

Removing user fees: learning from international experience to support the process

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Removing user fees could improve service coverage and access, in particular among the poorest socio-economic groups, but quick action without prior preparation could lead to unintended effects, including quality deterioration and excessive demands on health workers.

This paper illustrates the process needed to make a realistic forecast of the possible resource implications of a well-implemented user fee removal programme and proposes six steps for a successful policy change: (1) analysis of a country's initial position (including user fee level, effectiveness of exemption systems and impact of fee revenues at facility level); (2) estimation of the impact of user fee removal on service utilization; (3) estimation of the additional requirements for human resources, drugs and other inputs, and corresponding financial requirements; (4) mobilization of additional resources (both domestic and external) and development of locally-tailored strategies to compensate for the revenue gap and costs associated with increased utilization; (5) building political commitment for the policy reform; (6) communicating the policy change to all stakeholders.

The authors conclude that countries that intend to remove user fees can maximize benefits and avoid potential pitfalls through the utilization of the approach and tools described.

Keywords User fees removal, health policy, health financing

KEY MESSAGES

- In order for the removal of user fees to be successful, the policy change must be preceded by careful planning, including supportive policies to address increased service utilization and loss of revenue.
- By following the six sequential steps we outline, countries wishing to move beyond user fees and work towards universal access can maximize the chances for success and minimize unintended effects.

Introduction

The introduction of user fees to raise financial resources for health and regulate demand for health care in low- and middle-income countries has been a controversial topic in the public health discourse for decades. The current evidence

suggests that their introduction was not beneficial: user fees only raised an average of 5–7% of health sector recurrent expenditures at the national level, net of administrative costs (Gilson 1997; Pearson 2004); it is not clear that they reduced 'frivolous' demand, nor that this is a significant or relevant

issue in these contexts; and their negative impact on equity and efficiency has been widely documented (James *et al.* 2006).

As a result, in recent years, several agencies have changed their policy positions on user fees: the World Health Organization passed resolutions 58.31 and 58.33, urging member states to work towards universal coverage of maternal, newborn and child health services through a move away from user fees and towards prepaid mechanisms and pooled health financing systems (WHO 2005a; WHO 2005b); the World Bank's new health strategy entails the provision of support to countries that wish to move away from out-of-pocket payments (World Bank 2007); and UNICEF has similarly committed to support governments wishing to remove user fees for children and pregnant women (Meessen *et al.* 2009).

Several countries have also recently moved away from user fees at the point of delivery for essential health services, particularly in sub-Saharan Africa. Before 2000, only Tanzania, Malawi and South Africa delivered services free at the point of delivery. In 2001 Uganda opened the way for a wave of health care financing reform in Africa, abolishing fees for all publicly provided health care services. Zambia, Burundi, Niger, Senegal, Liberia, Kenya, Lesotho, Ghana and Sudan have since followed suit, abolishing fees from public facilities, although these reforms were mostly confined to (some) maternal and child health services (Yates 2009).

The existing evidence demonstrates that, while this policy change has the potential to improve service coverage and access, in particular among the poorest socio-economic groups, quick action with no prior preparation can lead to unintended effects, including quality deterioration due to lack of funds, excessive demands on health workers, depletion of drug stocks (Gilson and McIntyre 2005), and 'crowding out' of preventive services by curative ones (Wilkinson *et al.* 2001).

This paper aims at providing guidance to policy makers on:

- (1) Exploring the cost implications of a policy shift towards free health care at the point of delivery, and
- (2) Identifying key steps to maximize benefits and minimize potential unintended effects of the policy change.

The paper illustrates calculations of projected resource requirements of the removal of fees using data from three sub-Saharan African countries. These data cannot be assumed generalizable to other African countries.

Methods

Building on the latest systematic literature review on the impact of user fees (Lagarde and Palmer 2008), an additional review of the published literature on user fees experiences in developing countries was conducted via academic databases (Scopus, PubMed, EconLit) and Google Scholar. Studies were included if they comprised a quantitative evaluation of policy changes relating to user fees. The search terms combined the following: "user fees in health care", "user charges", "user fees*developing countries", "user fees abolition" and "user fees policy change". The case studies which contributed to form the evidence base for the development of this paper are reported in Table 1. The full bibliography of the case studies of removal of

user fees is reported in Lagarde and Palmer (2008) and in Save the Children UK (2008).

All studies that documented changes in health service utilization associated with user fee introduction, removal or change were compared. As no available study yet considers the longer-term impact of fee removal on utilization, we undertook further analysis of Uganda, where user fees were removed in March 2001, and experience of this policy is best-documented.

We sought to illustrate the projection of the resource implications of fee removal and service utilization increase by estimating pharmaceutical and human resource implications using two key sub-Saharan African based data sets that enabled the quantification of resource requirements associated with units of utilization, and the costing of inputs. As pharmaceuticals and human resources constitute the main recurrent costs of health services in low-income settings, these were considered an adequate proxy of the overall resource implications of increased utilization. A simple linear extrapolation of unit costs of pharmaceuticals and human resources was used to estimate resource requirements.

Staff time requirements were calculated using estimates provided by Kurowski and Mills (2006) of the amount of time required by type of staff for the delivery of the tasks involved in a standard Essential Health Package in Chad and Tanzania. Intervention type numbers per thousand health service users were obtained from estimates used to calculate the costs of the Malawi Essential Health Package (Box 1) which was costed in US\$ in January 2008, applying an ingredients approach to standard protocols of care (Malawi Ministry of Health 2008). Additional human resource requirements in minutes were translated into full-time equivalents (FTEs), or an estimate of the number of workers of each cadre required. A similar approach was used to estimate the drug requirements associated with increased service utilization.

In addition, a qualitative analysis was conducted to define the most appropriate phrasing of the policy reform.

