways contradicted the policy of trying to get women to deliver in facilities, but recognized that facility capacity would be unable to cope if all women immediately sought care facilities.

3. Evidence on DSF Effectiveness and Impact

There is growing evidence on the effectiveness of DSF programmes. Rapid scale-up and national scope of many programmes has meant that many evaluations have utilized quasi-experimental designs although there are some examples of (cluster) randomized control trials (RCT).

Quasi-experimental methods exploiting the gradual rollout of an unconditional cash transfer programme in South Africa found that transferring cash to women was associated with improved nutritional outcomes and yielded long-term economic returns (Aguero *et al.*, 2006). An RCT of cash transfers in Zimbabwe found that unconditional transfers had a significant and similar impact on child attendance at school as the conditional transfers and a significant impact on vaccinations, although one that was more modest than for conditional transfers (Robertson *et al.*, 2013).

Much of the evidence of CCT impact comes from Latin America where the Oportunidades (formerly Progresá) programme in Mexico led the way and offered a model for other similar schemes in neighboring countries. These CCTs offer monthly cash benefits to families in proportion to the number of school-age children as a way to improve education and health outcomes. In return, they require that children are sent to school, receive regular health visits and are fully vaccinated and pregnant women receive maternity services.

Randomised control trials of CCTs have been undertaken across Central America in Mexico, Nicaragua and Honduras as well as in Malawi. These show substantial treatment effects on health-seeking behavior including consultations with public facilities, antenatal visits and postpartum care and child health checks (Lagarde *et al.*, 2007). The impact on health outcomes is more mixed in some cases because studies are not powered to measure them. This is particularly the case with maternal outcomes which require a large sample to demonstrate effect (Murray *et al.*, 2014). Health impacts have been extensively studied in the Oportunidades programme. These indicate significant effect on levels of

childhood anaemia and anthropomorphic measures such as child height (Rivera *et al.*, 2004). One of the difficulties in assessing these programmes is that they are complex incorporating multiple interventions and it is often difficult to disentangle the “relative importance of different components” (Lagarde *et al.*, 2007). More complex RCT designs can help but there is also a need for process evaluation to help policymakers understand which elements and in what context interventions work.

Systematic reviews suggest that vouchers are an effective way of boosting utilization of targeted services (Bellows *et al.*, 2011; Brody *et al.*, 2013; Murray *et al.*, 2014). Tracking this to improved outcomes has been hampered by relatively short evaluation periods and an inability to control for other policies. There is also some evidence that vouchers can boost quality of the service as measured by, for example, number of services delivered during an antenatal care (ANC) appointment, reliability of diagnostic testing and appropriateness of treatment given (Brody *et al.*, 2013).

In the education sector, randomizing receipt of vouchers is not uncommon. In the US particularly, the random distribution of vouchers to access private or charter schools have been widely evaluated. Meta-analyses of high-quality RCTs suggest that in general they have a positive impact on performance as measured by reading, language and maths scores although the results across studies are variable (Shakeel *et al.*, 2016). Randomization is less common in low-income contexts although there are examples with positive effects reported in Colombia and Delhi and Andhra (Morgan *et al.*, 2013a, 2013b; Shakeel *et al.*, 2016).

Although there is general evidence of positive impact of DSF mechanisms, the types of impacts measured and effect sizes are extremely varied. Glassman’s review study of CCTs is one of the few to undertake a meta-analysis finding average percentage point (pp) increases for a range of outcomes. For maternal health, for example, the study reported effect sizes of 11.6 pp for delivery with skilled provider and 8.4 pp for prenatal monitoring (Glassman *et al.*, 2013). There appears to be little clear relationship between the payment level (in absolute terms or as % of GDP) and effect size (Figure 1). Similarly, although the impact of voucher schemes is generally positive, the reported effect sizes vary substantially. In Bangladesh, delivery with a skilled provider was reported to increase by 42 pp, in Cambodia, a similar scheme had a 14-pp impact, while in

Figure 1. pp increase in delivery with skilled health work and size of payment (US dollars).

Source: Adapted from Glassman *et al.* (2013).

Kenya, maternal vouchers had a much more modest impact on skilled delivery around 5 pp (Hatt *et al.*, 2010; Ir *et al.*, 2010; Obare *et al.*, 2014).

There is relatively little of evidence on the cost-effectiveness and the sustainability of DSF mechanisms with few evaluations undertaking an economic evaluation (Murray *et al.*, 2014). A recent review of voucher programmes, for example, found only one study (out of 24) that undertook an efficiency (unit cost) analysis (Brody *et al.*, 2013). Evaluations also often do not compare the intervention with the cost-effectiveness of a similar sized investment on the supply side which might be regarded as the correct counterfactual (Lagarde *et al.*, 2007).

