Going from bad to worse: Malawi's maternal mortality

An analysis of the clinical, health systems and underlying reasons, with recommendations for national and international stakeholders

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By

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1. INTRODUCTION

Malawi is an important maternal health case study because of the recent finding that over the course of the 1990s, its maternal mortality ratio (MMR) doubled to one of the highest rates in the world. According to the 2000 Malawi Demographic and Health Survey (MDHS) the MMR is estimated to be 1,120 per 100,000 live births, nearly double the MMR of 620 per 100,000 live births estimated from the 1992 MDHS. How is it that maternal mortality could have doubled, from an already high rate, in the decade preceding the new millennium? This paper will discuss the factors and reasons for the decline in maternal health, as well as the changes and interventions required to reduce the current MMR to about 150 by the year 2015 (in accordance with the MDG target of reducing 1990 MMR levels by 75%).

The next section provides a background of Malawi, consisting of a brief description of its social, economic and health systems context. Section 3 then gives an account of the clinical causes of maternal mortality as well as analysis on the avoidability of maternal mortality. It describes how the high MMR is the result of poor health care, health systems deficiencies, poor access to care and harmful 'patient-related behaviour'. Section 4 discusses the underlying factors and reasons for these immediate causes of mortality. Section 5 discusses various options for improving maternal health under three sections. First, improving maternal health through an integrated health systems approach. Second, through improvements within maternal health programmes. And finally, improving maternal health equitably addressing poverty and social inequalities. Section 6 consists of a set of concrete recommendations for a number of stakeholders and role players.

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2. BACKGROUND TO MALAWI

2.1 Socio-economic context

Malawi, with a population of about 11.5 million, is one of the poorest countries in the world. Its estimated per capita gross national income in 2000 was only US$170 (World Bank 2002). It is a predominantly rural and agrarian society. 85% of the population lives in rural areas, mostly in small farm households.[ii] Malawi's economy is extremely weak and fragile. Tobacco exports and development assistance provide the bulk of its foreign currency.

65% of the population is defined as poor[iii] and unable to meet their daily consumption needs; over half of the population is food insecure. Food insecurity is a persistent and widespread reality for most households in Malawi. As recently as 2002, the country came close to suffering a catastrophic famine.

Malawi's life expectancy at birth is a mere 38.5 years and its Human Development Index ranks it 163 out of 173 countries in the world (UNDP 2003). A third of under-five year olds are chronically malnourished or stunted. There has been a modest decline in child mortality rates over the last decade, but one child in five still dies before their fifth birthday. The national HIV prevalence is 8.4%, and AIDS is now the leading cause of death in the 20-49 years age group (NAC, 2002). An estimated 500,000-800,000 orphans have lost one or both parents (NAC, 2003).

In spite of a high degree of generalized poverty, there are considerable socio-economic inequities. The richest 20% of the population consumes 60% of goods and services, compared to only 6% by the poorest 20%. These inequities have spatial characteristics (UNICEF/GOM, 2000). In urban areas the average income is 25 MK per person per day, while it is only 10 MK per person per day in rural areas[iv] (MDHS 2000). Poverty levels are highest in the southern region, and worse in rural rather than urban areas. Gender inequalities are another important feature of Malawi. Women are disadvantaged in terms of access to health, education, and agriculture services (Semu et al 2003). Significantly, recent trends point to a deepening of both aggregate poverty levels as well as inequality (DfID, 2003).

2.2 The health systems context

As to be expected from a poor country, Malawi's health system is grossly under-resourced. Per capita expenditure is now approximately $12, which is inadequate for the delivery of basic PHC. In 2002, an extensive exercise to determine the cost of delivering an 'essential health package' (EHP) of well proven and cost-effective health services that would deal with the main burden of disease, calculated a figure of $17.53 per capita per year. The figure excludes the cost of ART, central level management

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[ii] 40% of household land holdings are less than half a hectare (World Bank, 1998).
[iii] Based on a national poverty line used by the Integrated Household Survey utilising an accepted method of measuring per capita consumption poverty.
[iv] Exchange rate in 2000: 80MK = US$1.

and supervision of districts, central hospital activity and the running of a District Health Office. In addition, the costing model predicted that full coverage of the essential package in the next five years would not be realistic, and therefore only costed a 67% level of coverage for some services. As well as this, the figure included the cost of a relatively small amount of the needed capital investment in new health facilities.

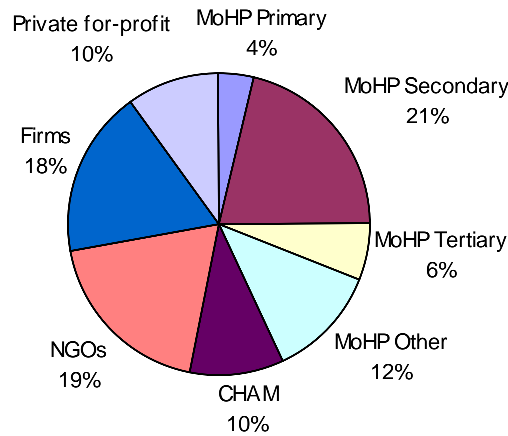
These exclusions from the costing model help to explain the relatively low cost of the EHP compared to figures of US$30-40 per capita to cover essential health services calculated by the Commission for Macroeconomics and Health, or of US$28 for the Uganda minimum package. Malawi's current health resource envelope is therefore completely insufficient for the delivery of a narrow package of essential health services.

Health services are provided by a number of different providers. 60% of 'formal' health facilities are government-run; and 26% of health facilities are mission facilities (mainly found in the rural areas). There is a small private-for-profit health sector limited mainly to the urban areas (including three private hospitals), as well as health services provided by private companies (MMoHP, 2003a). The mission facilities largely operate independently but collectively form a loose association called the Christian Hospital Association of Malawi (CHAM).

Other sources of healthcare include NGO projects, grocery stores and pharmacies, community-based distribution agents for family planning commodities and drug revolving funds operated by community volunteers.[v] The share of total health care expenditure in 1998/9 amongst different providers is shown in the diagram below (Figure 1).

[v] There is also a substantial traditional health sector. For example, approximately 23% of deliveries are attended by a traditional birth attendant (MDHS 2000) and most communities have a traditional healer.

Figure 1: Health expenditure in Malawi, 1998/9 FY



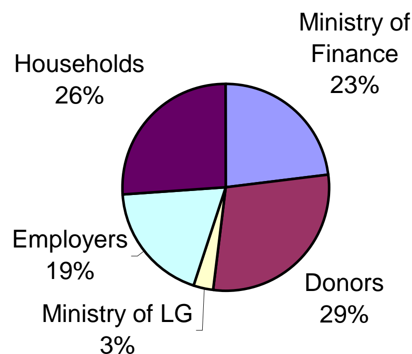
Source: Chart 4.2, National Health Accounts 2001.

The source of health care financing is shown in Figure 2. Twenty-six percent (26%) of health financing is from government revenue, of which 3% is through local government. Most government revenue is used to fund public sector health services, but a portion is used to pay for the salaries of Malawian staff working in mission health facilities. Donor assistance provides approximately 29% of the overall health sector resource envelope.[vi] These funds are either channeled through government, or to non-government health projects and mission hospitals.

Approximately 19% of funding is from the 'private' sector providing health care for employees (mainly on the large agricultural estates). The remaining 26% of total expenditure is from out-of pocket expenditure by households (MOHP, 1999). It should be noted that this pattern of health care financing reflects a period of time prior to the approved budget for Malawi's GFATM proposals. Although the Global Fund budgets are substantial, the flow of funds into the country has been relatively slow.

[vi] The 2002/03 budget included grants from 21 separate ODA agencies. There are also several international NGOs who bring external resources into the sector. These include Save the Children (US and UK), World Vision International, Concern Universal and Medicins sans Frontieres, among others.

Figure 2. The source of health care financing, 1998/9 FY



Source: Chart 4.2, National Health Accounts 2001.

Out-of-pocket expenditure consists of both the direct costs of accessing health facilities as well as the costs of user fees. Although most government facilities provide basic PHC services free at the point of delivery (MOHP, 1999), user fees are charged as a general rule in mission facilities.[vii]

Organisationally, the health system is divided into 27 districts. Previously, these districts were clustered into three health regions – north, central and southern. However, this intermediate organisational and management level of the health system no longer exists. Within this system, there are 4 urban central / tertiary health facilities; 22 government district hospitals; 18 mission hospitals and a network of government and mission run health centers, maternity units and dispensaries. There are 13,899 hospital beds in the country, 36% of which are in mission hospitals (CHAM). The hospital bed to population ratio is 1:842 population which is low/medium compared to other similar developing countries (Hornby and Oczan, 2004).

Health care resources are unevenly and inadequately distributed in Malawi. Only 46% of the population has access to a formal health facility within a 5km radius, and only 20% of the population lives within 25 km of a hospital (EHP document). Access is worse in the rural areas. There is a particularly significant mal-distribution of health personnel, which favours urban areas, and the secondary and tertiary levels of care. Half of Malawi's doctors work in its four central hospitals together with 25% of the nurses (MOHP 2003a). While the majority of Malawians live in the rural areas, 97% of government-employed clinical officers and 82% of government-employed nurses are in the urban

[vii] A study on outpatient paying patterns from 1995 indicates that 95% of all CHAM patients paid treatment fees, 19% paid associated health-service fees, and 22% paid for transport costs. In contrast, only a negligible percentage of MOHP patients paid treatment fees, only 12% paid associated health service fees and 9% paid for transport costs. However, the study also claimed that the actual level of fees were 'modest' (Franco-Miller et al., 1995).

areas (MOHP, 2003b). Therefore, although the aggregate level of health expenditure is already very low, the mal-distribution of health personnel suggests that health care resources in many rural areas could be as little as 10-20% of that required to provide a narrow package of essential health services.

As far as effective and good quality care is concerned, in general, the quality of PHC is poor in Malawi. An assessment of the peripheral health units in 2002 by a civil society health network found shortages of drugs in almost all hospitals and clinics (MHEN, 2002). Other problems with government health facilities include poor staff attitudes; patronage; long waiting times; and a lack of confidentiality (Kapulula et al, 2001; Chilowa et al, 2001; Khaila et al, 1999; Kabwazi et al, 2001; Ashwood-Smith, Bokosi and Matinga 1999). These deficiencies are worse for people living in rural and geographically remote areas. One study reported that 'the poor wait longer, receive fewer drugs and pay more in comparison with the wealthy' (MOHP, 2002b).

3. MATERNAL MORTALITY IN MALAWI

3.1 The clinical pattern of maternal mortality

A number of studies have helped to shed some light on the dramatic rise in maternal mortality. One of these was an in-depth confidential inquiry into 312 institutional maternal deaths[viii] that occurred in 2001 in the Southern Region of Malawi (Ratsma 2003). According to this audit, roughly two thirds of deaths (197) were direct obstetric deaths, whilst one third (107) had an indirect cause.

The majority of *direct* maternal deaths were due to sepsis, obstructed labour and ruptured uterus, obstetric haemorrhage (ante-partum and post-partum) and complications of abortion and eclampsia (Table 1). Anaemia and AIDS each accounted for about a quarter of all indirect maternal deaths (approximately 9% of all audited deaths). Meningitis, malaria and pneumonia were the next most common causes of indirect deaths.

Definitions of direct and indirect deaths
A maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management.
Maternal deaths are divided into:
Direct obstetric deaths - those resulting from obstetric complications of the pregnant state (pregnancy, labour, and the puerperium), from interventions, omissions, or incorrect treatment, or from a chain of events resulting from any of the above.
Indirect deaths - those resulting from previous existing disease or disease that developed during pregnancy and that was not due to direct obstetric causes but was aggravated by the physiological effects of pregnancy.

[viii] This audit did not include deaths that occurred in the tertiary hospital in Blantyre. There were 9,237 deliveries at this hospital in 2001, which included referred patients from districts hospitals in the region. The death profile from this hospital would therefore be expected to affect the overall picture.

