



**Interim Report  
of Task Force 4 on  
Child Health and Maternal Health**

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**Note to the reader**

This Interim Report is a preliminary output of the Millennium Project Task Force 4 on Child Health and Maternal Health. The recommendations presented herein are preliminary and circulated for public discussion. Comments are welcome and should be sent to the e-mail address indicated above. The Task Force will be revising the contents of this document in preparation of its Final Task Force report, due December 2004. The Final Task Force report will feed into the Millennium Project's Final Synthesis Report, due to the Secretary-General by June 30, 2005

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# **Millennium Project Task Force 4 Child Health and Maternal Health**

## **Interim Report\***

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\*This report was prepared by the Lead Authors and has been reviewed by the Task Force members. We have done our best to incorporate comments and changes suggested; however, discussion about several key issues continues within the Task Force and therefore this report should not be taken as representing a final, consensus view of the Task Force. In addition to the members of the Task Force and colleagues who have reviewed and commented on the draft, we would like to thank Rana Barar and Ann Drobnik for their dedicated assistance in the research and production of this report. Over the next several months, we will refine the contents of this report. Comments are welcome and should be directed to Lynn Freedman at [lpf1@columbia.edu](mailto:lpf1@columbia.edu).

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## List of Acronyms

AIDS	Acquired Immune Deficiency Syndrome
AMDD	Averting Maternal Death & Disability
ANC	Antenatal care
ANMs	Auxiliary nurse-midwives
ARI	Acute respiratory infection
CHWs	Community health workers
CMH	Commission on Macroeconomics and Health
CPR	Contraceptive prevalence rate
DALYs	Disability-adjusted life years
DFID	Department for International Development
EmOC	Emergency obstetric care
EPI	Expanded Program on Immunization
GATS	General Agreement on Trade in Services
GFATM	Global Fund for HIV/AIDS, TB and Malaria
GOBI	Growth monitoring, Oral rehydration, Breastfeeding, Immunization
GOBI-FFF	GOBI-Food supplementation, Family planning, and Female education
GP	General Practitioner
HIPC	Highly indebted poor countries
HIS	Health information services
HIV	Human immunodeficiency virus
ICPD	International Conference on Population and Development
IFI	International Financial Institutions
ILO	International Labour Organization
IMCI	Integrated Management of Childhood Illnesses
IMF	International Monetary Fund
I-PRSP	Interim-PRSP
JLI	Joint Learning Initiative
LHW	Lady Health Workers
MDGRs	Millennium Development Goal Reports
MDGs	Millennium Development Goals
MMR	Maternal mortality ratio
MNCS	National Social Oversight Mechanism
MTCT	Maternal to child transmission
MTEFs	Medium Term Expenditure Frameworks
NGO	Non-governmental organization
NHDRs	National human development reports
NNM	Neonatal mortality
NNMR	Neonatal mortality rate
ORT	Oral rehydration therapy
PHC	Primary Health Care
PPH	Post-partum hemorrhage
PPP	Public-private partnerships
PRS	Poverty Reduction Strategy
PRSPs	Poverty Reduction Strategy Papers
PSIA	Poverty and Social Impact Analysis
SRH	Sexual and reproductive health
SRHR	Sexual and reproductive health and rights
STIs	Sexually transmitted infections

SWAps	Sector-wide approaches
TB	Tuberculosis
TBA	Traditional birth attendant
TRIPS	Trade-related Aspects of Intellectual Property Rights
U5MR	Under 5 mortality rate
UNDP	United Nations Development Program
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VDGs	Vietnam Development Goals
WHO	World Health Organization

## 1. Introduction

The new millennium requires new thinking about the relationship between health and development. It is not simply the turn of a calendar page that beckons us to new thinking. It is the growing conviction that, notwithstanding enormous gains in many critical areas of health over the last 50 years, the old strategies are no longer sufficient. Indeed, to a large degree, they are failing.

In many parts of the world mortality declines have slowed or stagnated; in others they have reversed, leaving literally billions suffering from avoidable mortality and morbidity. Inequalities in health status and in access to health care are wide and deep – and they are growing. Such inequalities link to deep inequities, profound injustices, that ultimately feed the corrosive insecurity that now plagues all societies, rich and poor alike. Conventional strategies have done little to stem these tides. They may even have contributed to them.