3.1. DSF in Nepal 3: Assessing the effectiveness of DSF

Use of delivery with a skilled provider at a government facility has increased in all ecological zones of Nepal since the start of the national safe-motherhood strategy in the late 1990s. Trends in use of a facility appear to have increased more steeply since the introduction of the DSF mechanisms particularly in tarai and hill areas (Figure 2).

Figure 2. Trends in facility delivery by zone.

One of the difficulties with evaluating policies of this type is that policy practice can diverge quite substantially from the intention to treat, policy takes time to have impact and in turn can vary substantially across the country and population. A number of evaluations have been undertaken of the delivery-incentive mechanisms in Nepal. An early qualitative assessment of the policy found that there was huge variation in implementation including the amount of cash provided to women and circumstances of payment (Powell-Jackson *et al.*, 2009). Implementation was influenced by interpretation of guidelines by staff and by the delays in money reaching districts. Even though delays in the central disbursement of funds was common across the country, district coping mechanisms varied with some providing pre-funding from other funds while others simply stopped allocations to facilities. Powell-Jackson and Hanson (2012) show that there was a substantial gap between knowledge of the scheme and receipt of the incentive, and this gap tends to be larger for poorer households.

For political reasons, the mechanisms in Nepal were introduced quickly and to the entire country. This mitigated against a randomized evaluation. The relative rareness of maternal mortality in the population

meant that it has been difficult to monitor the impact on this primary outcome of interest. Several quasi-experimental evaluations have however been conducted to focus on uptake of services as a marker for eventual impact on outcomes. An early evaluation, conducted 2.5 years after the implementation of the MIS and based on a survey in six districts, matched beneficiaries and non-beneficiaries using propensity score matching (Powell-Jackson and Hanson, 2012). The study suggested that only around 25% of women had heard of the scheme. Those that had heard of the scheme were more likely (4.2 pp, $p < 0.01$) to deliver with a skilled attendant. The same study, suggested that the incremental costs of the programme were high at around US\$210 for each additional delivery (Powell-Jackson and Hanson, 2012).

A recent interrupted time series approach assessed the impact of the evolution of the three policy variants across the country (Ensor *et al.*, 2017). The study merged three rounds of the five-yearly DHS each of which provides information on births occurring over the preceding five years. Given the findings from earlier studies that the intervention effects took time to build-up due to delays in information acquisition and policy implementation, the study design incorporated the possibility for both immediate and gradual effects through the use of intercept and slope dummies. The results suggest that the combined policies are associated with different changes by income and geographic group. For the richest 50% of the population, the use of delivery increased by around 30 pp in the tarai and hill areas and 17 pp in mountainous areas. For the poorest 50%, the increase was 14 pp in the tarai while no statistically significant change was found for the poor in hill and mountain areas. The study suggests that although the policy has had an overall effect that is substantial, the lack of impact on the poorest income groups implies that much more direct targeting will be required to deliver services to the poor living in the least accessible areas.

4. Lessons from DSF Experience in Low-Income Contexts

DSF mechanisms have been introduced for a variety of reasons in low-resource settings. The multiple possible reasons for utilizing DSF can make it difficult to understand the main objective for introducing the

mechanism in a particular context. In Cambodia, a maternal voucher scheme was used to target resources at poorer households to reduce their costs at the facility (Van de Poel *et al.*, 2014). In Bangladesh, maternal vouchers were seen as a way of “stimulating increased utilization of maternal health services by poor pregnant women” (Hatt *et al.*, 2010). Allowing choice of facility, was thought to encourage greater competition and improved quality across providers (Ahmed and Khan, 2011a, 2011b). The Kenyan output-based (voucher) scheme, aimed to incentivize demand amongst the poor (Obare *et al.*, 2013). In Nepal, the MIS and then Aama programme were principally introduced to mitigate the costs of transport across the country with some targeting based on geography rather than individual wealth (Department of Health Services, 2007). A number of policy issues are apparent from this experience.

4.1. Demand-side funding complements well-funded service provision

DSF mechanisms work best where there is an already well-functioning supply of services so that the focus is on assisting people to use services. Although funding allocated through DSF mechanisms can be substantial it is often directed at non-health service components (e.g. transport, food). Where funding is allocated directly to facilities, in the form for example of vouchers that facilities can exchange for cash, the sums involved generally only cover part of the costs of running the facilities. Adequate funding for overheads, staffing and other aspects of services are still required. While the maternal voucher programme in Bangladesh was associated with an increase in use of services, the overall utilization remained low, particularly amongst the poor who largely rely on public services, because public services remained poor quality (Ahmed and Khan, 2011a, 2011b).

Supply-side investment is particularly important given that incentivizing the demand side is designed to boost the use of services which need to be able to cope with the influx of new users. Indeed, many DSF mechanisms have provided parallel support to the service delivery. There is, however, evidence, in some countries, India and Nicaragua for example, that the necessary investment in infrastructure or additional

supplies required are often not in place to support this increased demand (Gopalan *et al.*, 2014a, 2014b). Similarly, a continued wealth gradient between the use of maternal health services in voucher areas in Kenya is partly attributed to the continued lack of access to services by poorer populations (Obare *et al.*, 2013).