Table 1: Causes of 197 direct institutional maternal deaths in the Southern Region

	Frequency	Percentage
Postpartum sepsis	62	31.5
Ruptured uterus / obstructed labour	47	23.9
Post-partum haemorrhage	25	12.7
Abortion complication	20	10.2
Eclampsia / PET	16	8.1
Retained placenta	10	5.1
Ante-partum haemorrhage	8	4.1
Complication from caesarian section / anaesthetic mishap	5	2.5
Ectopic pregnancy	3	1.5
Puerperal psychosis	1	0.5
Total	**197**	**100%**

(Source: Ratsma 2003)

Table 2: Causes of 107 indirect institutional maternal deaths in the Southern Region

	Frequency	Percentage
Anaemia	28	26.2
AIDS	27	25.2
Meningitis	23	21.5
Malaria	11	10.3
Pneumonia	7	6.5
Pulmonary embolism	2	1.9
Hepatitis	2	1.9
Ascites	2	1.9
Gastro-enteritis	2	1.9
Other	3	2.8
Total	**107**	**100%**

(Source: Ratsma 2003)

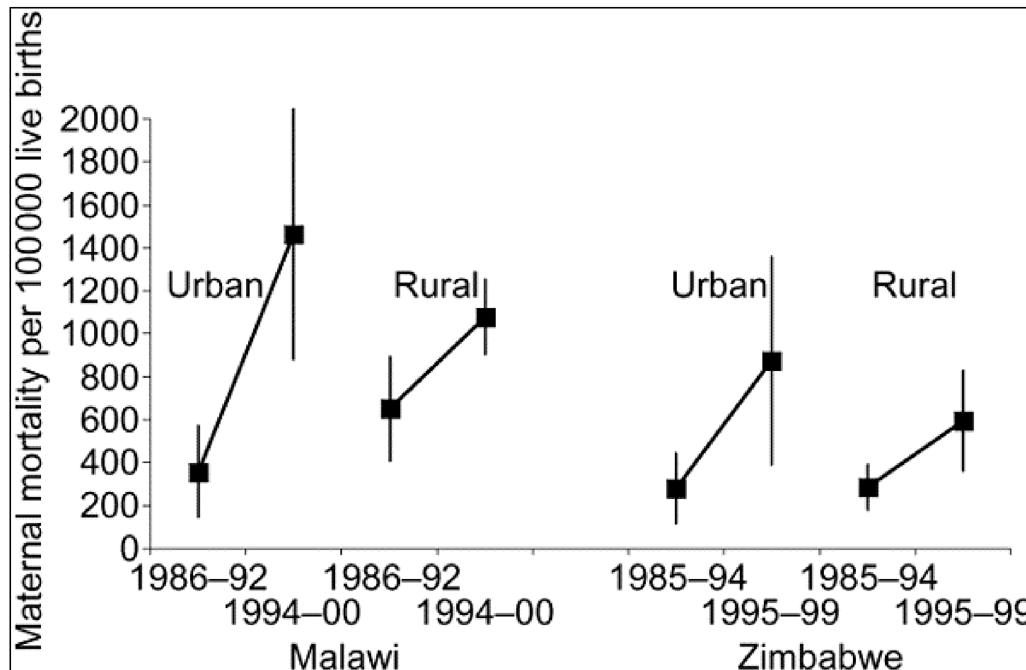
The precise impact of HIV/AIDS on maternal mortality may however be more significant than the figures suggested by the Southern Region audit. It is likely that some of the deaths due to sepsis were aggravated by HIV-related immunodeficiency. There is some evidence from other countries that mortality rates are higher in HIV positive pregnant women compared to HIV negative women (Sewankambo et al, 2000; Khan et al 2001; Ahmed et al).

In Malawi, the rise in maternal mortality documented by the two DHSs was also associated with a similar and significant rise in the adult female mortality rate thought to be due to AIDS, which lends weight to the argument that AIDS is a contributory factor to the rise in MMR (Bicego et al, 2002). In addition, a comparison of the worsening MMR in rural and urban areas shows a much greater deterioration in maternal health in urban areas compared to rural areas, one explanation of which is the generally higher HIV prevalence in urban areas (Figure 3).

On the other hand, one would expect that the rise in AIDS attributable deaths in the pregnant population would be less than in the general female population because pregnant women are

generally healthier and at less advanced stages of HIV infection (Ronsmans et al, 2001; Zaba and Gregson, 1998). It has also been suggested that there may be a tendency to report the deaths of women of reproductive age as maternal deaths to avoid the stigmatisation associated with a possible AIDS death. This might be a further explanation for the alarming rise in MMR.

Figure 3: Maternal mortality ratio trends in Malawi and Zimbabwe during the 1990s (period estimate with 95% confidence limits)



(Source: Bicego et al, 2001)

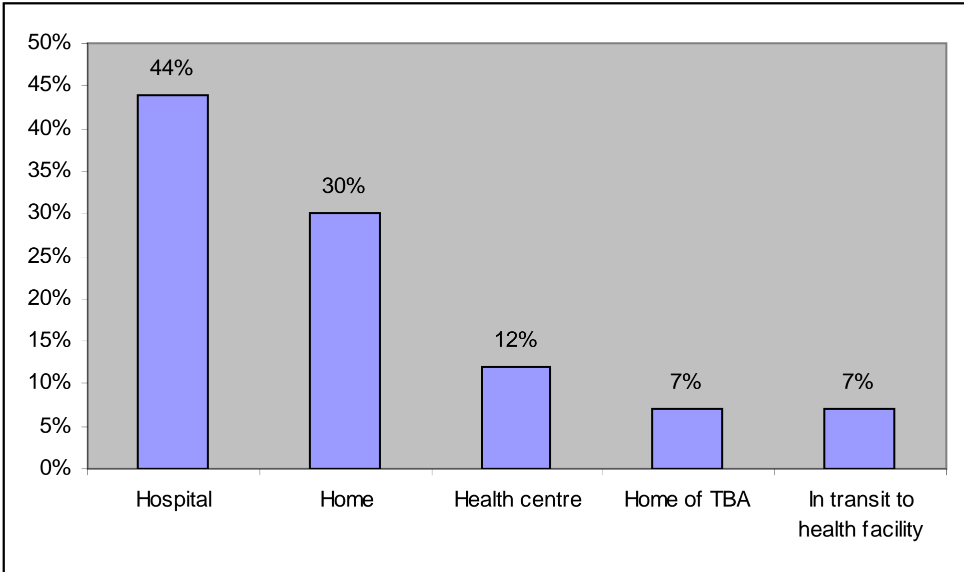
The precise direct contribution of the HIV/AIDS epidemic to the maternal mortality ratio cannot therefore be measured with great precision. Nonetheless, the findings from the audit, the two DHSs and the literature would suggest that the rise in MMR is *partially* attributed to HIV/AIDS.

In order to explore changes in the pattern of clinical causes of maternal death over the last decade, the Southern Region audit findings were compared to a 1989 study of 214 maternal deaths from twelve hospitals in all three regions of Malawi (Driessen, 1989). The comparison showed no significant difference in the proportion of direct and indirect deaths, and suggested an increase in the frequency and proportion of deaths due to puerperal sepsis, PPH, AIDS, meningitis and malaria.[ix]

[ix] It should be noted that the two studies are not strictly comparable due to different population groups being compared and non-standardised procedures for classifying maternal deaths.

Another limitation of the Southern Region audit is that it does not take into account maternal deaths occurring at home. As 44% of births take place either at home or in transit to a health facility (MDHS 2000), it can be expected that a significant number of maternal deaths occur without coming into contact with a health facility. The importance of considering these deaths is shown by a smaller-scale community audit of all maternal deaths in Nankumba (population 62,327) which revealed that approximately 44% of maternal deaths occurred either at the patient's home, the home of a TBA or in transit to a health facility (see Figure 3). A high proportion of these community-based deaths are due to obstetric haemorrhage, ruptured uterus, obstructed labour, and complications of abortion.

Figure 4: Place of maternal death in Nankumba



According to the 1992 DHS, 43% of births took place at home. The corresponding figure of 44% for the 2000 DHS indicates that no progress was made in the intervening years to increase the rate of institutional delivery.

3.2 Avoidability of maternal deaths

In addition to determining the cause of death, the Southern Region audit evaluated the quality of care associated with each death, and found that the quality had been 'sub-standard' in 62% of deaths.[x] Of the direct maternal deaths, 67% (107/160) were considered to have had sub-standard care, corroborated by the fact that 62% of direct maternal deaths occurred at least two days after admission.

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[x] The judgement of the quality of care was made by a committee that had to reach consensus. Quality of care was classified as 'substandard' where there was departure from generally accepted standards of satisfactory care.

Of the sepsis deaths, 49% were associated with sub-standard care (e.g. a delay in starting treatment, or the wrong treatment being administered), with deficient hospital care being the most common principal avoidable factor.[xi] In 29% of sepsis deaths a delay in reporting to the health unit contributed to the death. Half the post-partum sepsis deaths were associated with operative delivery, which suggests poor peri-operative infection control procedures. A lack of antibiotics was *not* recorded as a problem. However, some clinicians believe that many of the available front-line antibiotics are no longer effective due to the development of microbial resistance (Rijken, 2004).

The quality of care was judged to have been substandard in 64% of cases of death due to ruptured uterus / obstructed labour. Four patients were recorded as having ruptured in hospital. One patient was kept on a ward for 30 hours before being found with a ruptured uterus. Lack of availability of blood was recorded as contributing to about a third of deaths due to ruptured uterus. A delay in reporting to the health unit contributed to 70% of these deaths.

Of the deaths due to obstetric haemorrhage, 48% of cases were associated with sub-standard care. Deficient hospital care was the principal avoidable factor in 30% of these cases, and delay on the part of the patient in utilising the health service was the principal factor in 21% of deaths. In 12% of cases the principal avoidable factor was a transfer problem between health units. Lack of availability of blood contributed to a third of these deaths.

In 54% of the *indirect* deaths, the quality of care was judged to have been sub-standard. As with the direct obstetric deaths, this is corroborated by the fact that a majority of indirect deaths also took place at least two days after admission. Although deaths due to malaria and anaemia should be largely considered avoidable through the use of prophylactic anti-malarials and iron-folate tablets, the avoidability of deaths due to AIDS, meningitis, pneumonia, pulmonary embolism and hepatic disease is much more difficult to ascertain. In the absence of anti-retroviral treatment services, deaths due to AIDS might, for example, be considered unavoidable. On the other hand, it might be argued that good medical management, even in the absence of anti-retroviral treatment, should be able to prevent HIV-related mortality except in the instance of severe immunosuppression.

When all maternal deaths are combined, a principal avoidable factor was identified for 226 cases, and judged to be as follows in Table 3. Deficient hospital care was the principal avoidable factor in 38% of deaths, and deficient health centre care in 5% of deaths. Delay on the part of the patient in utilising the health service was the principal avoidable factor in 15% of maternal deaths. Only in 5% of women was a 'contraindicated pregnancy' the principal avoidable factor.[xii] 10% of all women who died were para six or more and 9% were 35 years old or more. Approximately 24% of women who died from both direct and indirect obstetric causes were teenagers.

[xi] This was determined by the audit committee who came to a consensus as to what could have been done to avoid the maternal death.

[xii] A contraindicated pregnancy refers to a pregnancy in a woman who would have been medically advised to avoid pregnancy because of significant health risks prior to the conception.

In summary, 46% of avoidable factors were related to sub-standard care or deficiencies within the health system. High maternal death rates are probably the result of a convergence of multi-level health care and systems deficiencies, poor access to care and patients' behaviours.

Table 3: Principal avoidable factor in institutional maternal death audit in Southern Region, 2001

	Frequency	Percentage
Deficient hospital care	118	52.2
Patient's delay	48	21.2
Pregnancy contra-indicated	17	7.5
Deficient health center care	16	7.1
None	12	5.3
Other patient-related problem	7	3.1
Transfer problem between health units	8	3.5
Total	**226**	**100**

(Source: Ratsma 2003)

When the findings of the Southern Region audit are compared to the 1989 study, it suggests that there has been no real change in the proportion of 'patient delay' and 'patient-related' factors. However, it does suggest an increase in 'deficient health centre and hospital care' and a slight increase in transfer-related problems.

Other research conducted over the same period in the Southern Region helps to provide a more detailed understanding of the nature of deficient health care. For example, one study found very unhygienic clinical areas and deficient aseptic practices, which may explain the high proportion of puerperal sepsis deaths (Maclean, 2000). Another study showed that partograms, a basic tool used to monitor progress of labour, were often non-existent, or used ineffectively or incorrectly (Ashwood-Smith and Simpson, 2003). Research conducted in two districts in 1999 observed that in government health centres, less than 20% of post-natal women's charts were correctly completed, even following caesarean sections (Ashwood-Smith and Simpson, 2003).

Aspects of antenatal care that may influence maternal mortality rates have also been documented. For example, one study of care in the Blantyre district in May-June 2001 found an incomplete coverage of pregnant women with malaria prophylaxis and many health care workers being unclear about the correct procedure for prescribing malaria prophylaxis (Coombes et al, 2003). According to the SMP, antenatal records are hardly ever completed correctly and syphilis tests are only available in hospitals and not routinely done. Thus, while there is reasonably good coverage of antenatal care, the quality of care provided is poor and few services provide accepted evidence-based good practice.

Finally, although there has been a rise in the uptake of modern family planning methods from 7% to 26% in the period between the two MDHSs, unmet family planning need and fertility rates (6.3 live

births per woman) remain high. The fact that 24% of the maternal deaths covered by the Southern Region audit occurred in teenagers, implies that there is room to reduce maternal mortality through primary pregnancy prevention efforts.