Results

Removing user fees sets off a chain reaction throughout the health system, which can improve access to services for the population. Based on our review of the literature, a clear conclusion can be drawn that the removal of user fees can lead to increases in utilization rates (Gilson 1997; James *et al.* 2006; Lagarde and Palmer 2008) and that the benefits associated with the policy change can be maximized through adequate planning (Gilson and McIntyre 2005) which we propose should be introduced following a series of six sequential steps:

- (1) Analysis of start-up position,
- (2) Estimation of the impact of fee removal on utilization,
- (3) Estimation of additional requirements for human resources and drugs,
- (4) Mobilization of additional financial resources,
- (5) Building political commitment for the policy reform,
- (6) Communicating the policy change to all stakeholders.

Table 1 Summary of measures of utilization change in response to user fee policy, selected studies

Category of utilization/Type of facility	Result	Author, country(ies), date
1. STUDIES OF USER FEE INTRODUCTION OR PRESENCE		
1.1 Studies reporting own-price elasticity		
Public clinics	-1.34	Asfaw <i>et al.</i> , Ethiopia, 2004
Hospitals	-1.06	
All formal care: richest quintile	-0.16	Pokhrel <i>et al.</i> , Nepal, 2005
Poorest quintile	-0.23	
Physician visits	-0.14	Kim <i>et al.</i> , South Korea, 2005
Child (deworming tablets)	-0.580	Kremer and Miguel, Kenya, 2007
1.2 Studies reporting % change in utilization		
Outpatient attendance	40% decrease	Biritwum, Ghana, 1994
Public facilities	52% decrease	Mwabu <i>et al.</i> , Kenya, 1995
Provincial hospitals (OPD)	27% decrease	Willis and Leighton, Kenya, 1995
District hospitals (OPD)	46% decrease	
Health centres (OPD)	33% decrease	
Outpatient attendance	41% decrease	Meuwissen, Niger, 2002
Inpatient admission after 5 years	52% decrease	Sepehri <i>et al.</i> , Vietnam, 2005
Outpatient attendance	35% decrease	Blas and Limbambala, Zambia, 2001
Number of consultations for curative care	-15.4%	Ridde, Burkina Faso, 2003
Average monthly curative outpatient attendances	-35%	Mbugua <i>et al.</i> , Kenya, 1995
Inpatient services (admissions)	-12%	
Mean length of stay (inpatient)	-17%	
Maternity admissions	-12%	
General outpatient attendances ^a	-27% Provincial hospitals -46% District hospitals -33% Health centres	Collins <i>et al.</i> , Kenya, 1996
Attendance at a referral centre for sexually transmitted disease	-60% for men ^a -35% women ^a	Moses <i>et al.</i> , Kenya, 1992
2. STUDIES OF USER FEE INCREASE		
2.1 Studies reporting % change in utilization		
Gynaecologist visit	-18.2% (16.2% price increase); 24.8% (30.2%); -30.3% (42.3%)	Bratt <i>et al.</i> , Ecuador, 2002
IUD insertion	-8.7% (16.9% price increase); 8.1% ^b (32.3%); -17.7% (43.8%)	
IUD revisit	-2.1% (16.2% price increase); 10.7% (33.8%); -23.6% (42.0%)	
Prenatal	-3.2% (15.6% price increase ^a); -5.0% (31.3%); -13.4% (42.9%)	
Number of paediatric outpatients (private hospitals)	-74% and +4%	Issifou and Kreamsner, Gabon, 2004
3. STUDIES OF USER FEE REDUCTION		
3.1 Studies reporting own price elasticity		
Number of users of intrauterine devices ^a	1991/92: -10.2 (-25% price) -5.7 (-50% price) 1992/93: -9.5 (-25% price) -4.8 (-50% price)	Ojeda <i>et al.</i> , Colombia, 1994

(continued)

Table 1 Continued

Category of utilization/Type of facility	Result	Author, country(ies), date
4. STUDIES OF USER FEE REMOVAL		
4.1 Studies reporting a % change in utilization		
Public facilities	42% increase	Mwabu <i>et al.</i> , Kenya, 1995
Rural health centres (OPD)	25% increase	Fafchamps and Minten, Madagascar, 2007
Antenatal visits	3.8% increase, 1994–5 followed by 10.5% decrease, 1995–6	Schneider <i>et al.</i> , South Africa, 1997
Antenatal visits	14.9% increase—average site but followed by larger fall	Schneider and Gilson, South Africa, 1999
Booked deliveries	4.6% increase	
Curative services (total/new)	+22%/+5%	Wilkinson <i>et al.</i> , South Africa, 2001
Antenatal visits (total/new)	−0.8%/−0.7%	
Under 6 care (total/new)	−34.7%/−3.8%	
Under 5 care	18.5% increase	Deininger and Mpuga, Uganda, 2004
Over 5 care	26% increase	
Vitamin A supplement	61% increase	
Deliveries	28% increase	
Postnatal care	34% increase	
All ages	53.3% increase	Burnham <i>et al.</i> , Uganda, 2004
Under 5	27.3% increase	
Under 5 immunization (always free)	17.2% increase	
Antenatal visits	25.3% increase	
Family planning	32.3% increase	
Public hospitals after 1 year	25.5% increase	Nabyonga <i>et al.</i> , Uganda, 2005
Public hospitals after 2 years	55.3% increase	
Health centres after 1 year	44.2% increase	
Health centres after 2 years	77.1% increase	
Attendance at a referral centre for sexually transmitted disease	−66% for men ^a (compared with fee period; −46% compared with pre-fees period) −88% women ^a (same as above; +22% compared with pre-fees period)	Moses <i>et al.</i> , Kenya, 1992 ^b
Outpatient visits to health care providers	+52%	Mbugua <i>et al.</i> , Kenya, 1995 ^a
4.2 Studies reporting a change in probability of accessing care when sick		
All formal care	10% increase	Deininger and Mpuga, Uganda, 2004
Public services after 3 years	10.65% increase	Xu <i>et al.</i> , Uganda, 2006
Private services after 3 years	2.49% increase	
Non-use after 3 years	16.18% decrease	

Notes:

^aFrom Lagarde and Palmer (2008).