The old strategies are failing in another sense as well. They no longer describe reality. The field suffers from a terrible disconnect between the dominant models and prescriptions that flow from them, on the one hand, and the reality that people are coping with, on the other. This is a warning sign. We need to re-think. The Millennium Development Goals (MDGs) and the Millennium Project provide a strategic setting in which to do just that.

The focus of this Task Force is on Goals 4 and 5 on child mortality and maternal health (Box 1). We have the technology, the specific health interventions, to prevent or treat the vast majority of conditions that kill children and women of reproductive age and to enable all people to protect and promote their health, and so to meet the MDGs. In that sense, the challenge is not a question of medical technology. Instead, for the health sector, the central challenge is to tackle the problems of implementation, of ensuring access to these interventions by means that simultaneously promote the fundamental aims of development. That challenge is social, economic, cultural, and unavoidably political, in the sense that it relates to the distribution of power and resources within and between countries.

### Box 1: The MDGs for maternal and child health<sup>1</sup>

GOAL	TARGET	INDICATORS
Goal 4: Reduce child mortality	Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate (U5MR)	<ul style="list-style-type: none"><li>• Under-five mortality rate</li><li>• Infant mortality rate</li><li>• Proportion of 1-year-old children immunized against measles</li></ul>
Goal 5: Improve maternal health	Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	<ul style="list-style-type: none"><li>• Maternal mortality ratio</li><li>• Proportion of births attended by skilled health personnel</li></ul>

<sup>1</sup> In this report, we recommend that Goal 5 be operationalized by the addition of an explicit target on sexual and reproductive health services, together with appropriate indicators (see Sections 4 and 7).

Power comes in many guises. Among them is the power to set the terms of the debate, to structure the patterns of thought and language, the fundamental taken-for-granted assumptions, which shape our approaches to problems and solutions. If, indeed, the current situation is untenable, if the dominant categories no longer address the dominant problems, then these terms must be challenged and opened to new debate and directions.

The central argument of this report is that dramatic, meaningful, sustainable progress toward improvements in child health and maternal and reproductive health – toward both the spirit and the quantitative targets of the MDGs – requires a shift in perspective and mindset. Our argument builds on the crucial distinction between (1) an evidence-based understanding of the medical, behavioral or public health interventions that will successfully address the primary causes of child and maternal mortality and morbidity; and (2) an evidence-based understanding of and approach to the social, political, economic, and institutional structures that will enable societies – locally, nationally, globally – to ensure that all people have access to those interventions (Bryce, el Arifeen et al. 2003).

These are two dramatically different exercises. In recent decades much work in the public health field has focused on the first, on identifying the primary causes of poor health, including their prevalence and distribution, and on developing an evidence-based understanding of the interventions that will work to address those causes. There is broad consensus on the methodology for evaluating evidence of the efficacy of interventions. The randomized controlled trial is widely accepted as the “gold standard,” though multiple other techniques are necessarily used to produce valuable evidence that is considered in deciding health policy. That evidence base has then been extended through economic analysis of cost-effectiveness, as typified by the World Bank’s Burden of Disease work and the priority-setting techniques articulated in *World Development Report 1993*. Building on the concept of Disability-Adjusted Life Years (DALYs), the evidence of cost effectiveness is used to arrive at “best buys” and the “essential service packages” which have been promoted by major international donors over the last decade.

The transition from efficacy of interventions to effectiveness of delivery strategies is where we so often lose our way. If efficacy is “proven” by techniques such as the randomized controlled trial that screen out the noise of confounding variables, then, ultimately, the techniques to assess effectiveness of delivery strategies and to decide priorities for health sector policy must do just the opposite. They must take into account, they must even grow out of, precisely the messy, contradictory, dissonant noises of real life. In this sense “delivery strategy” is a misleading term, implying a one-way flow almost as a postal service organizes to deliver a letter. In fact, a central point that we want to convey in our recommendations is the need to approach health systems and the health sector as a dynamic, complex structure into which new interventions cannot simply be wedged. Over and over again, we see international strategies, built on disease epidemiology, that simply assume that the societal structures to “deliver” those strategies exist and function. Then, over and over again, we see such strategies fail to have the expected impact. In subsequent evaluation, the obstacles are identified – but the epidemiology yields no new strategies for surmounting them; only new strategies for avoiding them.