4. EXPLAINING THE IMMEDIATE AND UNDERLYING CAUSES OF MATERNAL MORTALITY

This section describes the immediate patient / community-related and health service related factors that underlie the maternal mortality rates in Malawi. It then describes a set of intermediate factors, followed by a deeper set of underlying factors.

4.1 Patient and community-related factors

Skilled attendance at birth and access to high quality emergency obstetric care are essential to the reduction in maternal mortality. However, in Malawi there is a low rate of institutional deliveries. The caesarean section rate of about 3% is another indication that the access to and uptake of modern obstetric care is low. [xiii] Furthermore, even when obstetric care is accessed, there is evidence of significant delays in reaching health facilities. There are several patient and community-related reasons for this.

The sub-standard care described earlier suggests that the low institutional delivery rate may be due in part to women choosing not to deliver in health facilities because of previous experience with poor quality care, or a perception and knowledge of poor quality care. In one study from the Southern Region, many women revealed that they had been mocked during labour, shouted at and even occasionally struck if they cried out in pain (Ashwood-Smith and Simpson, 2003). These kinds of experiences are likely to be shared within a community and result in women feeling disinclined towards delivering in the same health facility.

Cultural beliefs about pregnancy and childbirth also play an important part in the high rates of home births, even when birth complications occur. For example, beliefs that obstructed labour is associated with infidelity result in some women being kept in prolonged labour at home until there is a 'confession' of infidelity (Ashwood-Smith, Coombes and Bokosi, 2004). Another cultural belief is an equilibrium theory based on a hot-cold balance which dictates who can and can't come into contact with a pregnant woman, resulting in instances when men are unable to help transport a sick pregnant woman to hospital. Even when women deliver in a health facility, certain traditional practices may reduce the safety and effectiveness of maternal health care. For example, there is a reported practice of

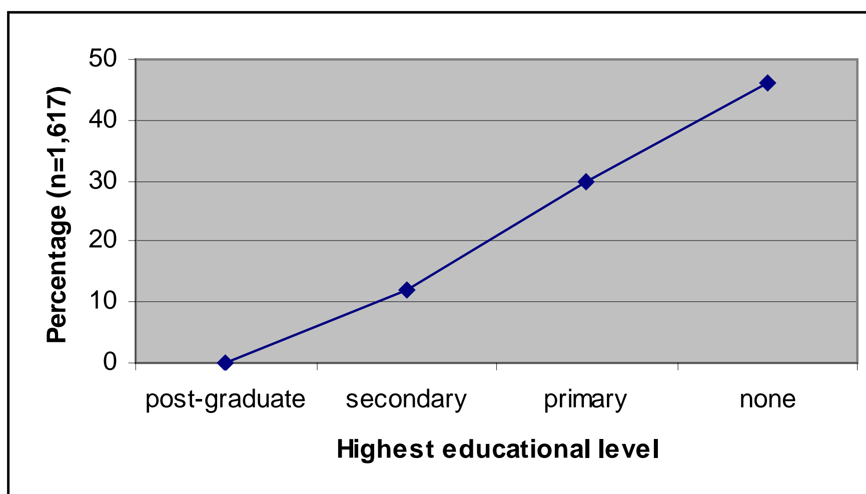
[xiii] Maternal health experts would expect Malawi to have a population-based caesarean section rate of between 5-10%.

consuming local herbs, which contain oxytocin derivatives that stimulate uterine contractions, without the knowledge of health staff.

Added to these cultural practices is a lack of knowledge about the complications of pregnancy and childbirth. For example, a survey of community members in Blantyre and Nsanje found not one respondent who associated fever or fits with complications of pregnancy. The relevance of knowledge allowing an informed choice about place of delivery to be made is underscored by the fact that there is a significant correlation between knowledge about the danger signs of pregnancy with the likelihood of delivery in a health facility.

There are also gender-related imbalances in decision-making that add to the vulnerability of women. Malawi is mainly a patriarchal society dominated by men, with high levels of social disempowerment amongst women. While only 49% of women are literate, the literacy rate is 72% for men (MDHS 2000). Research on the epidemiology of HIV has further brought to light the issue of sexual violence perpetrated against women (Matinga and McConville, 2002). By contrast, when women are educated and improve their social standing, they are better able to make decisions that influence their health. In Malawi, educated women are more likely to seek care in a maternity unit (see Figure 4). Although this may be due to the fact that a higher proportion of educated women live in urban areas where health facilities are more accessible, it is likely that a higher education status also allows women to more successfully access the household resources required to deliver in a health facility.

Figure 5: Unskilled delivery by education status (n=1,617; p=0.005)



(Source: Ashwood-Smith, Coombes and Bokosi, 2004)

As 65% of the population live in poverty, financial barriers represent a further barrier to accessing health care. User fees for delivery at mission hospitals are said to vary from 50K to 400K[12] and are a

partial cause of this financial burden. Even where services are provided free of charge (in all public health facilities), the costs of accessing the facility present a significant barrier to care. In one study (Mann et al., 2002), the direct and indirect costs of accessing a TB diagnosis (in a district where public health facilities were within 6km and where user fees do not exist) was found to be on average US$13. For the non-poor this was equivalent to 124% of their total monthly income. For the poor, the cost was equivalent to 248% of their monthly income, or 584% after food expenditure.[xiv]

Poor transport services add to the financial barriers to care and compound the large distances that some women have to travel to reach a health facility. In one study of two rural districts, 65% of post-partum respondents said that they had waited longer than 2 hours for transport whilst in labour, with 30% of women having waited longer than 4 hours. Many labouring women even end up walking to health centres, either because of a lack of transport or because transportation was unaffordable (Ashwood-Smith, Bokosi and Matinga 1999).

In summary therefore, a number of social, cultural and economic community-related factors interact with poor quality maternal health services in keeping the rate of institutional deliveries at a low rate. Quantifying the relative attribution of these different factors is not possible with the existing data. However, the evidence suggests that a multi-pronged approach addressing each of these factors would be required to make significant improvements in the institutional delivery rate.

4.2 Maternal health service factors

Available, accessible and acceptable health facilities and skilled birth attendants

The maternal mortality audit identified delay in accessing a health facility as being a contributory factor in more than 15% of maternal deaths. On the surface, access to primary level health facilities and ante-natal may be judged to be reasonable. 46% of the population live within a 5km radius of a health facility, and according to the 2000 MDHS, 93% of delivering mothers received some form of ante-natal care. However, the availability of emergency obstetric care (EOC) is poor. Only 20% of the population lives within 25 km of a hospital, which could treat all obstetric emergencies (MoHP, 2002e).

Of those facilities that do exist, many have poor standards of physical infra-structure, which may act as a further deterrent to facility-based delivery. For example, 21% of women delivering at a hospital in Blantyre had no bed prior to delivery, 19% had no bed following delivery and many complained of a lack of privacy during labour (Ashwood-Smith and Simpson, 2003). Across the country, there is a significant backlog of capital repairs and refurbishments for existing facilities in the health sector.

Furthermore, as described earlier, attending a health facility does not guarantee adequate antenatal or intra-partum care. One reason for this is that there is an absolute shortage of nurses, midwives and doctors (Ostergaard, 2003). Many health centres are staffed by only one enrolled nurse-midwife. In the Southern Region, 14 out of 180 maternity units (8%) have been closed due to lack of staff. Although staffing shortages are particularly acute in the rural areas, they also occur in district and central hospitals. For example, Zomba Central Hospital with a busy labour ward (11 deliveries / day) had at one time, only one midwife on duty in the delivery room. In other health facilities, unskilled and untrained staff are left to conduct deliveries.

Compounding the low staffing levels and poor motivation is a relatively low skills and knowledge base amongst staff. In one survey of staff from two districts in the Southern Region, no one was able to mention all five key direct obstetric complications, and 75% of enrolled nurse midwives and medical assistants admitted to not possessing adequate skills to treat post-partum haemorrhage or sepsis (Ashwood-Smith, Bokosi and Matinga, 1999). In another study, the low uptake of intermittent presumptive therapy for malaria was partly attributed to clinic staff not understanding the malaria policy guidelines accurately (Coombes et al, 2003). This corroborates findings from the Southern Region maternal death audit that identified mistakes in the clinical care of pregnant women.

Maternal health programme design

Programmatically, maternal health has received strong technical support and strategic guidance, including through the presence of a large donor-funded reproductive health programme. This has resulted in a large number of training initiatives as well as the development of many maternal health policies and clinical guidelines. However, until recently, approaches in Malawi have tended to focus on improving ante-natal care, training traditional birth attendants and identifying high-risk women, possibly at the expense of emphasising the importance of all women having access to emergency obstetric care. Although ante-natal care and screening for risk factors are an important part of good obstetric practice, and can help reduce the incidence of maternal deaths, it is vital that effective emergency care can be provided to pregnant women when they need it. The growing significance of HIV/AIDS as a cause of maternal mortality also means that there is a need to improve access to medical care for pregnant women if the MMR is to fall.

However, although the relative over-emphasis on ante-natal care and risk identification may have limited improvements in maternal health outcomes in the 1990s, it does not explain the dramatic rise in maternal mortality in Malawi. As explained earlier, HIV/AIDS must be a partial explanation for this. However, as shown by the findings of the Southern Region maternal death audit, there was an actual deterioration in maternal health services. The following section will discuss factors related to the

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[xiv] These costs involved multiple trips to a variety of providers, and could take up to 22 days of work being lost as a result.

broader health care system that are likely to have contributed to this deterioration in standards of maternal health care.

4.3 Intermediate factors

Health personnel capacity

The inadequate number of midwives and other skilled birth attendants is part of a wider shortage of skilled health personnel in Malawi where an estimated 50% of Ministry of Health and Population (MOHP) posts are currently unfilled (MoHP, 1999). There is only 1 physician per 50-100,000 people (compared to the WHO recommendation of 1:12,000), and the nurse-to-population ratio is approximately 1:3,500 compared to an average of about 1:1,000 for Africa in 1998.

One of the reasons for the low staffing levels is the loss of staff to the international market for trained health workers (Martinez and Martineau, 2002). Between 1999 and 2002 the MOHP was estimated to have lost 278 registered nurses and midwives overseas while its training institutions produced only 258 (Aitken and Kemp 2003). The UK nursing authority reports Malawi nurse registrations increasing from one in 1999 to 45 in 2001 (Hornby and Oczan, 2003). An estimated 100 experienced nurse-midwives were lost to other countries in 2002. Data from the Nurses and Midwives Council of Malawi indicates that the losses are mainly of the most highly trained cadres (NMCM, 2003).

Another problem has been the effect of HIV/AIDS on the attrition of health personnel due to high rates of absenteeism, illness and death (GoM/UNDP, 2002). Nurses are also leaving the profession because of fear of HIV infection (Aitken and Kemp, 2003), a fear that is given validity by a recent finding that more than half those health workers giving vaccinations or curative injections had suffered at least one needle-stick injury in the preceding 12 months (GoM, 2003).

On the supply side, Malawi's capacity to replace lost health workers by producing new ones has also been under pressure. The staff establishments of training institutions themselves are being denuded by the general attrition of skilled personnel from the health sector. Furthermore, there are also limits to the size and capacity of some training institutions. For example, the College of Medicine in Malawi only graduates approximately 20 doctors a year (96 have graduated since it opened in 1991).

Attempts to increase the volume of new health workers are also constrained by inadequate funding. An ambitious HR plan produced by the MOHP in 2000 could not be implemented because of a lack of funding. Even an emergency training plan, which targeted the training of priority cadres of staff, failed to gain sufficiently large commitments of funds in the timeframes required (Aitken et al, 2003).

In addition to the international migration of health personnel, there is also an 'internal brain drain'. Generally speaking skilled health workers tend to move from the rural to urban areas, as well as from the public sector to international NGOs, research projects and para-statal agencies that provide better salaries, better working conditions or both.[xv] Half of Malawi's doctors are working in its four central hospitals, together with 25% of the nurses (MoHP, 2003). Of the 30 nurses that graduated from Kamuzu College of Nursing in the 2000/01 year, only 2 joined the public sector; the rest went to NGOs.

Of the staff who remain, particularly those in the under-resourced rural areas, many are demoralised, demotivated and complain of a lack of supportive supervision, low wages, lack of recognition and appreciation, high work loads, poor working conditions and few career prospects. One of the outcomes of these are negative feelings and attitudes towards patients - staff who have acknowledged being rude to patients cite de-motivation, poor working conditions, low salaries, high patient loads, long working hours and poor career development opportunities as underlying reasons (Hornby and Oczan, 2003; Hornby and Lungu, 2002).