^bAuthors argue for ‘unstable demand’ at one of the clinics observed before and after the price increase.

OPD=outpatient department.

Step 1: Analysis of start-up position

The assessment of the impact of user fee removal on health services will depend on the original level of the fee system, as this will determine the level of revenue foregone, and the relative impact on utilization rates (analysed in detail in Step 2). Our analysis has, however, shown that country data are often scarce. Reviewing experiences from countries in the same region or facing similar issues can be helpful, although

the availability of comparative data on levels of user fees is also limited.

Questions that should guide an initial situation analysis include:

- Are fees high, medium or low in relation to household income?
- Are there exemption and waiver policies—and if so, how effective are they?

Box 1 Components of the Essential Health Package in Malawi

- Vaccination, and treatment of vaccine preventable diseases
- Case management of acute respiratory infections in under 5s
- Case management of malaria
- Safe delivery and management of adverse maternal and neonatal outcomes
- Case finding and treatment of tuberculosis
- Case management of acute diarrhoeal diseases
- Treatment of sexually transmitted infections including HIV and AIDS
- Case management of schistosomiasis
- Supplementary feeding, micronutrient supplementation and case management of acute malnutrition
- Case management of eye, ear and skin conditions
- Treatment of injuries

- What are the effects of fee revenues at the health facility level, especially in terms of staff remuneration and supply management of medicines?

Relative fee level

There are two direct impacts of removing fees: a loss of revenue and a change in patterns of service use. In most countries, the loss of revenue is likely to be relatively small at the national level. Studies in 16 African countries in the early to mid-1980s showed that revenues from user fees contributed between 1% and 12% of total health sector expenditure, net of administrative costs, averaging between 5–7% at the national level (Gilson 1997; Pearson 2004). In a recently documented African case, the revenues of the user fee system barely offset its administrative costs (Masiye *et al.* 2005). In Uganda for example, before user fees were removed, fee recovery rates at public health facilities were about 7% (Singh 2003), despite the system allowing the bulk of the fees to be retained at facility level. At the facility level however, the absolute revenue from user fees can be more important (20% of recurrent expenditures in Benin, for example; Pearson 2004). The analysis of the start-up position must therefore distinguish, as far as possible, between the relative national revenue and the absolute district or facility level revenue.

The amount charged to the individual service users relative to their income determines the extent to which fees represent a barrier to access. Fees that might be considered 'high' will have a larger deterrent effect on utilization than those considered 'low'. However, there are a number of difficulties in making this judgement. There is little comparative evidence available on levels of user fees and a number of problems of comparability, including the need to compare currencies in a way that reflects local prices and to compare disposable income levels and their distribution. While methods are available to cope with these problems, they involve the collection of more data than is likely to be feasible. Instead we propose a series of rules of thumb that reflect the range of estimates of fee levels found in the

literature expressed in terms of 1 day's average gross national product (GNP):

- Fees that amount to less than 1 day's average GNP per capita might be considered low;
- Between 1 and 5 days' average GNP per capita might be considered medium;
- Above 5 days' GNP per capita might be considered high.

Effectiveness of exemption or waiver system in place

Most fee systems include, in principle, waiver and exemption policies. However, in practice, such policies are difficult to implement in a consistent manner. Therefore, the provisions to waive user fees should also be analysed before estimating the impact of fee removal. Evidence shows that actual granting of waivers on the basis of poverty is not frequent, and when it does happen, it only inconsistently benefits the poorest segments of the population (Bitran and Giedion 2003). In Ghana, less than 1 in 1000 users was granted a waiver on the basis of poverty status although it is estimated that 15–30% of the population lives in poverty (Nyonator and Kutzin 1999). In Kenya, when the waiving of fees was left to the discretion of facility managers, some facilities treated patients on credit, some treated patients free of charge and others turned those with insufficient money away (Mwabu *et al.* 1995).

Data on the types and numbers of effective waivers and exemptions granted must therefore be assessed. Where a fee policy grants waivers and exemptions to a large percentage of users who successfully claim their entitlement, and where those users represent poorer sections of the population, removal of fees will have less impact. Waivers for population groups, such as children under 5 or pregnant women, or for specific services (e.g. malaria), have been more successful (Abdu *et al.* 2004; Witter 2009).

Loss of revenue

As identified previously, the loss of revenue from the removal of user fees will be limited at national level but could be more substantial at district or facility level. In some countries, loss of revenue from removal of fees accrues to the national Treasury. In these circumstances, the amount is usually not substantial enough to warrant concern for the sustainability of health care service provision. On the other hand, in countries where a significant share of fee revenue is retained at, or close to, the point of collection, to finance a proportion of staff income (Sepehri *et al.* 2005; Yates 2006), to supplement pharmaceutical costs in case of stock-outs or to cover other operating expenses (Nyonator and Kutzin 1999), the loss will need to be offset and careful consideration given to this process.

Step 2: Estimation of impact on service utilization

Change in service utilization is determined by a number of factors: the underlying epidemiology of infection and disease; costs associated with care-seeking behaviour (user fees plus other out-of-pocket expenses including transport, costs of accompanying carers and sometimes food) and other indirect costs; subjective perceptions of disease and illness; and social factors, including status of women as decision-makers about their own and their children's health care.

