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Health System Strengthening: Role of conditional incentives?

Health Worker Incentives and Safe Motherhood Indicators in Burundi

A complete package for change in health systems

Von Judith Cowley

Experience from Burundi shows that although health worker incentives can contribute to safer motherhood, other interventions such as increasing the numbers of skilled staff and ensuring adequate basic and post-basic education programmes are equally if not more important. Women also need to be able to access care financially and in a timely manner if Burundi is to achieve the millennium development goals 4 and 5.

Burundi is a tiny landlocked country of approximately 8 million people, comprising 17 administrative provinces and located in the Great Lakes region of Central Africa. Following over ten years of civil war which ended with democratic elections in 2005 the health sector has finally been able to take its' first steps towards reform, most importantly decentralisation. The country is only now able to put in place a system of 41 health districts and address the ways and means to achieving the Millennium Development Goals.

As in other sub-Saharan African nations motivation and retention of qualified health personnel is a nagging problem which required the Ministry of Public Health to find quick solutions to the "brain drain", particularly of doctors, from rural to urban areas, public to private sector including local and international organisations and migration abroad. Performance based health worker incentives or "Pay for Performance" (P4P) were seen as a means of addressing extremely low and demoralising salaries as well as improving the "performance" of staff leading hopefully to increased utilisation rates and better quality health services, including maternity services. Low salaries are seen as one of the most important factors, among many (Rowe / de Savigny / Lanata / Victoria 2005), influencing staff motivation and "performance". Newly qualified doctors receive an average of 120 USD per month, while enrolled nurses (A2,A3) can expect 65 to 72 USD. Auxiliary nurses who make up the bulk of staff in rural health centres can receive as little as 10 to 20 USD per month.

Burundi was particularly influenced by its' neighbour Rwanda where P4P had been enthusiastically embraced at national level in 2006 and, most importantly, supported by bilateral and multilateral donors, including the World Bank. The Ministry of Health in Rwanda was influenced by the success of two pilot projects in the southern provinces of Butare and Cyangugu which had been implemented by the Dutch NGOs HealthnetTPO and CORDAID respectively. These projects, from 20001 onwards, had been successful in increasing health service "productivity", particularly in terms of women giving birth at their local health centre rather than at home and family planning uptake. The incentives also attracted more qualified staff to work in rural health centres (Soeters / Musango / Meesen, 2005).

Such a results based approach is also seen by some of the proponents of P4P as being an alternative to traditional input based financing ("donations" of equipment, medicines etc.; Soeters / Habineza / Peerenboom; 2006) which has largely failed over the years to improve health systems at the level of the "workface" or health outcomes, including maternal and neonatal mortality and morbidity rates which remain unacceptably high in much of sub-Saharan Africa.

Both CORDAID and HealthnetTPO commenced P4P projects in various provinces of Burundi in 2006, followed by a Swiss Development Agency funded health system strengthening project in the northern Ngozi province, which introduced health worker incentives in November 2007. The Belgian Cooperation and the European Union have also very recently commenced this approach in other provinces. During 2009 it is planned for the rest of the country to be included in the approach through health sector budget support funding from the World Bank (Health and Population project), the GAVI Alliance (health system strengthening) and DFID (lead donor in health).

Implementation

Indicators: Before commencing the approach it is necessary to sensitise the workforce concerning the aims of P4P, both in the health centres and hospitals and "negotiate" the verifiable quantitative indicators to be evaluated in terms of "productivity", such as numbers of clients for family planning services (necessitating a well functioning health information system) and the level of payments for each indicator, for example 1USD for each client consulted.

With regard to safe motherhood indicators, due to difficulties in measuring maternal mortality rates, certain proxy or process indicators such as "skilled attendance" at birth are generally used to determine if progress is being made in reducing mortality with the proviso that "skilled" does not necessarily mean the same thing in different settings, for example most health centre births in Burundi are attended by A2 and auxiliary nurses, rather than professional midwives, whilst doctors carrying out caesarean sections may not have followed a course of specialist training.

Safe motherhood indicators for basic (health centre) and comprehensive (hospital) essential maternity care have been a priority in the Ministries' of Health directives for P4P in both Rwanda and Burundi. As mentioned previously the main indicator is the number of women attending health centres and hospitals for skilled delivery assistance, but specifying also the use of a partograph in Burundi's case (a decision making tool which can assist in the timely referral of women to hospital during labour).

Trained traditional birth attendant (TBA) assisted home births are not regarded as being desirable in either Rwanda or Burundi as TBA training is now, for a number of reasons, considered ineffective in reducing maternal deaths.