Finally, declining standards in the country's schools have meant that secondary schools are increasingly unable to produce enough entrants for medical, nursing and midwifery programmes due, among others, to weak science and maths education (MMoHP, 2002b). Training institutions are running below capacity for some courses because of a lack of suitably qualified entrants.

Health systems organisation and management

The Southern Region audit of maternal deaths indicated that the inability of the health system to refer high-risk and emergency patients to appropriate levels of care, contributed to poor maternal health outcomes. In some instances, the lack of transport and inadequate tele-communications infrastructure undermined the concept of a tiered health system.

Rationally organised tiered health care is also undermined by the organisational fragmentation of the health care system. Malawi's health system consists of a patchwork of public sector services, mission hospital services, donor programmes and NGO projects. Even the CHAM facilities operate as a network of autonomous facilities; although there is some shared administration, each mission facility operates independently with, for example, different user fee schedules and clinical policies.

Therefore, within a district, clinics, health centres and hospitals fall under different authorities. Although all health districts have a government-employed District Health Officer (DHO) who is nominally responsible for the coordination and supervision of all district health services within his/her

[xv] In one example, a research institution has employed over 80 nurses, many of whom used to be health care providers in the public health system. Wages in the non-government sector can be 8–10 times higher than in government.

boundaries, in practice, many NGOs and mission facilities operate independently of the DHO, and in parallel to government health services.

The capacity to organize services effectively is also hampered by the lack of management capacity at the district level due to many of the human resource problems described earlier. Low pay and high staff turnovers also mean people being put into management positions soon after completing their basic under-graduate training.

According to the Working Group for Hospital Autonomy, poor hospital performance as manifested by inadequate drugs, medical and other supplies, poor maintenance of buildings and equipment, low staff morale and generally poor standards of care, are symptoms that originate from a deeper set of causes, including hospital managers' lack of management capacity and authority to make key decisions, ineffective management systems, and a culture of top-down rules and regulations (WGHA 1997).

Where there may be capacity at the district level, DHOs who should be at the forefront of developing locally owned and relevant plans to improve the efficiency and quality of health care delivery, are often hamstrung by bureaucratic inefficiencies and forced to work without clear budgets (Kadale Consultants 2002). More often than not, districts act as conduits for the implementation of top-down plans and projects determined centrally, or by donors and international NGOs.

Health sector leadership and strategic planning

Informants from within Malawi attribute the problems with the health system to a lack of resources and a failure to implement policy, as opposed to a failure of policy development per se. The clear planning around the EHP, Malawi's quick and successful submission of a plan and budget to the Global Fund for AIDS, TB and Malaria (GFATM) as well as its wide array of programmatic plans and clinical guidelines suggest reasonable policy development capacity. There seems however to be a weakness in operational planning, management and efficient administration.

One illustration is that in spite of a long-standing awareness of the human resource crisis, there is still incomplete information on current staffing levels (Ager et al, 2003; Aitken and Kemp, 2003), as well as administrative inadequacies that compound the problem (for example, taking six to twelve months to replace a health worker who has died or left the service). There have also been well documented failings with the management of the accounting and procurements systems, and of the Central Medical Stores. One review of human resources described minimal amounts of management training as well as the role and definition of managers within the service being ill defined (Hornby and Oczan, 2003). Such failings in the basic bureaucracy of the Ministry of Health undoubtedly have negative effects on the quality of care provided.

These problems are partly a result of inadequate human capacity. For example, it has been estimated that there are less than six people in the civil service who are trained and specialised in human resource planning (Kathyola 2003). In addition, a recent stock and flow analysis conducted by the MoHP Planning Unit found that most middle level management posts had been unfilled for some time, particularly in the Planning and Administration units (MoHP, 2002c).

Secondly, poor remuneration coupled with many civil servants operating at levels beyond their capacity has resulted in demotivation and demoralisation, and consequently poor performance. And finally, a culture of patronage and corruption undermines the rational and rules-based under-pinnings of the bureaucracy. According to one informant, district health services have been known to fall into a state of "total collapse" due to corruption by the DHMT.

Malawi's status as a poor and indebted country has also resulted in a great degree of donor dependency, and has left the country susceptible to severe external, economic shocks, which can make long-term and confident strategic management difficult. In addition, the bewildering array of fragmented, donor-funded projects and the burden of separate negotiations around different agendas and timeframes creates major obstacles to strategic management that would challenge any organisation. The design, appraisal, management, monitoring, and evaluation requirements of individual projects are immense and tend to overburden the government bureaucracy.

A tendency for donors to stake their claim on particular districts or vertical projects, with their own health priorities, training thrusts, information requirements, and financial systems, with little regard for national-system requirements (Picazo, 2002; Hornby and Lungu, 2002) also undermines the capacity for effective and integrated management.[xvi] Donors have also been guilty of funding capital projects without due consideration of the recurrent cost implications (Picazo, 2002)

The reluctance of donors to support public sector recurrent and salary costs has led to expatriates and consultants being placed in key posts within the MOHP, creating an unsatisfactory situation where staff may be accountable to different institutions, and where the resulting inequities in salaries and allowances between externally supported and government staff undermine good working relations (Aitken 2003).[xvii]

HIV/AIDS

The effect of HIV/AIDS deserves special attention. Apart from its direct effect on increasing maternal mortality, HIV/AIDS is one of the causes for the high attrition rate of personnel from the health sector.

[xvi] Donors have also tended to locate in better-off areas, with remote districts having little access to donor-funded services

[xvii] The use of non-government sub-contractees for project management and external technical assistance also increases the transactional costs of the donor assistance programmes and raises questions about wasteful expenditure and a culture of exploitative or self-serving industry of technical health consultancies.

In addition, it has increased the demand for health care in such a way that it has resulted in the displacement of some health services. Hospital-based studies have shown that HIV-related conditions account for 40% of all in-patient admissions, possibly crowding out the delivery of other services.

The increasing funding, energy and attention being paid to HIV/AIDS services, in particular ART, is resulting in a relative de-prioritisation of other health policies and services. The GFATM requirements for quick outcomes and performance-based funding have introduced an enormous pressure to reach annual targets. Where health services are currently understaffed and struggling to provide existing services, the introduction of new services for HIV/AIDS cannot be seen as additional, but will be at the expense of some other service area (Kemp et al, 2003).

Because of the urgent imperative to expand access to treatment, funds ear-marked for ART may result in a reliance on the private and non-government sector, which in turn may accentuate the internal brain drain of staff from the public sector, as well as further increase the public sector's burden of having to better coordinate activities in the health sector.

What is particularly worrying is that the burden of addressing HIV/AIDS is not as great now as it was in the 1990s when the MMR was lower. Although there has been additional funding to support the expansion of ARV treatment, the funding will not translate into the required expansion of health personnel because of the lack of supply and the inadequate allocation of AIDS-related funding to health personnel salaries.

4.4 Underlying factors

The previous sections of this report have focused on Malawi's health system. This section now draws attention to the broader political, economic and social context.

Economic and political context

The state of health in Malawi is inextricably linked to the state of poverty and socio-economic development. Poverty impacts on Malawi's maternal health status at the individual, household and health systems level through a number of pathways. At the household level, poverty constrains access to health facilities and the consumption of health care. At the health systems level, health expenditure falls far short of that required to finance a minimum essential package of health services and to adequately remunerate health personnel. At the country level, Malawi is vulnerable to the loss of its few skilled health workers to richer countries and is unable to adequately fund its education sector. Its dependence on donor funding undermines the development of strong local leadership in the health sector and leaves Malawi susceptible to the effects of multiple and fragmented donor and non-government projects.

Macro-economic factors and broader development policies are therefore critical to any effort to improve maternal health. Understanding why Malawi is so poor and what can be done to lift the country out of its current levels of poverty must be taken up as a challenge by anyone with an interest in Malawi's Millennium Development Goal health targets.

One reason that Malawi is poor is that it failed, for many reasons, to develop itself economically following independence. Today its economy remains poorly differentiated and heavily reliant on the agricultural sector, in particular on tobacco as a cash crop. Although there is potentially room to improve Malawi's agricultural earnings, there has been a gradual decline in the market value of agricultural commodities (Jaffee 2003), as well as the capture of markets by international companies.

As the world has become increasingly globalised and economically integrated, prospects for development become smaller for countries such as Malawi that are faced with having to compete with richer countries on an unlevel playing field. The country is furthermore susceptible to external shocks to the economy. An economic slump in 1994/95, for example, resulted in a severe contraction of government health spending, from which the country has still not recovered. Although the decline in government expenditure was cushioned by a rise in donor funding, real per capita health expenditure (at constant 1995 prices) actually dropped from Malawi Kwacha 45.1 in 1994 to MK40.9 in 1998 (Picazo, 2002).

The roots of Malawi's economic insecurity go back many years, and include the failed and corrupt practices of the post-independence government of Hastings Banda. Although the country's GDP grew at an annual rate of 6 percent in the 1970s, much of this was squandered on the enrichment of a small elite.[xviii] Large parts of the population did not benefit. The Hastings regime also presided over the period of unscrupulous lending and borrowing in the 1970s and 1980s that saddled the country with a massive and unsustainable debt. Apart from constraining social sector budgets, the debt burden resulted in Malawi being subjected to the economic prescriptions of the International Monetary Fund's (IMF) and World Bank's (WB) structural adjustment and macroeconomic programmes. These prescriptions not only had a devastatingly negative impact on reducing public expenditure on health, education and water delivery (Schoepf, Schoepf & Millen, 2000; Breman & Shelton, 2001), but then failed to deliver consistent GDP growth, or increased foreign direct investment.

A good example of the combined effect of poor governance and bad adjustment is found in the agricultural sector. After independence, a notable policy of the Hasting's government was the alienation of customary land into the hands of a small group of large landowners who produced cash crops on large estates. During the structural adjustment period of the 1990s the World Bank actively encouraged estate-led growth and continued the neglect of small, food producers on customary land and subsistence farmers (Harrigan, 2001; Chalira, 1993). The legacy today is intensified pressure on

[xviii] Hastings was said to have personally controlled large parts of the economy himself.

land, declining soil fertility, limited off-farm and non-agricultural income-generating opportunities that have led to poverty and economic vulnerability being entrenched in so many households (Devereux, 2002). The subsidisation of agriculture in Europe and North America, and the consequent dumping of cheap grain in southern Africa has further hindered the development of a viable farming sector in Malawi.

The injustice of the debt burden on millions of people in many of the poorest countries eventually culminated in the HIPC initiative. However, while the HIPC initiative creates some relief of the debt burden, a closer analysis reveals significant shortcomings in the process. For example, while Malawi is expected to receive in 2004/5 K4.63 billion in the form of debt relief, it will still need to raise K5.5 billion for debt repayments (DfID, 2003). Even with full HIPC relief Malawi's debt service would amount to more than 10% of government revenue after 2002. According to Jubilee Research, the envisaged debt relief under the enhanced HIPC initiative is insufficient to bring Malawi's external debt to sustainable levels, and the country's debt-to-export ratio will remain above 150% for more than a decade, even with the most optimistic projections of Malawi's future economic performance.

Sectoral policies

As highlighted earlier, a number of factors outside the health care sector, such as female education and literacy, have an important bearing on maternal health outcomes. In terms of education, there has been some progress made in increasing the enrollment of girls in primary and secondary schools, which will bring important health dividends in the future. However, in real terms, budgets in the education sector (and other social development sectors) remain just as inadequate as they are in the health sector, and equally dependent on overseas aid.[xix]

Another important policy issue is the lack of household food security, which contributes to both poverty and poor health. Apart from the problems described earlier, the decimation of the agricultural labour force by HIV/AIDS and raised household dependency ratios underlie a perilous and chronic state of household food insecurity, exemplified by the food crisis of 2002, which was precipitated by a drought. The maternal mortality audit conducted in the Southern Region was of deaths that occurred in 2001. It is possible that an audit of deaths in 2002, during and after the food crisis, might have shown an even higher number of deaths due to delayed access in seeking care as households struggled to maintain food on their tables.

The development of roads, transport and tele-communications are other areas of public policy that have affected maternal health outcomes. This paper is unable to provide a detailed analysis of all the factors underlying Malawi's maternal health. What is important is that Malawi's high MMR is viewed as a consequence of factors operating at a variety of levels (the household, clinic, hospital, district,

country and global levels), as well as a mix of clinical, biological, environmental, social, cultural, political and economic factors.

5. DISCUSSION

5.1 An integrated health systems approach to maternal health improvement

The analysis of the clinical causes of maternal mortality reveals that the large majority of deaths are preventable through basic, tried and tested obstetric health care services. Even if a significant proportion of the maternal deaths are due to AIDS, good basic medical care as well as treatment with modestly priced anti-retrovirals, should allow a much lower MMR in Malawi.