Table 2 Various scenarios of impact of fee removal on service utilization

Scenario	Impact on health service utilization
<ul style="list-style-type: none"> • High level of fees and limited exemptions • Supportive policy measures put in place 	50–70% increase over 2 years, level sustained thereafter
<ul style="list-style-type: none"> • Low level of fees and effective exemptions • Supportive policy measures put in place 	20–50% increase over 2 years, level sustained thereafter
<ul style="list-style-type: none"> • High or low level of fees • Limited supportive policy measures 	Initially a potentially large increase in utilization, but not sustained

Nonetheless, some clear patterns emerge. When other factors are controlled, price elasticities are negative, which means that service use declines as fee levels increase. Where analysis allows for the identification of different utilization effects by socio-economic or income group, poorer groups are most affected by user fees and least likely to use services.

Table 1 summarizes the experience of a number of countries that removed, introduced or changed the level of user fees, and the impact this had on service utilization. Because the studies employed different methodologies, arose from diverse policy and implementation contexts and focused on different population groups, it is not possible or useful to identify any average or universal effect of the introduction or removal of user fees on service utilization. Some studies focused on exemptions or the removal of fees for specific population groups only. Even where several studies look at the same policy change, as is the case for Uganda, the differing methods and geographical scope make it difficult to compare the results directly.

However, experience indicates that, overall, removing user fees has had a varied impact on health service utilization rates, with increases ranging from 3.8% (Schneider *et al.* 1997) to 287% (Ojeda *et al.* 1994), although most studies report increases ranging from 10% to 80% (see Table 1). The Ugandan experience shows the impact of removing fees on service utilization in a context where fees have clearly acted as a barrier to access, and other measures have been put in place to support the fee removal policy. The data suggest that annual increases in utilization of 20–70% are achievable in the first few years, and that the resulting level of utilization can be sustained (Deininger and Mpuga 2004; Tashobya *et al.* 2006). Where fees are less of a barrier, or where supportive measures are not introduced, there is likely to be a less marked and less sustained impact.

Table 2 illustrates three scenarios, and their possible impact on utilization, based on the above and further similar information included in the table, primarily for illustrative purposes. Ultimately, impact on utilization cannot be estimated with any confidence from other countries' experiences and is difficult if at all possible to predict. The literature can at best provide a framework to estimate a range within which expectations of the impact of policy change in a specific country should be situated.

A change in user fee policy may also lead to one type of service being 'crowded out' by increased demand for another. For example, in South Africa it was argued that preventive activity was crowded out by the demand for curative services stimulated by user fee removal (Wilkinson *et al.* 2001). The impact on public sector utilization may overstate the overall increase of health care use as people substitute public for private sector care (Mwabu *et al.* 1995; Asfaw *et al.* 2004). As incentives for providers change through the introduction of fees, the level of supplier-induced demand may change (Sepehri *et al.* 2005). Some of these indirect effects have implications for public sector costs while others are important from the point of view of the overall public health impact of a change in policy.

These observations suggest that additional policy support measures required might include management of staff incentives and measures to protect preventive services as demand for curative services increases.

Step 3: Estimation of additional requirements for human resources and drugs

Health workers' salaries and drugs are the two largest recurrent expenditures on health budgets in low- and middle-income countries. We therefore assumed that an increase in health service utilization will impact on resource requirements primarily through additional needs in terms of health workers and pharmaceutical products.

Human resources

A projection of human resource requirements was constructed by combining the estimates of the skill levels and times required to carry out specific tasks according to the research of Kurowski and Mills (2006) carried out in Chad and Tanzania, and the estimates of numbers of people requiring those specific tasks and the level of the health system at which those tasks should be carried out from the model of the Essential Health Package (EHP) constructed for Malawi (Malawi Ministry of Health 2008). These estimates were compiled for the disease or condition groups that were covered by both studies (malaria, tuberculosis, HIV/AIDS, childhood illness, motherhood-related conditions) and were combined across skill levels to produce the estimates provided. Hence they may understate the requirements to provide a broader package of care.

We made no attempt to reconcile all data to the situation of any specific country. The data are used in an illustrative way to demonstrate the approach, and the results are interpreted as relating to no country in particular. They may or may not prove typical of sub-Saharan African experience, or indeed in resource-poor settings elsewhere, as similar data are gathered.

Table 3 shows the skill categories that were used in the task analysis. These skill categories do not correspond to 'jobs' or cadres of health workers. Rather, it is recognized that cadres are differently structured in different health systems and that each country will uniquely combine skill categories in identifying a cadre. In the Tanzania and Chad case studies, the 18 skill levels were merged into five broader categories consisting of unskilled, nursing and midwifery, clinical, technical, and managerial and administrative.

Table 4 shows the total human resource requirements of the Malawian Essential Health Package (EHP) at health centre

Table 3 Definition of skill categories of human resources (Kurowski and Mills 2006)

Skill level	Definition of skill category
1	Essential nursing care, including monitoring of vital signs and basic maintenance tasks, for example cleaning of equipment.
2	Directly observed treatment.
3	Basic and advanced nursing care of inpatients.
4	Birth attendance, syndromic management of sexually transmitted infections among female adults.
5	Diagnostic and patient management of uncomplicated adult cases of infectious diseases such as tuberculosis, malaria, sexually transmitted infections among male patients, basic palliative care, continuation of complex treatment courses initiated at higher levels of the service delivery system.
6	Diagnostic and patient management skills for cases of complicated and severe infectious diseases such as tuberculosis, malaria and HIV/AIDS among children and adults and for emergency care.
7	Basic laboratory procedures and maintenance of equipment.
8	Basic radiological procedures and maintenance of equipment.
9	Distribution (giving out) of drugs.
10	Management of drug storage and supply at facility level.
11	Supervision and management of district health system.
12	Supervision and management of health facility (other than drug related).
13	Counselling of cases of infectious disease, provision of patients with supplies (e.g. insecticide-treated nets).
14	Counselling of pregnancy-related risks and family planning, basic obstetric physical examination, monitoring of vital signs, ordering and performance of simple diagnostic tests (e.g. urine protein), provision of basic drugs (e.g. iron) and supplies (e.g. condoms).
15	Syndromic management of paediatric diseases.
16	Emergency obstetric surgery.
17	Basic anaesthetic procedures, including epidural anaesthesia.
18	Assistance in the operating theatre.