This will no longer work. We need to grapple with the true systemic obstacles to scaling up, to access, utilization and equity, and so to dramatic improvements in maternal and child health. The ultimate solutions will include the infrastructure and resource requirements to deliver priority interventions, but that cannot be the starting point of our analysis of scaling up. Instead, we need to open a second line of inquiry, analysis and evidence-building; one that

begins, not ends, with the social and political dimensions of health and health care, as they are experienced by the people whose lives make up the grim statistics that are the focus of the MDGs.

That analytic and evidentiary problem is distinct from the equally important exercise of identifying social, economic and other environmental (non-physiological) determinants of health and disease. By identifying such determinants – and by understanding the mechanisms through which they influence biological status and mortality and morbidity levels – we begin to get a more accurate and refined picture of the importance of interventions outside the health sector.

So, for example, virtually all of the health conditions identified in the MDGs correlate with income poverty. But the solution to good health is not simply poverty reduction – full stop. Understanding the causal link is key. For some health conditions, such as the mortality of children under 5 years (U5MR), improvement in the basic living environment – water, sanitation, nutrition – that can come with economic growth will have a powerful effect because of the huge influence that malnutrition and infectious disease have on children’s health in the post-neonatal period (Black, Morris et al. 2003). For other health problems, such as maternal mortality, improvements in living conditions will, by themselves, make very little difference. This is because the correlation between poverty reduction and maternal mortality reduction works *through* the impact that economic growth can have on the health system (Wagstaff 2002). Improved living conditions do not substantially change the chance that a woman will experience a life-threatening obstetric complication during pregnancy or childbirth; but access to a health system that can treat such complications will save women’s lives and dramatically lower maternal mortality (Maine 1991; Lule, Oomman et al. 2003). For other aspects of maternal health, such as preventing sexually transmitted infections including HIV, poverty reduction can have significant impact when it facilitates access to education, control over income, and a supportive legal system – i.e., poverty reduction affects HIV risk status, in part *through* its effect on women’s empowerment (Matinga and McConville 2002).

The Millennium Project as a whole will address these multi-sectoral issues and, of course, country-level poverty reduction strategies must address them too. In Section 4, we flag the most important of these determinants of child health and maternal and reproductive health. However, our main focus in this Task Force report is on the health sector. Having identified the effective health sector interventions and, where possible, assessed their *theoretical* relative weight in addressing primary causes of maternal and child health and disease, we come to the core problem with current strategies. That problem is typically characterized as “scaling up.”

In the health literature, “scaling up” is under-theorized and under-conceptualized. Often the tacit assumption is that scaling up is largely a matter of doing the same things that have been proven in small-scale demonstration projects, but extending them to wider geographic areas and larger, more diverse populations. The obstacles to scaling up are identified as insufficient capacity and resources: not enough money, not enough human resources, not enough managerial skills, not enough information, not enough political will.

While all of these deficiencies are indeed there and certainly must be addressed, our aim in this report and in our recommendations, is to begin to identify and approach the problems *systemically*. This means building a far stronger base of understanding of the complex functioning of the health system (broadly defined) in social and political life. With that foundation, the deficiencies in resources can be addressed in a context that we believe can make strategies more pertinent and effective.

While we discuss the nature of the scientific evidence base for assessing systemic problems, our approach to health systems is not and cannot be neutral. By its very nature, embedded in the dynamics of social, economic and political life, every health system will be driven by values. We attempt to be explicit about the values that we believe *should* drive health systems. These include a focus on equity and on processes that both respect and build on human rights.

We hasten to point out that there is no such thing as a value-free or objectively scientific perspective on the recommended solutions. The status quo implies acceptance of the values that drive systems now – even if those values are not often acknowledged and made explicit. If the current state of global health is unacceptable, if the status quo needs to be transformed, then consciously identifying and addressing the values that operate in health-related decisionmaking in households, communities, districts, nations, and globally -- and the relationship of those values to the distribution of power and resources -- will be an essential part of the transformative process.