The scale of the health systems deficiencies in delivering these services suggests that the deplorable doubling of maternal mortality is as much a crisis of the entire health system as it is a crisis of maternal health services. Malawi's entire health system has been in a state of progressive deterioration over the past two decades due to chronic under-investment, structural adjustment programmes and the gradual attrition of health personnel. The Malawi Health Facilities Survey conducted in 2002 indicates that 90% of facilities do not satisfy the requirements of the EHP. Added to this is the growing effect of HIV/AIDS on the health care system.

This is echoed to some extent by the experience of other key health programmes. For example, worsening economic conditions and the indirect effect of HIV/AIDS on the capacity of the health care system have been described as threats to Malawi's TB programme (Harries et al, 1996; Harries et al, 2001). A recent analysis of the resources available to the TB programme revealed serious omissions in the overall care of TB patients as well as shortages of medical, nursing, laboratory and radiography personnel, and diagnostic equipment (Harries et al, 2002).[xx] There has also been a decline in immunisation coverage (MMOHP 2003c).

One of the biggest challenges to the reduction of maternal mortality in Malawi will therefore be in determining how to organise a focussed and targeted approach to improve maternal health care without creating an 'over-verticalised' approach that inappropriately competes with other health programmes, undermines a comprehensive approach to health systems development, or runs the risk of piecemeal or unsustained maternal health improvements in limited areas (Brown, 2001; Narayan, 2001). This is particularly important given the coincidence of a reduction in public sector financing in 1994/95 with a recent trend for donors to strengthen vertical programmes (Picazo, 2002). In addition, the expansion of ART in the context of an under-resourced health care infrastructure may result in a

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[xix] There has been a slight increase in expenditure on the social and development sectors as a percentage of GNP over the last couple of decades. There has also been a decline in military expenditure from 1.3% to 0.8% of GDP.

vicious cycle involving the weakening of public sector stewardship and the fragmentation of the public health system (McCoy et al, 2004).

The importance of a degree of effective vertical support from the centre of the health care system is well demonstrated by Malawi's relatively successful TB programme.[xxi] In spite of the broader health systems problems described earlier, a high level of strategic and operational leadership; well-established policy framework and five-year development plan supported by national standards and guidelines; a strong planning, implementation and reporting cycles and a coordinated donor/GOM partnership to implement TB services have helped to ensure that district-level (Kemp et al, 2003).

The National TB programme also benefits from donor basket-funding, with supplementary funding from WHO for specific activities in support of the overall workplan. An important element of the work of the centralized national TB programme is the training, supervision and monitoring of implementation at all levels of the health system, as well as ensuring uninterrupted drug and commodity supply (MmoHP 2003d). Regional and district level TB officers provide a vital role in deconcentrating operational management and ensuring an effective link between the center and periphery of the health care system, as well as between the mission facilities and the government. Finally, a structured programme of human capacity development through training and post-graduate educational opportunities has helped to ensure continuity of staff and high quality performance.

Therefore, while there is a dedicated TB programme in Malawi, it is characterized by countrywide coherence, highly effective strategic leadership and coordination at the national level, and an appropriate degree of vertical technical support and supervision. Designing an appropriate balance between 'vertical, centralised and dedicated' maternal health support and supervision with the periphery of the health care system may therefore make a huge difference to the improvement of maternal health services and maternal health programme management.

For maternal health care, however, ensuring that the health care system as a whole is functional is much more important than in the case of TB programme. For one, maternal health services need to be embedded much more significantly within the broader health care system, partly because a maternal health programme consists of a highly differentiated set of activities (ranging from routine, non-acute ante-natal care, to essential emergency obstetric care; medical care, nutrition support as well as surgical care), and because it involves a large number of generalist nurses and physicians who by necessity have other health care responsibilities. Providing such a wide array of services, and at different points in the health system, through a dedicated and vertical health care infra-structure would not only be unfeasible, but in the context of a highly cash strapped health system, would be costly and

[xx] According to Harries (2002), for example, 50% of TB wards in district and mission hospitals had no full-time nursing staff; and over 50% of district hospitals had no regular clinical ward rounds on the TB wards.
[xxi] Between 1993 and 2001, the number of smear-positive TB cases increased from 5,462 to 8,813. In spite of this the combined 'cure' and 'treatment completion' rate for the national TB programme declined only slightly from 73% to 70%. Furthermore, nearly all this decline is attributable to increase TB-associated mortality as opposed to an increase in the rate of treatment default.

inefficient. On the other hand, the potential to synergise improvements in maternal health care with improvements in child health, as well as HIV/AIDS, is a reason why improving the delivery of maternal health services should be seen in the context of improving the ability of the health care system to deliver PHC as a whole.

By contrast, the range of services and activities involved in TB control and its dependence of generalist health workers is much less (a large proportion of the critical workforce for TB control is shouldered by community-based DOT supporters). However, what can be learnt from Malawi's TB programme are a number of generic lessons about what constitutes good national health programme management, and the fact that the promotion of maternal health as part of a broader PHC agenda should not imply the absence of maternal health specialists and dedicated maternal health service managers.

While all nurses and doctors need to have a basic set of obstetric skills, there will be a need for a proportion of nurse and medical clinicians to develop obstetric special expertise, as well as a need for health managers at the district, regional and national level whose job is to provide dedicated and specialised input into supporting the improvement of maternal health care. It is merely that their activities, roles and functions should be appropriately integrated.

What does an integrated health systems approach to maternal health improvement mean in practice? In the case of Malawi, it is suggested that this would imply five things: 1) a shift in mindset; 2) a commitment to the full and uncompromised capacity to deliver the EHP; 3) appropriate health systems development; 4) effective human resource management and development; and 5) District Health Systems (DHS) development. These requirements are now discussed in more detail.

Shift in mindset

A shift in mindset entails the recognition of the fundamental importance of the health system to health outcomes, and the need for coordinated, sector-wide leadership. This will require reversing decades of capacity diminishment in the public sector, and ensuring that recent efforts to establish a Sector Wide Approach (SWAp) to health development succeed in promoting better donor coordination and submerging donor goals within a set of shared, country-wide goals.

This would include shifting planning and budgetary processes away from the mechanistic 'budget cut-and-defend' approach where prioritisation is a matter of lobbying by program managers, rather than of transparent, strategic choices based on epidemiological needs, cost-effectiveness and equity criteria. Better information on current patterns of expenditure and more streamlined administrative and accounting procedures should all be positive developments emerging from the SWAp that will improve the prospects of coordinated health planning.

The improved management and coordination of the multiple streams of government and non-government funding would also assist with the development of more equitable and needs-based resource allocation procedures. At present, no systematic formula for resource allocation based on catchment population and other indicators of need is used.[xxii]

For donors, getting the balance right between dedicated programme support and sector-wide budget support would also require a greater commitment to sustained financing and support for the institutional development of the public health sector. This includes addressing the underlying causes of demoralisation, demotivation and de-skilling in the public sector, as well as explicitly recognising the need for the long-term support of recurrent costs in the health system.

This is challenging for donors, as they face pressures to show visible results in a short time frame. Long-term support for the basic running of health systems is not as visible as a fixed-period campaign with measurable outcomes, or the building of new infrastructure. However, the option of *not* financing essential recurrent costs is not acceptable. It is therefore necessary, that in addition to a coordinated SWAp, donor officials need to lobby for change from the emphasis given to funding based on relatively short-term project cycles, towards much longer forms of financial commitment (LaFond 1995).

The inter-face between donors in the social sectors and creditors who determine Malawi's macro-economic policies must also come under closer scrutiny. Prioritising adequate, long-term funding through a SWAp must take precedence over any concerns that the IMF may have about Malawi's fiscal discipline, inflationary pressures or macro-economic policies. At present the IMF plays a significant role in determining medium-term expenditure ceilings (as a pre-condition of debt relief and through their informal influence on donors and the World Bank) which can prevent the required expenditure in the health care sector to meet Malawi's urgent health needs.

In turn, government and the MOH should be expected to redouble their own commitment to transparent, accountable and ethical administration at all levels. Their mindset needs to involve a recognition that the health sector performance of countries with similar levels of income and poverty can vary significantly, due in part to the efficiency and effectiveness of public sector performance, and that in spite of the colonial and post-colonial inheritance of undemocratic traditions and corrupt practices, bureaucratic malaise can be overcome.

And finally, for NGOs (and also their donors), the shift in mindset includes a greater readiness to measure their success through the success of the public sector, rather than through the success of their own projects and programmes. Donors and NGOs should also work on developing a code of conduct within Malawi that would lay down principles around, for example, the obligation to ensure

[xxii] The current plans for Malawi's sector-wide approach for health include the proposal of a resource allocation formula which is weighted by population size (20%), poverty levels (20%), historical allocations (20%) and existing infrastructure (40%). However, as conceived at the present time, this formula only incorporates public financing and does not incorporate direct donor funding on health projects nor the budgets of the mission facilities.

donor harmonisation, avoid burdensome red-tape and suggest equitable and appropriate schedules for consultant fees and technical assistance contracts (for both local and expatriate personnel). The latter should help to prevent the effect of donors and NGOs 'asset stripping' the public sector by recruiting its personnel.

A commitment to the adequate funding of the health sector

As long as Malawi's total resource envelope is less than that required to fund even a basic EHP, efforts to improve health through the health system will be limited in success. As long as the bulk of Malawi's health staff are inadequately remunerated, human resource deficiencies will be a constant constraint to service delivery improvements. In the context of maternal health, there are no cheaper alternatives to the need to fund access to EOC and the presence of skilled birth attendants at deliveries and a functioning referral system.

Without a considerable injection of resources, Malawi will never have the capability to deliver a basic package of PHC services, let alone more complex, expensive and resource-intensive treatment programmes such as those required for AIDS. The question is from where will these resources be generated?

Ideally, one source for this additional revenue would come from domestic economic growth, possibly through improvements in the agricultural, manufacturing and tourism sectors. However, breaking out of Malawi's poverty trap will be difficult. As UNCTAD (2002) notes, the type of generalised and widespread poverty that exists is Malawi is, in itself, a major constraint on economic growth.

For reasons described earlier, solutions to Malawi's state of poverty will require actions outside the borders of the country. This includes increasing levels of sustained development assistance, eradicating Malawi's debt burden and reforming the global political economy and system of global governance in such a way that promotes the development of poor countries. Reforms to the international system of trade and finance, which is biased against poor countries, will do much to assist Malawi's potential for economic development and poverty reduction.

The World Commission on the Social Dimension of Globalisation (2004) describe two main channels through which weaknesses in global governance have contributed to the uneven impact of globalisation. The first is the creation of a system of rules governing the global economy that has been prejudicial to the interests of most developing countries, especially the poor within them. The second is the failure to put in place a coherent set of international economic and social policies to achieve a pattern of globalisation that benefits all people. Correcting these failures entail, amongst other things, improving access to the markets of wealthier countries; and setting up an institution to stabilise the price of primary commodities based on longer-term commitments between buyers and sellers, coupled with compensatory financing from the international community to mitigate drops in prices and

earnings. The international community could also support economic development by directing development assistance not just towards the social sectors such as health and education, but also towards the productive sectors, such as agriculture.

Another source of funding is from the cancellation of Malawi's debt. The current pace of debt relief is wholly inadequate, and it is completely unjustified that the poor should continue to bear the brunt of misguided borrowing and lending in the past, especially given the growing disparities in wealth globally and Malawi's level of poverty.

In addition, there is a good argument for the volume of ODA to be increased substantially. Overall levels of ODA are still considerably less than the modest target of 0.7% of GDP of donor countries. Such development assistance could also go a lot further if it were untied from donor interests and foreign policy considerations. There are furthermore various options for raising global finance from the global economy and from global corporations (WCSD, 2004). With the right political will and international commitment the money could be found not just for Malawi, but for all the least developed countries in the world.

It may also be possible to raise government revenue through more effective tax collection, as has happened in South Africa. Alternatively, the health sector could benefit from an increase in the share of government revenue. At present, the health sector already benefits from a relatively high share of government revenue, and any increase in its share would have to avoid detracting from other social and development sectors.

Another source of additional resources may be generated not through additional funding, but through efficiency gains. Wasteful expenditure and inefficient practices must be identified and eliminated. The study by Picazo (2002), commissioned by the WB, has usefully highlighted some practices that could be targeted for reform. These include the expensive practice of referring certain cases abroad; high frequency of external travel and external travelling allowances; transport mismanagement; inefficient medicines prescribing; and the leakage of drugs into the private sector.

Efficiency gains could also be generated through a shift of current patterns of expenditure away from the bias towards urban hospitals and tertiary services.[xxiii] This would improve the delivery of more cost-effective primary health care services as well as avoid the use of expensive hospitals to provide primary care because the quality of care at clinics and health centres is so poor.