Table 4 Total human resource skill requirements for Malawian Essential Health Package at health centre level

Skill level	Estimate in minutes	Estimate in FTEs	FTEs per 10 000 health centre users	FTEs per 10 000 health centre users without HIV programme
1	33 548 589	386	0.28	0.10
2	8 531 704	98	0.07	0.07
4	670 123 649	7708	5.66	4.31
5	47 710 376	549	0.40	0.39
6	523 771 797	6025	4.42	0.00
7	920 227 857	10 585	7.76	2.62
9	82 168 133	945	0.69	0.29
13	473 638 046	5448	3.99	0.00
14	27 710 344	319	0.23	0.23

Note: FTE = full-time equivalent.

level, expressed in terms of these 18 skill levels (not all of which were applicable in the Malawian context). It shows the total number of minutes required at each skill level. To make interpretation easier, we have translated these into FTEs, or an estimate of the number of workers required.

The translation from requirements in minutes was done on the basis of a 35-hour working week,¹ a 46-week working year, and by making an allowance of a further 10% of time for professional development activities. This gives a total of 86 940 minutes in a working year.

Hence, in row 1, the number of people in Malawi who require essential nursing care (skill level 1) has been multiplied by the number of minutes each person is estimated to require (column 1). This is translated into FTEs by dividing by 86 940, the number of working minutes in a year (column 2), and this in turn has been translated into FTEs per 10 000 health centre users by dividing by the Malawian population estimate $\times 10\ 000$ (or on the basis that 1363 health centres with that intended catchment would theoretically be required to cover the population of 13 630 000 estimated in 2008) (column 4).

These estimates of numbers of health workers required may seem high relative to the actual availability of health staff in some African countries, or other resource-poor settings, reflecting the scarcity of health workers, that workload analysis has generally not informed staffing establishment and that new aid-funded programmes exert a considerable burden on staffing capacity without in most cases enhancing it. Sixty-four per cent of the total staff time estimate was accounted for by the HIV/AIDS programme. Given the variance in disease burden associated with HIV/AIDS in different contexts, we have recalculated the FTEs per 10 000 health centre users without taking into account HIV/AIDS.

This guide focuses on increased utilization as a result of removing fees at the health centre level. Similar calculations of human resource requirements for community and hospital levels can be found in Save the Children UK (2008). These will be relevant for countries removing fees at community and hospital level or considering possible implications for hospitals of increased health centre utilization.

The model assumes a linear relationship between human resource requirements and utilization. In practice there may be economies or diseconomies of scale in the use of health staff as utilization increases, but in the absence of specific knowledge of local production functions, a linear basis of estimation is a reasonable central assumption. The worked example in Box 2 illustrates how the coefficients in Table 4 can be utilized.

Drug requirements

Based on the Malawian EHP, an exercise similar to the above was conducted to estimate the drug requirements associated with increased service utilization. For the Malawian EHP model, interventions, treatment lines and associated drug regimens were defined. Table 5 estimates the drug costs at health centre level in the Malawian EHP. Similar tables for community and hospital levels are available in Save the Children UK (2008).

The results show that the drug budget requirement per additional user is US\$1.76 (calculated using January 2008 prices). As with the other estimates in this paper, it is provided

Box 2 A worked example: estimating human resource requirements at health centre level

In Country X, the skill levels represented in a typical health centre (treating 10 000 patients per year) are considered to best equate to the local cadres as follows:

Levels 1, 2 and 13:	Basic trained nurse
Levels 4, 5, 6:	Medical assistant
Level 7:	Laboratory technician
Levels 9 and 10:	Pharmacy technician
Level 14:	Midwife

Country X has estimated—following the process recommended in step 2—that the increase in utilization to be associated with user fee removal in the average health centre will be 5000 per year. Hence in each health centre, country X will need:

Basic trained nurse 5000/10 000 (0.1 + 0.07) = 0.085

Medical assistant 5000/10 000 (4.31 + 0.39) = 2.35

Laboratory technician 5000/10 000 (2.62) = 1.31

Pharmacy technician 5000/10 000 (0.29) = 0.145

Midwife 5000/10 000 (0.23) = 0.115

Each health centre will require at least two new medical assistants and a laboratory technician. Comparing the existing establishment with the estimated requirement for each 10 000 population before user fee removal will allow consideration of which other cadres are short staffed and will require additional recruitment, and which may have spare capacity to cope with increased demand. These figures exclude HIV prevention and treatment. Should these be included, the human resource requirements would increase significantly (as per column 3, Table 4).

Table 5 Drug costs at health centre level in Malawian Essential Health Package

	Users	Total drug costs (US\$ ^a)	Drug cost/user (US\$ ^a)
Vaccine-preventable disease	613 357	214 675	0.35
Acute respiratory infection	1 303 942	74 139	0.05
Malaria	2 512 550	3 525 544	1.40
Adverse maternal/neonatal conditions	2 409 595	3 016 453	1.25
Tuberculosis	284 390	581 423	0.28
Acute diarrhoeal disease	854 959	189 488	0.22
Sexually transmitted infections including HIV/AIDS	2 289 212	11 419 979	4.99
Schistosomiasis	477 056	138 346	0.28
Nutritional deficiencies	0	0	0.00
Eye, ear and skin conditions	128 916	54 106	0.42
Common injuries and poisoning	56 583	65 598	0.40
TOTAL	10 930 560	19 279 751	1.76

Notes:

^aAt 2008 constant US\$ rate.

for illustrative purposes. Drug prices vary significantly across even neighbouring countries and differences in epidemiological patterns imply that the mix of conditions presenting has a significant effect on the average; for example, countries with a higher proportion of users presenting with sexually transmitted infections and malaria compared with acute respiratory infection (ARI) and tuberculosis will have a higher budget requirement per additional user at similar price levels to Malawi's.