In Burundi other safe motherhood indicators specified by the Ministry of Public Health include the number of new and repeat clients attending family planning services, the number of women referred to hospital for emergency maternity care, postnatal and ante natal attendance, the latter despite considerable research which has shown its' limits in screening for the prevention of maternal and neonatal deaths (Rooney 1992), apart from tetanus prevention. An additional indicator is the number of impregnated mosquito nets distributed (for the prevention of malaria during pregnancy which can be fatal for the mother and/or baby) despite the fact that this is rather more dependent on the regularity and sufficiency of supplies rather than health worker motivation. In hospitals safe motherhood indicators also include the number of caesarean sections and blood transfusions performed.

Voluntary confidential screening for HIV and the Prevention of Mother to Child Transmission activities are also approved indicators in those health centres (very few, due to a shortage of qualified staff and unreliable supplies of the necessary materials) and hospitals (all) providing the services. Due to a lack of trained counsellors in outlying provinces uptake of Voluntary Confidential Counselling and Testing for HIV during pregnancy is actually low (30% in Ngozi), although up to 70% in the capital, Bujumbura where considerably more trained counsellors are available.

Meanwhile intermittent prophylactic treatment of malaria for pregnant women, a proven intervention elsewhere in helping to reduce mortality, is not currently stipulated in the health policy of Burundi.

The health information system, registers and other records are the tools used by the health centres and hospitals in order to fill in their quarterly declarations of productivity for each indicator and by the fund holding body that verifies the data. The "fund holder" can be an NGO or donor implementing partner or a local government committee in collaboration with the Ministry of Health (as in Rwanda) or a health insurance provider.

Quality indicators include waiting times, the satisfaction of service users, hygiene standards, institutional management and organisation standards and availability of medical material and medicines. Facility based and household surveys organised by the fund holders gather data on these indicators with feedback given to the institutions concerned.

Health promotion indicators, whether in health centres or in the community, have not been included in either Rwanda or Burundi due to perceived difficulties for the fund holder in subsequently verifying the data presented.

Level of payments: Determining the level of payments can be quite tricky, particularly when there are tight budgets. Forecasting the level of "productivity", although theoretically based on the catchment area population figures and previous health information statistics for each individual health centre or hospital, higher than expected productivity can arise, particularly where population figures are inaccurate or changing due to the movement of refugees (in Burundi for example former refugees have been returning in very large numbers from Tanzania) Health personnel may also have high expectations due to salaries which do not cover their basic needs. A proportion of the payments are also earmarked to subsidise running costs, additional activities to increase productivity such as incentives for the traditional birth attendants to accompany women to the health centre for ante natal care or delivery, as well as infrastructure investments of the health centre or hospital. The level of incentives and subsidies paid, although based on forecasting and estimations of a "fair" incentive to cover the living costs of staff and running costs of the facility, also inevitably depend on the total funding budget available and the number of health centres and hospitals included.

In Ngozi province the level of incentives was on average 50 to 80 USD per month for qualified nurses and 3-400 USD for doctors during 2008 (this was consistent with the other Provinces of the country where P4P was being implemented) in 38 health centres and 1 district hospital. The payment levels for each individual staff member were decided internally in a transparent manner during meetings of all personnel, as the financial envelopes transferred comprise the payments for total performance of the particular health centre or hospital. The parameters used in the internal "scoring" of staff to determine the level of individual incentive payments included qualifications, numbers of years experience, numbers of hours overtime worked and the punctuality of individuals.

Percentage reductions in financial envelopes to be transferred can be made
based on quality indicators as well as the veracity of the productivity data declared by the health centres and hospitals for payment. The earmarked funds for running costs (average 150 USD per month in Ngozi during 2008, thus insufficient for large investments in the infrastructure) also varied depending on the "productivity" of a particular health centre as they comprised a percentage of the total funds transferred.

Despite the incentives being paid in various provinces a national strike in September/October 2008 demanding better pay and allowances paralysed health centres and hospitals, apart from accident and emergency services (including deliveries) throughout the country for almost two months. This was the second strike by health workers during 2008 and demonstrates the fact that health workers need recognition of their contribution to society through adequate remuneration and the fact that they do not have faith in the sustainability of the incentives scheme! At the time of writing a further strike is about to commence.

Results

Utilisation of services: Assessing the effects of P4P on safe motherhood indicators in Burundi is complicated by the fact that childbirth assistance in health centres and hospitals (and care for the under fives) became free at the point of access in May 2006 due to a presidential decree to this effect – this had an immediate positive effect on institutional delivery rates and thus it is now difficult to disentangle the relative effects of the health worker incentives and the removal of the financial barrier previously impeding women from accessing maternity care at the time of delivery.

In Ngozi the subsidy increased health centre delivery rates by up to 400 % between 2005 and 2006 in Kiremba District (one of three) a particularly isolated and poor area (4% to 20% coverage). Following 6 months of incentives, in the same district, a further 95% increase was noted (from 20% coverage to 39%) The 95% increase seen after the introduction of incentives, however, would still in theory have the subsidy element influencing the result. It would seem from these figures that financial accessibility has had a greater impact on improving "productivity" in the delivery rooms of health centres than health worker incentives. The same patterns of increase were also seen in the two other districts.