Given Malawi's severe resource constraints, it is vital that resources are used cost-effectively. However, at the same time, this should not be reduced entirely to the delivery of a limited and selective set of discrete technologies or services. Analysing health needs and providing health care in

[xxiii] Using standard facility/population ratios established by the World Bank (Shaw and Elmendorf, 1994), Malawi is over-supplied by hospitals, whilst it has insufficient health centres (MMHOP, 1999).

a way that balances public health with individual needs, prevention with curative care, and in a socially and culturally appropriate manner, are much more subtle activities than is projected by the idea of cost-effective packages (Seagall, 2003). The EHP concept must be used as a guide to support budgeting and resource allocation, to define minimum standards and to sensitise health managers to what are cost-effective interventions. However, if used as a tool of financial control and cost capping in a mechanistic way, it will undermine the need for managers and health workers at the district and facility level to use it as an adjunct to more bottom-up, comprehensive and holistic local level health care planning.

In improving the capacity of clinics and health centres to provide primary health care, a review of Malawi's 66 hospitals should take place to explore the options for reducing the overall number, whilst simultaneously strengthening the capacity of the required number of district hospitals. There should also be a moratorium placed on the building of new hospitals unless there is clear demonstration of a need.

However, it is vital that the shift of resources down the tiers of the health system is not construed as an invitation to further weaken the capacity of district hospitals, which are central to the reduction of maternal mortality and which should be viewed as an integral component of the PHC system.

It is therefore worrying to note that some MoHP documents talk about an increase in the number of central hospital beds as well as of central hospital staffing establishments.[xxiv] Although these same documents mention a rise in capacity at lower tiers of the health system, under the current human resource constraints, it is of concern that the need to shift health personnel from central and tertiary level facilities to peripheral and lower tiers of the health system is not reflected in planning documents more explicitly.

Finally, it is important to mention proposals by the World Bank and some bilateral donors to increase the level and proportion of health financing from patients, households and the private sector through user fees and cost-recovery drug revolving funds; developing income-generating private wards and services in public sector facilities; extending private and social health insurance; and even generating revenue from non-medical programmes such as parking fees and cafeteria services![xxv]

While it may be possible to raise additional financing through these mechanisms, these policy recommendations must be treated with a great deal of circumspection. In a country where 65% of the population lives beneath the poverty line, user fees will create, without a doubt, further barriers to access. Although it is proposed that fee exemption systems will protect the poor, the national and international literature has consistently shown the ineffectiveness of such measures (Russell and Gilson, 1997; Creese 1990). In Malawi, where mission hospitals have a reputation for applying user

[xxiv] MoHP dopcuments quoted in Hornby and Oczan, 2003.
[xxv] See Picazo (2002), LATH (1999), Marshall (1996), MMoH (1992) for details.

fees carefully and equitably, research has shown that as much as 61% of non-poor households get health services without paying (leakage), while as much as 43% of poor households end up paying (UNICEF).

Suggestions that additional financing could be raised through private wards for the rich or those with insurance cover, run the risk of segmenting the health system and widening disparities between rich and poor. Scarce medical and para-medical resources may be diverted towards cost-ineffective medical services and undermine the public sector's ability to provide care for public patients. Privatisation may also distort clinical practice and result in the inefficient over-supply of services. The experience of public and private-for-profit partnerships has not shown much in the way of benefit to the poor or to the public health system. Thus while the overall resource package could increase through these measures, they will be accompanied by an increase in inequity and an increase in inefficiency.

At the present moment national policy is clear that the Essential Health Package will be provided free of charge (MOHP, 1999 and GOM/MOHP 2002). However, Malawi's PRSP is a little more ambivalent stating The MPRSP is less definite, stating that "operational research will guide the decision as to whether the EHP will be free at the point of entry, or subject to user fees charges with an exemption mechanism for poor or targeted groups" (GOM, 2002a, p61). The MOHP has recently confirmed the former position as policy, i.e. free EHP at the point of delivery in government health facilities, while leaving open the possibility of strategic cost-sharing initiatives in the mission health facilities and elsewhere within the sector (Kemp, 2004 pers comm.).

Appropriate health systems development

As with many countries, Malawi's health system is being subjected to a health sector reform agenda. This will affect the delivery of maternal health services and it is important that maternal health programme managers engage with this agenda.

As mentioned earlier, a large component of reforms promoted by the World Bank and some bilateral agencies are concerned with identifying extra-budgetary sources of financing from patients and households which carry threats to equity as discussed earlier. Linked to this is the proposed expansion of the private sector. Since Malawi allowed private medical practice in 1991, the for-profit sector has dramatically expanded. Regulations also make it possible for doctors and medical officers to have second jobs as private practitioners. As a result, 'moonlighting' government doctors and paramedics are now common in cities and peri-urban areas.

The out-sourcing of ancillary services to the private sector is also being promoted. Under the World Bank's Second Fiscal Restructuring and Deregulation Program, the government committed to contract

out several health functions, such as catering, cleaning, transport, building maintenance, mortuary services and security (Picazo, 2002).

In addition, there is the planned corporatisation of secondary and tertiary hospitals. Policies have been proposed to provide legal autonomy to hospitals and to establish them as independent corporate entities, governed by an independent Hospital Board. These hospitals would have freedom in dealing with staff salaries, pensions, and benefits; hospital fee schedules; staff training; and procurement. The MOH in turn would re-establish its relationship with hospitals in the form of a contract, and as a purchaser and regulator of services.

Another strand of reform concerns the devolution of responsibility for the delivery of primary health care services to local government (including maternal and child health services, the control of communicable diseases, health education and ambulance services, and eventually, district hospital services). Proposals include health staff becoming employees of the local assemblies and ceasing to be members of the civil service (district assemblies would, however, be required to pay a minimum salary equivalent to a corresponding civil service post). According to the Decentralization Secretariat, local assemblies would be free to impose user charges, even in the absence of a national policy.[xxvi]

Taken together these reforms represent an intention to liberalise, privatise and disintegrate the health system into smaller components. It is believed that transforming the public health system into a series of purchaser-provider relationships and giving third party insurers and households a bigger role in directly engaging with providers will result in efficiency, resources and greater productivity.

However, serious issues with respect to equity, pricing, and quality of care have already emerged in the wake of health-sector privatisation and liberalization. It is also unclear how the needs for better coordination and stewardship would be served by these reforms. A health system that is already fractured between MOH, NGO, and CHAM services, will become even more fractured by the establishment of semi-autonomous district assembly health systems and a growing private sector. In the current institutional context, the government will struggle to act as an effective steward and regulator of such a fragmented and atomised health system.

A more appropriate response – and vital from the point of view of maternal health services – would be to explicitly encourage the development of a universal health system, moving away from its present fragmented state to one that encourages a greater degree of collaboration between all the participants. Government must play the leading role in doing this.

A universal and inclusive public health system need not be automatically equated with a rigid, monolithic, inefficient and highly bureaucratised health system. Decentralisation and the creation of

[xxvi] Again, it is not clear how the national policy intention of ensuring that the EHP is provided free of charge to all will square will the policy intention to devolve power to local government to charge user fees for certain services.

space to allow some management autonomy are possible through the deconcentration of authority through a district health system, as well as through appropriate public-non-profit partnerships. It is also possible, within an inclusive and universal public health system, to develop performance management systems with agreements and even contracts as tools of performance enhancement and mutual cooperation, in contrast to the application of contracts between purchasers and providers as tools of control and financial management, which can lead to counter-productive and costly behaviour such as the misreporting of achievements.

Effective human resource management and development

Health care workers are the lifeblood of any health system. Of the many health systems challenges that exist, it is vital that resolving Malawi's health personnel crisis is prioritised. Although a large part of the human resource problem is related to the inadequate financing of the health care system, addressing the human resource problem will also require a comprehensive and sustained plan of action that includes:

- stemming the haemorrhage of health personnel out of the health sector due to HIV/AIDS and emigration to other countries;
- providing fair salaries to health workers, particularly in the public sector;
- stemming the internal brain drain to NGOs and research projects;
- keeping existing staff adequately motivated and skilled;
- reversing the inequitable distribution of health personnel within Malawi; and
- strengthening the capacity to generate new health workers.

Stemming the attrition of health personnel due to HIV/AIDS would need the development of more effective occupational health programmes for health staff, including improving adherence to standards of universal precautions, and the provision of ART to health workers who become infected.

Reducing the international out-migration of health workers may be more difficult. Ethical recruitment strategies (such as the one set up by the British government), which attempt to prevent developed country health systems from plundering the human resources of poorer countries, do not appear to be effective. They also potentially deny the right of individuals from poor countries to better their lives through migration.

Encouraging forms of partnership between developed country institutions and poor country health systems which assist poorer countries with their health service needs; or encouraging schemes such as utilizing the willingness of diaspora health communities to assist their home health systems – through, for example, periods spent back at home undertaking training or clinical support. Another approach, which is inadequately discussed, is to acknowledge the role that poorer countries play in providing rich nations with their health workers and compensate them for this. This means debating

costs and dealing with a probable lack of political will on the part of richer nations to undertake this type of strategy.

Reversing the inequitable distribution of health personnel within Malawi will require stronger political commitment to health equity. A policy to redistribute health personnel from urban, tertiary and well-resourced segments of the health system may encounter opposition from health workers and urban communities. Incentives may be needed to entice staff to work in rural, under-served areas. Other strategies might include rotating health personnel between urban and rural health facilities; or creating mid-level categories of health workers who might be more affordable and likely to stay in rural areas.

Another intervention to improve human resource management in the health sector might be to reduce the disparities in remuneration between the public, donor and NGO sectors. The internal brain drain of health personnel from the public sector to the non-government sector creates a destabilizing effect on health systems planning. If strategic leadership is not exerted over the sector as a whole, there is a danger that the growth in funding for new services in the non-government sector will undermine public sector staffing and delivery of essential services to the population.

The need for equitable staffing requires an on-going clarification and determination of Malawi's desirable volume and mix of health personnel. For maternal health services, this includes determining the role of community-based health workers (such as Malawi's health surveillance assistants) and traditional birth attendants, the number of midwives and doctors needed, the level of midwifery skills expected of general nurses and generalist doctors, and considering the need for an advanced level of midwife who is trained to perform interventions such as instrumental deliveries, and able to provide clinical supervision and support to midwives as well as generalist doctors. A decision taken in 2001 to change the basic nurse-training programme from a three-year course that includes midwifery to a two-year programme without midwifery should also be revisited.

Adjusted, population-based norms should then be established for each district in Malawi so that targets can be set for the equitable and needs-based distribution of maternal health care staff. Population-based norms could be adjusted to take into account variations in HIV prevalence and the physical accessibility of health facilities. In addition, workforce planning would have to carefully take into the account the effects of NGO proliferation, privatisation and devolution.

Although it would be more cost-effective to develop staff retention strategies rather than to produce new staff, there will also be a need to strengthen Malawi's training institutions, and to have closer links between the ministries of finance and health, and the training institutions. At present the training institutions are funded directly by Treasury, with little input from the MoH, undercutting the ability of the MoH to play a strategic role in directing the production of health workers for the health sector.

While resource shortages are undeniable constraints within Malawi, it is important that they do not become an excuse for sub-optimal health care delivery. In spite of low morale, under-staffing and poor baseline knowledge and skills, well-designed quality of care interventions can be effective in improving health care. For example, there is a general acknowledgement that the quality of care provided through some mission hospitals is of a higher standard compared to other hospitals, in spite of having the same salary scales, because of better and more effective local management.[xxvii] There is also the example of the national TB programme described earlier.

Ensuring that staff are paid correctly and on time, do not have problems receiving their due benefits and are properly cared for in the event of contracting HIV/AIDS, will improve staff motivation and loyalty. According to Aitken at al (2003), improving pay and terms and conditions of public sector health workers is vital, and sick leave, retirement and disability policies must also be reviewed urgently to allow those with valuable skills to be retained and work as far as they are able.

Improving the terms and conditions of health personnel could also help reduce, or even abolish the use of training per diems as a means of supplementing income, which distorts training programmes and which has created a perverse culture of 'workshop attendance'. This benefit is distributed on an individual and often inequitable basis between workers, and results in a distortion of priorities among health workers. In Malawi, close to a tenth of all donor expenditure in 1997 went to training. This included training out of the country (US$1.5 million), workshops (US$2.2 million) and other unclassified activities (US$0.8 million). The cost is staggering for a country the size of Malawi and would translate to a US$473 salary increase for one year for each of Malawi's 9,500 health-sector civil servants. This would be the equivalent of 50% of the US$80 monthly salary of a typical civil servant (USAID, 2003; Picazo, 2002).

Training and capacity development needs to be organized and delivered in a way that results in sustained improvements in the quality of care, rather than short-lived improvements that are linked to sporadic and poorly coordinated training interventions. Presently, post-basic and in-service training is poorly managed and coordinated.