Many countries are removing user fees for selected conditions and sections of the population, most commonly pregnancy and the prevention and treatment of illness in children. Cost implications vary by condition and population group, so it should not be assumed that the resource requirements of such policies can be assumed proportionate to the shares of population covered. Adverse outcomes of pregnancy for women and neonates generated the highest costs in the Malawian costing exercise, in part because an ambitious 'road map' to maternal health was under implementation there, but nevertheless suggesting that policy makers should be particularly careful to fully anticipate resource requirements in this area.

Step 4: Mobilization of additional financial resources

The successful implementation of the fee removal policy must be supported by additional financial commitments to cope with the increase in utilization and offset the revenue forgone, however limited. In principle, additional resources can be generated domestically and/or from external sources. Options for identifying new sources of finance will vary greatly from one country to another. In some cases, the overall resources available may need to be increased; in others, improvements in efficiency may suffice; or it may be necessary to look for both.

UK Department for International Development (DFID), the Government of Denmark, the World Bank and the World Health Organization have pledged to support technically and/or financially countries wishing to remove user fees for a basic package of health services (Yates 2006). The need for some countries to rely on foreign aid to finance their health care should be balanced vis-à-vis the unpredictability of external assistance (Gilson and McIntyre 2005).

Funds freed from debt relief can also be redirected towards health. Uganda, Senegal, Ghana and Burundi, for example, benefited from the Heavily Indebted Poor Countries (HIPC) initiative, which enabled the governments to invest in improved health systems at the same time as removing user fees (Meessen *et al.* 2009). Eligible countries engaged in dialogue with the International Monetary Fund (IMF) towards achieving irrevocable debt relief could therefore propose a user fee removal policy within that framework.

The funds available domestically for health care in most low-income countries are far from adequate, both because general revenue in these countries is limited, but also because of a limited prioritization of health by national governments. African countries agreed in 2001 to allocate 15% of their budget to health, yet only a handful is doing this. Nigeria, for example, allocates only 6.4% of its national budget to health; the Congo only 5.8% (WHO 2011). Alternative domestic financing mechanisms to generate revenue may also be identifiable in many contexts, for example through property or corporate taxes

(Di John 2008; Di John 2009) and/or from non-tax sources such as royalties from extractive industries (Warmer 2005).

Beyond preserving or increasing the overall resource envelope, it is of paramount importance to ensure that funding flows to health facilities are not reduced as a result of the user fee removal. In contexts where fee revenues are kept at the facility level, it will be necessary to find additional funds to cover revenue reductions. In settings where funds are routinely transmitted from the central to the facility level, such funding flows need to be protected and increased to offset lost revenue. In those rare settings where no such systems are in place, they need to be created. The approach of providing funding to replace user fees directly to health facilities, as it has been documented in Kenya, seems promising (Opwora *et al.* 2009).

Providing direct funding to health facilities may eventually lead to the introduction of performance-based payments, directly linking level of payments to results achieved. This policy option has generated increasing interest among development partners and policy makers in light of its theoretical potential of improving the efficiency of service provision by aligning the incentives of payers and providers (Hecht *et al.* 2004). While the evidence base on performance-based financing presents important gaps and unanswered questions (Eldridge and Palmer 2009) that should caution against turning it into a universal policy prescription, there have also been well-documented successes that highlight the positive potential of this financing approach in some contexts (Basinga *et al.* 2010).

Step 5: Building political commitment for health financing policy reform

Engage and manage stakeholders

Policy reform is an inherently political process, the outcome of which is influenced not only by the contents being discussed, but also by the positions and power of the actors involved, the processes according to which they interact, and the context in which they operate (Walt 1994; Gilson and Mills 1995). As in other domains of public policy-making, the real nature of health financing policy change is characterized by incrementalism and 'bounded rationality' (Simon 1957; Lindblom 1959; Etzioni 1967).

A typical framework to describe policy making revolves around a four-stage process of: (1) problem identification; (2) policy formulation; (3) policy implementation; (4) evaluation. While this sequential categorization is logical, the linearity that it implies is an idealized framework that bears little resemblance to the reality of health policy making. According to a more realistic model of public policy change, opportunities for reform stem from iterative interactions between the three processes of analysing problems, identifying solutions and generating policy consensus around the latter; actual change occurs when these three flows converge (Kingdon 1984).

Applying these principles to the policy process of removing user fees, we can articulate recommendations in three categories.

Actors

Various stakeholders can have an influence on a discussion on health financing policy. While achieving decisions by consensus would represent the ideal strategy, this may not always be possible. Stakeholder analysis may help in identifying the

actors that can play a role in the policy dialogue, mapping their interest in the issue and their power to affect decisions. Through active actor management, a strategy to remove user fees needs to seek to mobilize support from possible like-minded actors, while minimizing opposition from others who could potentially be opposed to this policy reform (Eden 1996).

Influential actors typically include the presidency (or office of the prime minister), the ministries of health and finance, the local government authorities, the World Bank and other development partners. UN agencies, non-governmental organizations and academic institutions typically have significant expertise, but rarely have much power in shaping the course of action. The relative lack of influence of technocrats and the weak links among different branches of government may partly explain the lack of appropriate preparation and planning of health financing reforms in Zambia and South Africa (Gilson *et al.* 2003).