In systems with a weak service network, there is relatively little evidence that choice is substantially enhanced by DSF mechanisms. The maternal voucher programme in Bangladesh was touted as offering choice to women of public and non-public providers while the reality was that in many poorer areas only one facility continued to provide services (Schmidt *et al.*, 2010; Ahmed and Khan, 2011a, 2011b). Attempts to expand choice of delivery facility in Nepal have been frustrated by the lack of for-profit providers who have been willing to accept rates of remuneration that do not fully fund their costs (Tiwari *et al.*, 2015). In contrast, in Kenya, maternal health vouchers appear to have expanded the use of non-government services with providers using the funding creatively to improve services (Njuki *et al.*, 2015).

In Nepal, the lack of functional services was and remains an important issue particularly in mountain areas. It led to an early modification of the DSF policy to provide incentives to skilled birth attendants to provide deliveries at home. This contributed to a problem of fraudulent or “phantom” deliveries at home, something that is much harder to monitor than in facilities (Powell-Jackson *et al.*, 2009). A further supply issue, has been that the pressure placed on facilities to provide deliveries crowd out other services that are not similarly incentivized (Mehata *et al.*, 2017).

4.2. How sustainable are DSF mechanisms?

An important criticism of DSF mechanisms relates to sustainability. Mechanisms in LMICs are often supported by international development partners and operated by international not-for-profit organizations (NGOs). When the funding runs out, these mechanisms may collapse. It is easy, however, to overstate the sustainability problem. An unpublished study found that of 40 reproductive health voucher programmes reviewed, only seven had ceased to operate (Gorter *et al.*, 2012). A number of schemes

have received multiple rounds of funding from donors and some integrated into national programmes.

A learning or normalization effect is suggested in some studies when use of services goes beyond the remit of services that are incentivized. Women, for example, are reported to be more likely to use a provider for delivery care in studies of Oportunidades in Mexico even though CCTs only condition the use of antenatal care (Glassman *et al.*, 2013). There is paucity of research on this issue, partly because evaluations are rarely long term enough to examine what happens substantially beyond the end of a programme.

4.3. Does DSF encourage unhealthy behavior?

A persistent criticism of DSF, particularly funding that appears to exceed the user cost of care, is that it encourages undesirable behavior. In Bangladesh, there was a concern that the value of a maternal voucher was higher for caesarean section and would therefore encourage excessive surgical deliveries. Although there was some evidence that the rate of surgical deliveries increased after the introduction of the mechanism, this was from a very low base and the rate was still recorded at a lower level than in areas without the voucher funding (Schmidt *et al.*, 2010). A similar worry is that providing funding for maternal care could incentivize fertility. Again, reviews suggest there is little evidence for this with the mechanisms in some countries showing small decreases in fertility and in others small increases (Morgan *et al.*, 2013a, 2013b).

4.4. Do DSF mechanisms swap one information asymmetry for another?

DSF mechanisms can generally help overcome information asymmetries by nudging service users into particular health-seeking behaviors and service use patterns. However, the mechanisms themselves need publicizing and often explaining which may lead to other information shortfalls. In the early days of the MIS in Nepal, for example, the low take-up was attributed to lack of knowledge about the operation of the scheme (Powell-Jackson and Hanson, 2012). A systematic review using a realist synthesis noted that

not only does it take some time for DSF programmes to impact on behavior but that misconceptions about programme operation can lead to perverse behaviors; for example, in Mexico, the worry that improved child nutritional status might lead to reduced programme benefits caused some mothers to withhold food from their children (Gopalan *et al.*, 2014a, 2014b). Similarly, service providers must learn the rules governing the new system which can be complex where many but not all services and groups are covered. In Kenya, this knowledge was unequally spread with workers in larger facilities having access to more training and knowledge than those working in more remote dispensaries with a likely knock-on impact on population access (Njuki *et al.*, 2015).

5. Conclusion

The maternal DSF in Nepal is illustrative of a class of financing mechanisms that have now become a routine part of the international health policy dialogue. They have the potential to impact health service behavior and ultimately outcomes, and fill the gap left by initiatives operating only the supply side. That these mechanisms can achieve multiple objectives not only increases their potential power but also means that objectives can be muddled and their implementation in practice may diverge from theoretical expectations. The long-term effect and cost-effectiveness of DSF remain under-researched, partly because in most countries, these mechanisms remain relatively novel and partly because most evaluations are undertaken during periods of donor support and relatively soon after implementation. Future research could focus on longer term sustainability and the degree to which these mechanisms encourage normalization of health behavior change. The wide range of mechanisms implemented in different countries with diverse results also suggests the need to focus further on the contextual factors that influence the impact of each mechanism.

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