The establishment of functional health districts capable of developing needs-based and comprehensive training plans would form one solution to the problem of top-down, centrally-imposed training interventions. Action research approaches can help develop knowledge, skills and critical thinking amongst staff about the deficiencies in care and the ways to change them. Such approaches can be time-consuming as they are intended to develop at the pace of those participating, and not necessarily at the pace of technical experts. Other interventions that would help translate the large investments in training into improvements in the quality of care, is to 'join up' up clinical training with management training. Skilled midwives and doctors are most effective when they work in an

[xxvii] The safe motherhood project in the Southern Region has observed that standards of hygiene, equipment levels, drugs supply, staffing ratios, partograph use and the monitoring of vital signs for post-operative patients

adequately managed health system with smooth running support systems. Important concepts are supportive supervision, follow-up in the field after training, ensuring an enabling environment so that health workers are able to actually implement what they have learnt, competency-based training, practical hands-on training.

In the past however, the donor focus on single disease programmes has led to an emphasis on clinical technical skills and less attention being paid to the management and support skills needed to run a health service. This has left pharmacy and pharmaceutical management, health-facility management, health planning and administration, HR planning and systems, accounting and finance, and procurement and logistics skills in short supply. Yet this shortfall in managers and administrative bottlenecks are a major reason for the low absorption of donor resources (Picazo, 2002).

By integrating the interventions required to improve clinical and management capacity, the additional and important spin-off benefit of strengthening the institutional relationships within the local health system is also created. Clinicians and managers can learn to address the blockages and barriers to cooperation and teamwork when training programmes adopt multi-disciplinary approaches to problem-solving.

District Health Systems Development

Many of the suggested solutions to improving maternal health outcomes through an integrated health systems approach also appear to point to the importance of organising the health system into discrete geographical units with well-defined catchment populations and a rational network of inter-connected health facilities. An organisational strategy to reduce the fragmentation of the health system and to improve the poorly functioning referral systems could be addressed by a real commitment to a District Health System (DHS).

In a DHS, each health district is managed by a district health management structure that is responsible for coordinating all primary and district health services. Such a system allows for decentralised, bottom-up and context-based health planning; the development of local quality-improvement management cycles; community involvement in health; and the integrated management of different PHC programmes. It would also allow better coordination between government health facilities, NGOs and CHAM, and between clinics, health centres and hospitals.

However, such a system would only work if district level management structures have the skills, authority and capacity to plan and coordinate health activities. Ideally, some of the most capable, committed and experienced health managers in the health sector would be placed in charge of health districts. At the same time officials within government and the donor community who are based at the

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are generally considered better in mission hospitals.

centre would need to reorientate their actions towards creating an enabling policy and administrative environment for district level management structures, as opposed to being top-down and directive.

However, plans to devolve health care to local government would add a complicating dimension to the establishment of a DHS. In addition to have to organise and coordinate more integrated forms of health care delivery with mission facilities, central government would also have to manage a set of relationships with local government councillors and officials. The obstacles towards an efficient and well organised system of health care services that are associated with devolution must therefore be factored in as part of any plan to improve maternal health care services.

5.2 Improving maternal health programme interventions

The earlier section has focused on improving the health system as a means of improving maternal health services and outcomes. This section discusses what might be done within maternal and reproductive health programmes to improve maternal health.

Improved maternal health programme management at the district level

In the same way that there is a need to strengthen the capacity and authority of district health officers, there is a need to ensure that every district has a capable and motivated maternal health champion. Working closely with the district health management structures, her job would be to evaluate and strengthen the maternal health referral systems, provide technical support and supervision to staff, oversee the regular conduct of the perinatal mortality audit process, support local IEC initiatives and generally act as a local advocate for maternal health. A key element of ensuring the presence of this capacity at the district level is the existence of technical support and supervision at the central level. Dedicated maternal health specialists who are able to support skills development at the district level, help ensure that maternal health care services are adequately supplied and equipped and provide clear leadership around the establishment of effective referral systems, are an essential element of effective health care at the district level.

Improved maternal health information systems and peri-natal and maternal mortality audits

The wealth of information generated by the Southern Region maternal death audit illustrates the importance of information in instigating efforts and plans to improve maternal health. However, the findings of the Southern Region audit were not the result of a routine system of maternal death reporting, but were the result of a dedicated and donor-funded research project. It is vital that information systems are strengthened in order to generate similar information on a routine basis.

This information can mobilise political support and health care resources for improving maternal health. Information systems that are able to quantify key maternal health indicators on a district by district basis would also assist central supervisory and support structures to target their quality improvement interventions.

At the local level, peri-natal and maternal mortality audits should be conducted as a routinely in all districts, *and* fed into a quality improvement cycle that involves all health professional groups involved in the provision of maternal health care. These audits should be used to identify the cause of death, as well as the extent to which an error or omission in care may have contributed to the death. Such audits require the establishment of protocols and accepted standards of care, and have been shown to be extremely powerful engines for the improvement of the quality of care (Pattinson et al, 1995). Ideally they would be embedded within the District Health System, with audits being conducted for a network of clinics and hospitals so as to be able to highlight problems and deficiencies related to the referral system.

Information, education and communication aimed at the community and public

There needs to be a programme of work directed at informing and educating the community and the public about the danger signs of pregnancy and childbirth, the importance of birth preparedness and seeking care swiftly and the benefits of delivery in a health facility and the entitlements of the community to safe, effective and appropriate care. Empowering the community with knowledge and an understanding of their rights and entitlements in the context of demotivated, inadequately skilled and unsupported front-line health workers must however be done carefully in a way that creates meaningful partnerships between providers and users, rather than greater conflict and mistrust. IEC interventions targeting communities would therefore need to be planned in conjunction with the coordinated in-service training plans and quality improvement cycles described earlier.

An integrated approach with the National Aids Commission's behavioural change strategy has been attempted to ensure maternal health becomes an integral part of the larger reproductive health programme but this needs to be strengthened and cross-fertilisation of research, activities and monitoring should be undertaken.

Improving access to intra-partum care, in particular for emergency obstetric care

There are a number of interventions that can be implemented to make intra-partum care more accessible. The main intervention is quite simply to ensure the availability of skilled and equipped birth attendants in hospitals, health centers and clinics. In the absence of good transport and accessible health facilities, another intervention is the use of maternity waiting homes, which should be established in the grounds of *at least* every hospital in the country. These huts allow women in the advanced stages of pregnancy, especially those with risk factors, to stay in close proximity to a

delivery facility. A third strategy would be to consider ways in which women would feel more amenable to seeking intra-partum care in adequately staffed health facilities – this would require improvements in the current standard of inter-personal care, but could also include encouraging women to deliver in health facilities in the company of traditional birth attendants, thereby seeking to establish a bridge of cooperation with the traditional birth system that is popular in Malawi. Other strategies would include the improvement of transport systems and tele-communication systems to enable the referral system to work, and to encourage communities to develop their own emergency transportation plans.

Family planning

Malawi's family planning uptake rate remains low, and it is likely that some reductions in maternal mortality could be achieved through primary prevention (i.e. by reducing the number of high-rsik pregnancies and the proportion of grand-multiparities).

Legalise the termination of pregnancy

Abortion-related deaths contribute to approximately one in fourteen maternal deaths according to the maternal death audit conducted in the Southern Region. The illegality of terminations and associated stigma means that this figure may be an under-estimation. Given female disempowerment, the reported prevalence of sexual violence and the unhygienic and unsafe conditions of illegal terminations, there are strong public health grounds to decriminalize the termination of pregnancy.

Improvements in ante-natal care

Although there is, quite rightly, an emphasis on safe deliveries as a means of reducing maternal mortality, a considerable number of maternal deaths can be prevented by improved ante-natal care. A proportion of deaths due to malaria, HIV/AIDS and anaemia for example, are likely to be preventable through the provision of ante-natal and medical care before delivery. There is therefore a need to identify the elements of ante-natal care that would have an impact on reducing maternal mortality and ensuring that this is then carried out. This might include linking PMTCT programmes with plans to expand access to ART; making improvements in the delivery of malaria prophylaxis; the prevention and treatment of anaemia; and screening for evidence of pre-eclampsia.

At the same time, given that ante-natal clinic attendance is reasonable in Malawi (many women attend as many as 6 or 7 times), there may be some room to reduce the frequency of ANC visits (as per WHO guidelines) which may in turn help ensure better quality care at each visit.

5.3 Improving maternal health equitably

This paper has already emphasized the importance of reducing levels of poverty as a strategy for improving maternal health outcomes. However, improving maternal health outcomes equitably implies a conscious effort to reduce disparities and inequalities between the 'haves' and 'have nots' of society.

Gender inequities and female disempowerment are undoubted features of Malawian society that shape unequal social vulnerabilities to poor health and premature mortality (Matinga and McConville, 2002). Improving the political, economic and educational status of women is therefore not just an important strategy for improving maternal health, but is also strategy for reducing health inequities between men and women.

Key recommendations for improving maternal health outcomes equitably must therefore include interventions designed to empower poorly educated and socially disenfranchised women, especially those who live in poor households in rural areas. There is a need for much stronger national and community leadership to promote the rights of women and girls. In the education sector, the lower rates of school attendance by girls compared to boys must be addressed. The policy to abolish school fees in all primary schools which has helped to narrow the disparity in school attendance between girls and boys illustrates the potential for public policies to lever change in social inequalities.

Inequities are also expressed in terms of differences between socio-economic groups. There are, for example, significant gradients between the richest and poorest quintiles of the population in terms of secondary school enrolment and consumption of health care (Al-Sammarai and Zaman; Gwatkin). Research from the Southern Region has further described how insensitive treatment appears to be more pronounced towards less educated patients in rural government centers, compared to more affluent patients attending mission hospitals. There are also clear geographic inequities, with the rural population, particularly in the Southern Region, suffering a greater burden of ill health as well as poorer access to good quality health care.

Interestingly, the gap in maternal mortality between the urban and rural population has not only narrowed but may have even reversed. There seems to now be a higher MMR amongst urban women compared to rural women, in spite of the fact that urban women have better access to health facilities. One explanation for this is the higher HIV prevalence in urban areas. Urban communities are themselves socially stratified, and it is likely that the socio-economically vulnerable women in orban population bear a disproportionate burden of maternal mortality. However, the data may also point to a new fissure of health inequity in the Malawian social landscape – that between people with and without HIV.

In terms of the geographic inequities, an obvious strategy for the health system to undertake is to create a needs-based allocation formula needs as soon as possible to reverse the inequitable distribution of health care resources. The intention to improve the coordination of the multiple streams of government and non-government funding provides an opportunity to pool resources at the central

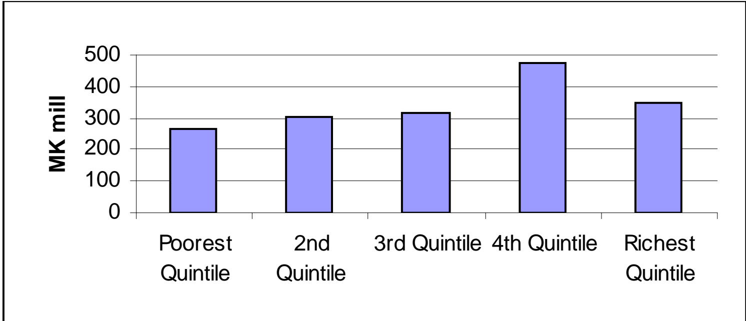
level so as to allow a systematic and equitable allocation of public *and* donor / non-government health financing.

A greater investment in the public health system, coupled with policies designed to ensure access for all to essential health services for all, will also help reduce socio-economic inequities in the use of public services and and in the distribution of out-of-pocket expenditure on health care between different wealth groups. At present public services are used disproportionately by the higher income socio-economic groups, and the distribution of out-of-pocket expenditure is flat, suggesting a disproportionate financial burden on the poor (see Figure 6 below).

The challenge for improving health equitably must be to increase the capacity and ability of the public health system to meet the needs of the poorer groups, as well as the needs of the higher income groups. Such a strategy would help to raise the standards of health care for the poor within an inclusive health system. However, the policy thrust of privatization, while it may be considered a response to the bureaucratic inefficiencies of the public health system, could encourage the development of a segmented health system. Health resources could be siphoned off into the private sector which would respond to market signals of demand, and not to need, whilst leaving a further weakened public health system that the poor would depend upon.

Much out-of pocket expenditure is due to the costs of physically accessing health facilities and of user charges, which are levied by mission services and the private sector. Given the breadth and depth of poverty, and given the body of literature showing the harmful effects on the poorest groups, a policy aim for Malawi must be to abolish user fees for all maternal health services. Currently the national policy intention is to ensure that the package of EHP is provided free of charge to all at the point of use. Reforms aimed at decentralising fiscal responsibility and introducing user fees to raise revenue should therefore be about explicit about the exclusion of the EHP, including essential maternal health care services.