The traditional birth attendants had also to be "co-opted" in the form of incentive payments from the health centres so as to encourage them to bring their clients to deliver at the health centres, because they were losing their traditional livelihoods. Public education campaigns concerning safe motherhood were also undertaken in the community by health promotion staff based in the health centres prior to the introduction of the incentives.

The increases in obstetric referrals, post natal consultations and family planning uptake which occurred are also difficult to attribute solely to the effects of the incentives, as other interventions such as the training of staff in the use of the partograph, post natal care and more comprehensive family planning services as well as the setting up of a subsidised functioning referral system (ambulances and radio communications) could also have had an additional impact.

Three of the four referral hospitals in Ngozi province were already well staffed medically due to the fixed salary supplements being paid to doctors by other donors (Catholic Church and Italian Cooperation). One of the three district hospitals, however, was not functioning in terms of tertiary level services and the incentives scheme of the Swiss funded project did allow it to provide complementary essential obstetric care (eg. caesarean section, blood transfusion) by attracting an additional doctor. An evaluation or audit of tertiary level care, however, would need to be undertaken in order to ascertain the quality and appropriateness of care given, as well as outcomes.

The "massaging" of "productivity" data, although initially a problem in Ngozi and other Provinces where P4P was in operation, was not of undue concern, as this can and has been fairly easily detected. Of concern, however, is the sustainability of the funding and developing

exit strategies which would allow the government to take over the management of the scheme countrywide.

Quality of care: In Ngozi province, following the introduction of incentives the negative effect of the "free" maternity care initiative on health worker motivation due to the loss of considerable revenues, "under the table" payments previously demanded from clients diminished, staff had a more welcoming attitude and health centres were functioning 24/7 which they were not previously.

P4P in Ngozi also allowed health centres to improve the working environment and conditions to a certain extent (purchase of cleaning products, phone cards, plumbing services, stationary, curtains for delivery rooms, small repairs etcetera) and to develop strategies to increase service utilisation rates, such as public education campaigns and incentives for the traditional birth attendants. As in other provinces, however, the infrastructure was not able to properly accommodate the increasing numbers of women seeking institutional care. Many health centres are simple dispensaries in terms of the space available. In Ngozi hospital there are always two to three women occupying the same bed, with five beds taking up a space normally reserved for three beds maximum. Ante natal patients are sharing the same beds as post natal patients.

This pressure on beds also led to complaints from hospitals that many of the women referred to them by the health centres had normal deliveries and should not have been transferred. One could argue, however, that even if health centre staff did refer large numbers of women (the partograph is not infallible and some women may have only needed an augmentation of contractions in order to deliver normally) if the life of one woman is saved through surgical intervention then that is all to the good. One can, however, also understand the frustrations of hospital, as locating a donor willing to build an extension to the maternity unit at the Ngozi regional referral hospital for example will not be easy. In a meeting with traditional birth attendants they claimed that in some health centres they were often left to conduct deliveries after having accompanied women to the health centres, particularly if it was late evening or at night thus defeating the objective of "skilled attendant" at birth.

Where P4P cannot reach

It is evident that safer motherhood requires much more investment in interventions and strategies other than health worker incentives:

Emergency obstetric care and referral systems for obstetric emergencies: Incentives can have little or no effect on the number of women transferred in good time for specialist care in case of complication or emergency where functioning referral systems are not in operation. These require sufficient funds to invest in and run and maintain ambulances and radio communications systems. Catastrophic transport costs cause delays and subsequent morbidity/mortality where subsidies or community solidarity funds to cover these costs are not in operation. In Ngozi province, due to the support from the SDC funded project the number

of transfers was already increasing before the introduction of incentives due to such an input, as well as the training of staff in the use of the partograph which allows staff to make timely referrals whether for maternal or fetal indications, as well as the management of obstetric emergencies.

Similarly, high standards of emergency care at both the primary and tertiary levels such as the effective management of pre-eclampsia / eclampsia or post partum haemorrhage, can only be ensured at the national policy making level and through basic and continuing education.