Experience, however, shows that it is important that the vision for policy change is inspired or owned by political leaders (Osborne and Brown 2005). Heads of state were involved in driving the policy change in several countries, such as South Africa (Gilson *et al.* 2003), Uganda (Burnham *et al.* 2004), Burundi (Batungwanayo and Reyntjens 2006) and Liberia (Meessen *et al.* 2009).

Processes

The decision-making processes which characterize policy change may be extremely variable, but in the majority of cases they have taken the form of 'big-bang' reforms inspired by the highest level of political leadership (as in Uganda and Burundi). Processes characterized by a thorough situation analysis, the weighing of policy options and a consultative and inclusive process leading to policy formulation have been less frequent (Meessen *et al.* 2009). Rather than following due process, however, the most important determinants for successful introduction of the policy reform seem to be (1) political commitment at the highest level, and (2) adequate prior preparations (*ibidem*).

Arguably, a more incremental approach which allows for problems to emerge and be resolved more gradually might be advisable, but such approaches are rare, suggesting that their technical advantages may be outweighed by political difficulties. The exception is those countries that have removed fees for some population groups only. In some contexts this might prove a step towards more general removal of fees

The identification of key players through a stakeholder analysis needs therefore to be followed by an examination of the modalities by which stakeholders interact, and the fora for policy dialogue and decision making. A typical pitfall is restricting the policy dialogue to health sector technocrats: generally, health financing decisions have important political and financial implications, and restricting the dialogue to technical fora is not likely to foster the necessary inter-sectoral dialogue nor generate political support.

Context

Finally, the overall health policy and macro-economic environment of a country must be understood in order to identify the most appropriate strategies, timing and sequence of the

proposed reform. It is important to understand the macro-economic situation, the fiscal space and the opportunities for external support of a country, the current contribution of user fees to the health financing envelope (in terms of both quantity and distribution), how this links to the overall health expenditure and the mid-term expenditure framework.

It is important also to consider the wider political situation of the country and to identify appropriate windows of opportunity for initiating a policy dialogue on removal of user fees, for instance as part of the run-up to an election campaign, as was the case in Uganda, or in the case of post-conflict health sector recovery, as in Liberia and Burundi.

Also important is the policy of development partners in the country: some donors have pledged to support governments who want to move away from out-of-pocket payments, and leveraging their commitment and support can be instrumental in achieving policy change.

This analysis may lead decision makers to adapt a free-for-all approach, as in Liberia, or a two-step approach, for example removing fees for children under 5 and women as a first step, as done in Sierra Leone and Burundi.

Step 6: Communicating the policy change

Evidence has shown that communication is key to success in effecting a policy change to remove fees (Gilson and McIntyre 2005). It ensures that users know about the policy and demand free health care where an entitlement has been created. It is also crucial for health care providers to know exactly which services are free at the point of use and which ones are not. And it is critical for building and sustaining political support. The process of communicating the policy change should begin at the very start, with the initial planning.

Communication is more than a one-way process of educating and providing information. Across a wide range of contexts it has been shown that behaviour change—such as encouraging people to seek treatment when they are ill—cannot be achieved on the basis of giving information alone. Other elements are required to engender confidence in the exchange, and hence in the information communicated. Nevertheless, in reality, attention is often focused on one-sided provision of information and thus communication overall is not as successful as it could be. Good ‘public engagement strategies’ focus on achieving all of the following: communicating information, consulting, achieving active participation, attracting and managing wide public representation, dealing fairly with all involved parties, enabling a three dimensional flow of information and questioning, and assuring that recommendations of participants will be used in decision-making (Nisker *et al.* 2005).

Inform the health workforce

One of the key stakeholder groups to get on board is health workers. They are the patient’s first point of contact with the health system, and they have the greatest influence on how a patient perceives the quality of care, whether this is objective or not. Where health workers do not support a policy of fee removal—for example because they fear loss of income—they can act as gatekeepers and prevent the policy from being implemented by continuing to charge fees at their own discretion. Effective staff communication strategies should be

developed to provide opportunities for dialogue to enhance acceptability of the new policy and maintain morale in the face of increased workload (Burnham *et al.* 2004). Meetings between senior health managers and local-level health workers as well as supervision visits and newsletters are also recommended.

Inform the public

Some attribute success of Ugandan fee removal to effective information dissemination. The policy was supported at the highest political level (it was an initiative of the President himself), which resulted in its wide dissemination through the media and other channels. This ensured that Ugandans were made fully aware of the policy change and knew about their right to free health care when they arrived at health facilities. It also helped that the message to be communicated was a simple one—all government health services were to be free to everyone (Yates 2006).

Multiple forms of media should be engaged to let people know about their new entitlement: for example, an advertising campaign could use posters and radio, and the Minister of Health and other health officials could use radio interviews to promote the message. It may also be appropriate to establish and advertise a mechanism by which members of the public can report instances where fees are still being charged, providing a bottom-up mechanism for voice and accountability.

Discussion

Limitations in study method

This paper builds on a body of peer-reviewed and grey literature and experience accumulated over more than two decades of health financing reform in low- and middle-income countries. Yet the empirical basis of the primary evidence referenced here presents important limitations (Lagarde and Palmer 2008; Meessen *et al.* 2009). None of the country-wide health financing reforms (both introduction and removal of user fees) was conducted with a deliberate in-built monitoring and evaluation strategy. As a result, most of the primary evidence relates to either small-scale pilots, whose findings cannot be easily generalized, or country-wide implementation of the reform undertaken in the absence of rigorous evaluations that would allow attribution of changes in health services utilization to the health financing policy change. There is also limited evidence on the long-term effects of user fee removal on service utilization, and most of our projections relating to long-term results are based on one country alone.