Figure 6: Distribution of household out-of-pocket expenditures between wealth quintiles, 1998/99



Source: Derived from Table 6.3, National Health Accounts 2001.

Other elements of the health sector reform agenda described earlier also carry implicit threats to health equity in Malawi. A poorly controlled and managed process of decentralization and privatisation could weaken the capacity of the MoH to redistribute resources within the health system. Although the public sector currently benefits the richer income groups in Malawi disproportionately, this is not surprising. With such a limited resource base, it is not unexpected that the richer and more powerful sections of society have found mechanisms to capture a disproportionate share of the meager health resources.

Outside of the health system, the vestiges of a multi-party democratic system, a bill of rights with a statutory Human Rights Commission and the development of a poverty reduction strategy (PRS) provides Malawi with the foundations of a coherent, transparent and sustainable framework and plan for social and economic development. The PRS process has promoted much more public debate and discussion about Malawi's development priorities and has strengthened the pro-poor rhetoric (Jenkins & Tsoka, 2001).[xxviii]

However, there is also evidence of government corruption and a growing intolerance of political opposition, which has even resulted in some donor countries recently withholding their aid. The political and social context within Malawi therefore remains significantly sub-optimal for development, and poverty alleviation.

Policies to promote economic growth and productivity must also be designed and implemented in a way that will not aggravate socio-economic inequity. However, the policy thrust of institutions such as the World Bank is to promote a liberal economic and political agenda that emphasizes market freedom and growth without an adequate emphasis on the redistribution of assets in order to allow the poor a fair chance to benefit in economic development, or on the existence of robust social security nets to protect those sections of the population who are unable to benefit from the liberal reform measures.

While the rhetoric of Malawi's PRSP is to ensure sustainable poverty reduction "through empowerment of the poor" and the creation of the conditions "whereby the poor can reduce their own poverty" (Malawi, 2001: p.9), there are concerns that the policy and institutional framework for poverty alleviation and rural development is inadequately based on an analysis of the factors that hinder individuals and families from constructing pathways out of poverty (Ellis et al, 2003).

It is only that Malawians are being subjected to an idealised projection of participatory processes through, among other things, devolved local government assemblies through which the market and local development will be managed. In pursuit of these ideals, district assemblies are to be granted powers to pass by-laws, including licensing regulations for small businesses and tax raising powers,

[xxviii] The PRSP consists of four pillars: pro-poor economic growth; human capital development (i.e. education and health); improving the quality of life of the most vulnerable (i.e. safety nets); and good governance. In addition, two of the four cross-cutting themes (HIV/AIDS and gender) consist of poverty alleviating dimensions. A central

so that over time their budgets become less dependent on central grant distributions, more reliant on their own revenue generation and in theory, more accountable to local communities.

However, there are real concerns that this will not only reduce the capacity and responsibility of central government to ensure a clear strategic framework for national development whilst allowing local elites to capture the benefits of decentralisation. A cautionary example of the latter is provided by Uganda which is several years ahead of Malawi in the decentralisation process, where not only does local tax revenue impose punitive burdens on monetised activity in rural areas, it is also almost wholly utilised on sitting allowances for councillors and other functionaries rather than providing locally specific services to rural citizens. According to Christian Aid, district-level PRSP workshops are already dominated by elected local officials, government employees and local elites (Painter). Under these conditions, decentralised government could become a part of the problem of rural poverty not part of the solution.

A further concern about the development path being adopted by Malawi is exemplified by the reforms of the agricultural sector, which recently experienced a food crisis in 2002 and where household food security is under constant threat. A policy of liberalisation has reduced the capacity of the government, through its agricultural para-statal, to effectively manage maize depots in the more remote rural communities, provide subsidised support to subsistence farmers and to consumers and stabilise food prices. The weakening of an effective safety net of grain reserves and subsidised agricultural support to poor farmers and households has been one explanation for why the more severe drought in 1992 sustained fewer deaths than the drought in 2002.

In recent months, the World Bank has demanded the further privatisation of Malawi's state Agricultural Development and Marketing Corporation (ADMARC) as a condition of its latest structural adjustment loan, in spite of the Bank's own Poverty and Social Impact Analysis (PSIA) showing this would harm the country's ability to support the livelihoods of the many households dependent on subsistence farming (World Bank, 2003). In addition, opposition by a wide range of academics, civil society groups and even parliamentarians has not been sufficient to prevent legislation to pave the way for the further liberalisation of the agricultural sector.

Although it is in need of management and administrative reform, ADMARC represents an institution that embodies the principle of governments providing safety nets and actively creating bridges for the poor to cross over from a poverty trap into a position where they can partake in self-sustaining economic activity. While the liberalisation of the agricultural sector may well catalyse more efficient and productive economic activity, it needs to be done in an institutional context that protects the poor and prevents exploitation and excessive profiteering.

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requirement for Malawi's reversal of its declining maternal health status will be its success in translating this rhetoric into a real reduction in poverty.

The 2002 food crisis has shown the deleterious effect of the growing and unregulated marketisation of the agricultural sector, with the phenomenon of unscrupulous private suppliers, acting in collusion with officials, either pricing out the poor from being able to purchase food (and forcing them to starve), or forcing households to strip their meagre assets even further (Devereux, 2002).

Embedded in these concerns are issues about the relative role of state regulation, safety nets and markets. The general approach however seems to be biased towards the release of the potential of markets without the guarantee of safety nets, nor of local institutions designed to ensure ethical economic behaviour that protects the poor. Instead, poor, illiterate and disempowered people will be expected to act as effective economic agents with the capacity to correct market imbalances and imperfections themselves.

6. RECOMMENDATIONS

This section summarises the key recommendations drawn out from the earlier discussion. It is organised in respect of the various role-players considered to be important for reducing Malawi's maternal mortality, and doing so in an equitable manner.

6.1 Government of Malawi / Ministry of Health

Government leadership

Provide unambiguous and clear leadership around a programme of comprehensive health systems development. The SWAp should be conceived of as an opportunity to provide more integrated and coherent health sector leadership, but it will still require the government to make clear statements of principle to guide the process.

- This should include upholding the principle of inclusive public health systems that allow the equitable distribution of health care resources, as well as opportunities from risk pooling and cross-subsidisation. It should also entail a commitment to ethical governance and the zero tolerance of corruption, starting from the top and working down.

Provide leadership around the improvement of women's social and health status by declaring the high rates of maternal mortality a social and public health propriety and fostering a culture of equal rights between men and women.

Health systems development, not health sector reform

The proposed agenda of health sector reform which appears to encourage privatisation, cost-sharing, out-sourcing and the fragmentation of the health system carries serious threats to worsening inequities, undermining the public health system and creating market-led inefficiencies. These should be resisted, at the very least until there is a greater degree of public sector capacity to effectively manage the reforms and provide effective sector-wide oversight and regulation to the private and public health systems. Instead there should be a programme of health systems development focused on the following:

- A comprehensive, holistic and properly funded HR strategic plan that addresses the inadequate numbers of skilled staff, the inequitable distribution of staff, the high levels of demoralisation and demotivation, the high rates of staff attrition, and the uncoordinated post-basic and in-service training activities must be a central priority of the country's health systems development agenda. This should include an emphasis on the recruitment and retention of skilled doctors and skilled birth attendants.

- A programme to establish a District Health Systems, whereby the health system is organised geographically and district health management structures provide the foundation for more locally relevant, bottom-up planning; the functional integration of government and non-government providers; and the coordination of multiple health initiatives within a single and coherent district health plan. This would require building into the HR plan, a strategy to deconcentrate senior and experienced health personnel to the level of the district, and reorientating the role of central officials to one that is focussed on policy development, facilitation and providing support.

- A needs-based resource allocation formula (within the organisational framework of the DHS) that takes into account all the major streams of government and donor health financing. This should be coupled with the development of clear and explicit staffing norms (based on population and an index of need) for each district, so that progress towards the equitable distribution of health personnel can be monitored and tracked. From the perspective of maternal health, resource allocation planning should also incorporate plans to reach WHO standards on the availability of and access to basic and comprehensive emergency obstetric care.

- A rational, equitable and cost-effective pattern of health expenditure across the different tiers of the health system. This implies some shifting of resources from urban and tertiary facilities to rural and primary level facilities.

- A comprehensive and coherent plan for the strengthening and improvement of sector-wide support systems related to the supply of medicines, equipment and blood; health information

(focussing on human capacity to collect and interpret data); transport and tele-communications; and human resource administration.

The argument that addressing Malawi's inadequate health budget through the implementation of user fees and cost recovery schemes is likely to aggravate existing inequities and barriers to health care.

Maternal health programme interventions

Within a broader health systems development agenda, the following recommendations should also be pursued:

- Strengthen the capacity of supportive supervision for maternal and reproductive health services at the district level.
- Strengthen the collection and analysis of perinatal and maternal mortality surveillance systems, and establish regular four to six weekly perinatal and maternal mortality audits on a district by district basis.
- Strengthen existing IEC programmes targeting the community and public on maternal health as well as family planning and women's rights
- Encourage and support the development and use of maternity waiting homes, as well as of transport and tele-communication systems to reduce barriers to care and enable the referral system to work.
- Legalise the termination of pregnancy

Addressing poverty and the underlying determinants of poor health

The Poverty Reduction Strategy (PRS) of Malawi must be highlighted as an important vehicle for addressing Malawi's maternal health problems, by virtue of its effects on nutrition, household income, food security and education. As with the development of the health sector, the government needs to take greater leadership over the process in a way that is principled, transparent and aligned to principles of ethical governance and equity.

Concerns that the thrust of Malawi's current PRS is over-emphasising economic growth and liberalisation at the expense of social security safety nets and the creation of assets for the poor to allow them participate in economic self-development must be taken up. The role of the state to ensure the provision of basic household needs must not be diluted through the process of reforms being promoted through the PRS.

From the perspective of maternal health, there needs to be a greater emphasis on raising levels of female literacy.

Donors and development community in Malawi

It is first of all hoped that the donor community will support the recommendations listed above for the government / MoH. Their commitment to a SWAp is an encouraging first step. However, much more needs to be done to ensure that the SWAp translates into the reality of donors and development partners sitting in the same boat and rowing in the same direction. This would include explicitly supporting the need for root and branch health systems development, adequate health systems resourcing and the adoption of a culture of bottom-up problem solving, rather than the top-down implementation of blueprint solutions.

In addition to supporting the recommendations listed above, donors also need to consider the development of a code of conduct that would lay down principles around their obligations to ensure donor harmonisation, avoid burdensome red-tape and promote equitable and appropriate schedules for consultant fees and technical assistance contracts. Among other things, they should be advocating for countries as poor as Malawi to benefit from unambiguous and long-term funding support to meet the basic recurrent costs of the health system, and from deeper and faster cancellations of its debt burden.

Non-profit sector in Malawi

The mission facilities and NGOs that provide health care in Malawi are a vital and important component of the health system. The role of the non-profit private sector must be clearly distinguished from the commercial and for-profit private sector in developing health systems development strategies by the government. The non-profit private sector on the other hand should support the idea of a proper and effective DHS within which cooperation, policy coherence coordination and appropriate partnerships with the public sector can evolve and develop. They should also be prepared to participate in national health accounts exercises and proposals to develop equitable and integrated resource allocation strategies.

Global health institutions

In addition to supporting the recommendations listed above, it will be necessary also for the primary global health institutions such as the WHO and UNICEF, to take up the macro-economic determinants of Malawi's chronic poverty and health systems under-resourcing with much greater vigour and courage. The line between Malawi's deteriorating maternal health status and rising HIV/AIDS epidemic and the unfair global political economy must be drawn more thickly and boldly.

At the same time, global health institutions such as the WHO and UNICEF should be charged with the responsibility of monitoring the role of the World Bank and IMF in encouraging health sector reforms

that threaten to aggravate inequities and diminish the role and capacity of the public sector to provide adequate health sector stewardship.

The problem of the global brain drain is receiving greater public attention, but we would encourage more visible signs of innovative and bold solutions to meeting this problem. Considerations of raising money directly (e.g. through various forms of international levies an taxes) at the international level for a Global Fund for Health Systems development should be proposed if the international market in health personnel is to become progressively globalised.

G8 / OECD governments and public

The unwillingness of the richer countries to promote a fairer and more just global political economy, to cancel the 'odious debt' of countries like Malawi and to reach the target of 0.7% of GDP must be condemned, and identified as one of the reasons for the poor health outcomes in Malawi. It is recommended that the public health community in these countries play a more pro-active role in influencing their respective governments to do more.

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