Specialised professional midwifery care: Maternity care is carried out mainly by general trained A2 enrolled nurses and auxiliary nurses there being no professional midwives in Burundi. The western medical obstetric model has been handed down to the nurse training schools from the colonial period and has led inevitably to practices which would not nowadays be regarded as the ideal in terms of quality, including immobility during labour, normal deliveries in the supine position in lithotomy stirrups, routine episiotomy (with no local anaesthesia) for all first time mothers, extreme fundal pressure to shorten the second stage of labour, regular use of oxytocin drips in hospitals, routine manual curettage of the uterus following delivery of the placenta, routine post natal administration of ergometrine, rapid clamping of the umbilical cord, poor neonatal care including resuscitation techniques, delay in establishing breast feeding and the exclusion of a supportive relative from the delivery room. Assessing foetal positions in labour is also problematic due to the limitations of general nurse training and basic medical training and which can lead to unnecessary referrals and/or caesarean sections (alongside the latter's associated risks for subsequent deliveries when women live far from hospitals). There is also very little post natal support and information/counselling for mothers, in establishing breast feeding for example and general care of the newborn, as well as the use of mosquito nets, child nutrition etcetera for the same reasons of over medicalisation and lack of the socially based midwifery skills and concerns.

These issues, however, could be addressed in an evaluation of the various nurse education curriculae which currently do not meet international standards. Some of the nurse training schools are private, whilst there is insufficient regulation of both private and public establishments. University based training schools for A0 nurses (who complete only two weeks practical training in maternity care) are under the control and supervision of the Ministry of Education whilst the other schools of nursing, for A2 level nurses, are under the Ministry of Health. There is also insufficient recognition of the role and importance of the nursing and midwifery professions. There is no system of registration or regulation such as a Nursing Council and none of the health directorates at the national level of the ministry have high level nursing positions. Neither does nursing have its' own directorate at this level.

Specialised family planning skills: It is well known that increased family planning uptake can reduce maternal and neonatal deaths. Health worker incentives alone, however, cannot overcome the socio-cultural factors inhibiting uptake of services and inadequate services. In Ngozi province intensive training was provided to health workers to improve interactions with

clients, placing more emphasis on attending to women's concerns about perceived side-effects and specialised practical training sessions and supervision for IUD insertion, the latter option having been previously unavailable in the majority of health centres.

Women prefer methods that can be forgotten about (the oral contraceptive pill is not popular in Burundi) and for cultural reasons, in many cases kept a secret from husbands. Thus preferred methods are injectables and IUDs. There are obviously risks of HIV transmission through the use of non barrier methods, but these have to be weighed alongside the risks of multiple, closely spaced pregnancies. Meanwhile women are informed that they are not protected from HIV when using these methods. Thus, in Ngozi, initial and continued family planning uptake increased due to these initial interventions prior to the introduction of incentives, the latter acting as a complementary input.

Safe abortion care: It is estimated that unsafe abortion accounts for considerable mortality in those countries where abortion is illegal and women are imprisoned for long periods if found guilty of procuring one as is the case in Burundi.

Geographical and socio-cultural accessibility: Of those women who have not attended for institutional deliveries despite the free maternity care initiative it is clear that health worker incentives cannot have an effect on reaching out to them. Problems of geographical accessibility persist, particularly for those experiencing a quick labour and especially in a mountainous country such as Burundi where much effort and energy is required to reach a health centre in time. Social and cultural factors also have an inhibiting effect on the use of services. In a recent household survey in Ngozi province some women for example requested for deliveries to be assisted by female nurses. There was also evidence to suggest that some clients are treated in a more respectful manner than others. Women may not feel at ease if they feel that a nurse is looking down on them, because she is poorly dressed or does not have sufficient items or clothing for herself and her newborn. Despite education campaigns women may still regard childbirth as a normal problem free event and the convenience of giving birth at home outweighs the perceived low risk of developing a problem. Where health centres do not have sufficient infrastructure women may prefer to deliver at home, rather than having to perhaps share a small room with other patients, males included, after the delivery.

Poor working environments: P4P schemes can potentially improve working environments only if the levels of payments are sufficiently high to allow investment in the infrastructure (water supply, latrines, medical equipment etc.). This in turn requires autonomous, transparent and accountable financial management systems to be in place.

P4P in Burundi as a whole and in Ngozi province has been less successful in improving indicators in those health centres which are very isolated due to poor roads and broken bridges, have poor standards of infrastructure including a lack of staff housing and have below the required numbers of qualified staff. Additional inputs will be needed to address these factors and in Ngozi province actions to this effect are planned for 2009 by two SDC funded projects supporting the heath sector and local government.

Conclusion

Health worker incentives are, needless to say, not the proverbial "magic bullet" and should be part of a complete package for change in health systems; a package which allows geographical and financial accessibility to services (whether through subsidies or client incentives) and the advancement of the nursing profession through improved education, recognition and professional accountability to a regulatory body. In order to improve maternal and newborn survival rates much more planning and investment will be required in nursing and medical education and career development, in improved pay scales and living conditions and in addressing the inadequate health infrastructure. Financial accessibility is no longer a concern in Burundi due to the government subsidies currently in operation for pregnant women and the under fives, but should continue to be seen as potentially problematic if government and/or donor funding of the health sector does not remain stable – similarly for the sustainability of health worker incentives.

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