Most of the evidence and data used in our discussion has originated from sub-Saharan Africa. As a result, we believe that the estimates of the human resources and drugs additional requirements may be a useful illustration for sub-Saharan African settings, but require analysis of the extent to which cost structure and epidemiological profile vary from our worked examples to the setting in question. While variation may be large even for other low-income sub-Saharan contexts, it is likely to become even larger with the epidemiological variations that arise from greater geographical distance and the epidemiological and cost-structure differences that arise from income variation.

The model on which our projections was based assumes a linear growth of inputs and costs in parallel with increased utilization. While alternative models would have been possible, there was no empirical basis on which to found these alternative assumptions and we chose to use a simple assumption which appeared as good as any. Countries that understand more about the nature of the production functions in health facilities (for example those who know that there is significant spare staff capacity) might choose to apply a more accurate assumption about the relationships between utilization levels and particular resource requirements.

Finally, we chose to concentrate on additional human resources and drugs needed, not considering additional infrastructure and operating costs, as these contribute the largest share of the total cost of health care. With regards to infrastructure, the evidence base was not a guide to estimated additional requirements, but in the authors' experience health services infrastructure tends to be under-utilized in most low- and middle-income countries, and therefore we speculated that, in the majority of cases, significant increases in health service provision could be accommodated without substantive new capital investments. However, in a context where infrastructure is used at full capacity, additional investment in upgrading and expanding it might of course be required. With regards to operating costs (e.g. transport, stationery, utilities etc.), they are relatively small and mostly not directly related to utilization levels.

An additional factor that must be considered in contextualizing the implications of this model is that user fees contribute only a proportion of out-of-pocket payments: fees may be charged separately—without being officially accounted for—to pay for drugs and laboratory examinations. Informal charges can exist in the presence or absence of formal ones, and guidance on how to reduce or remove them, or mitigate their effects, is limited. User fee removal might change the level or tendency to charge informally by affecting the incentive environment, or by rendering specific resources scarcer than before, increasing their potential market value. The measures proposed in this paper, to render drugs less scarce, and to compensate staff for user fee revenue losses and additional workload, should mitigate these potential problems.

Moreover, households may need to face the costs of travel to and from medical facilities, of providing daily subsistence for the patient and a carer during periods of admission. Ideally, the various components of financial barriers contributing to overall out-of-pocket payments should be analysed to derive more precise and realistic estimates of the likely impact of removing user fees; the relative importance of different financial barriers is likely to vary significantly within and across countries.

From planning to implementation

The careful analysis of health system variables and implementation of these six steps should ensure that the removal of user fees is adequately prepared. Yet there may be tension between preparedness and the timing of implementation. Once the decision to phase out user fees has been taken, a balance must be struck between a hasty pace of reform and an over-cautious approach of small pilots, which can lead to the loss of momentum and eventually to shelving the proposed reform

once attention shifts to other competing priorities ('death by pilot').

The guidance provided in this paper concentrates on making adequate preparations for the introduction of the policy change, which can assist in the successful removal of user fees, but are not a substitute for focused attention to the nuts and bolts of the implementation itself. Adequate implementation comprises multiple dimensions and steps, including sufficient resourcing, provision of technical stewardship and managerial leadership by government and its technical partners, the development of more detailed implementation plans, linking the policy reform to the budgeting cycle and to the systems for decentralized financing of health facilities, leveraging the comparative advantages of the various health sector stakeholders in achieving the most effective division of responsibilities, setting up roll-out and supervisory mechanisms to ensure that the policy change is implemented as per design, and monitoring and evaluating the impact of the reform. Overall, it should be emphasized that the removal of user fees is not an end in itself, but a step towards a more effective and equitable health system.

The evidence gaps on the effectiveness and the impact of user fee policy changes have been explored elsewhere, and a research agenda has been identified accordingly (Lagarde and Palmer 2008). In addition to better documenting the long-term effects on coverage and equity of user fee policy changes, however, we argue that it is important to identify and better document also the determinants of and factors conducive to successful introduction and implementation of this type of policy reform. Broadening the research agenda on user fee policy to a wider system perspective entails exploring not only 'what works', but also 'how, for whom, and under what context' (de Savigny and Adam 2009). Achieving this deeper level of understanding requires complementing the traditional paradigm of effectiveness analyses with a more qualitative dimension, which, by exploring how policy reform is achieved and implemented in the real world, can provide more practical guidance to policy makers and health service planners.

The challenges faced by many health systems in low- and middle-income countries are deep-seated, and in many cases are of daunting complexity, relating to a disrupted social fabric in the society, fundamental governance constraints, or health systems problems which are intractable in the short term, such as an absolute shortage of funds or qualified health workers. Policy makers and advocates should be under no illusion: removing user fees is not going to be a panacea for failing health systems (Yates 2009).

In many contexts, however, demand-side barriers play an important role in constraining access to health services (Ensor and Cooper 2004). In these cases it appears that financial barriers are frequently an important part of the constraints, and are within the power and mandate of policy makers to address. In these circumstances, removing user fees has the theoretical potential to increase service coverage and, as a consequence, improve health outcomes (James *et al.* 2005).

In order for the policy change to be successful, it must be preceded by careful planning, including supportive policies to address increased service utilization and loss of revenue. Removing fees without giving adequate consideration to these associated impacts means that the policy change may fail to

achieve the desired results. When uptake of health services increases as a result of fee removal, it affects other parts of the system, from staff workload to demand for drugs and medical supplies. While lost revenues are likely to be limited, additional resources will be required at local level to fund the additional human resources and drugs required, and to cover items currently funded through user fee revenues, especially at health centre level. Following the sequential steps we have outlined, countries wishing to move beyond user fees and work towards universal access can maximize the chances for success and minimize unintended effects.

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Conflict of interest

All authors declare that they have no conflict of interest.

Endnote

¹ 35 hours per week is based on two assumptions: (1) 7 hours is the realistic time availability for task performance in a working day; (2) there are 5 working days in a week.

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