We recognize that the creative, effective solutions that positively transform societies and their health ultimately grow from processes that take place within those societies. In both child health and maternal health there are powerful stories of true success, which tell us that change is possible, that the MDGs need not be pie-in-the-sky, and that leaders of change speak many languages. At the same time, we are keenly aware that global forces both constrain and facilitate the ability of local and national actors to think and act boldly. The global community, and the wealthy nations that strongly influence it, are not rescuers of poor countries in distress; nor are they solely responsible for all problems. But they are complicit in creating the conditions that define the dismal state of health today, and therefore they must be part of the solution as well. Their complicity lies not just in the economic and political realm. In the health arena, the global community, including multilateral and bilateral agencies, does critical work in setting technical norms and standards, generating and evaluating scientific evidence, forging consensus strategies, and facilitating or frustrating implementation on the ground. Transformative change must be on their organizational agendas too.

This interim report focuses on the health sector, in the expectation that it will then be joined to the work of the other Task Forces and the overall Millennium Project as we together address fundamental questions about macroeconomic policies, poverty reduction processes, and the role of the MDGs in them. In moving toward final recommendations from this Task Force, we must negotiate a careful path between two kinds of problems that we face simultaneously in the health sector:

- Fundamental questions about the principles that underlie current global health policy prescriptions and their implications for the organization and functioning of local health systems must continue to be raised, debated and addressed. Understanding the MDGs not as an abstract statistical goal line, but as a process for tackling poverty in its full economic and social dimensions, we come to the global health policy principles by asking: *What do the operative principles mean for poor people (and not just for poverty)? What do the operative principles mean for the complex phenomena of social exclusion and social inequity as they are experienced in health and health care?*
- At the same time, we need to be sure that debates over first principles do not divert us from tackling the very real and very urgent operational problems that confront the health sector. A commitment to the MDGs as a process for tackling poverty means that the perspectives we take on first principles must be translated into hard questions about

priorities, about the processes for deciding priorities, and about actual steps toward solving the nitty-gritty – but not trivial – problems of a functioning health care system. The search for real solutions to these problems and the actual commencement of serious action must not be sacrificed to the inevitable ideological debates that will continue in the corridors of power. Allowing the ideological debate to derail real action on operational issues, such as the crisis in human resources, is *itself* a statement about the value we place on truly meeting the needs – and the rights – of the poor and the marginalized.

This interim report attempts to address both kinds of problems. At this stage, with a year and a half to go in the Millennium Project, we stake out the areas that we believe require the most urgent attention and frame the issues which we hope will stimulate wide debate and serious action, both in the health community and in the broader policy arenas where so many decisions that constrain or facilitate health-related policy and programs are made. The priority areas for elaboration in the Task Force's ultimate recommendations can be summarized with the following assertions:

**1) Successful scale-up of interventions proven to be effective in addressing key child health and maternal and reproductive health conditions requires a conceptual shift to a focus on health systems as systems, grounded in the social, economic, cultural and political realities of poor countries.** Progress will require:

- a) Understanding how the current health system actually functions for and is (or is not) used by poor people – as compared to its theoretical functioning as outlined in such documents as national health plans, civil service regulations, donor strategies, and PRSPs. This will include recognition that the formal distinction between public and private sectors rarely holds in practice.
- b) Determining how policies that structure the organization of the health system and determine its functioning can move the overall system toward increasing inclusiveness and equity, rather than toward segmented health systems designed to function for those who can pay and to “target” those who cannot. Affirmative action steps giving special attention to the needs and circumstances of the poor and other marginalized groups are likely to be part of the process of creating inclusive, equitable systems.
- c) Focusing as a matter of urgent priority on the capacity and operation of an integrated District Health System, i.e. primary care (including community and household-based care and facility-based care) up through the first referral level. Attention should be paid to both capacity of management and the capacity of health providers from community to health posts/health centers up through the district hospital, including the links of referral and supervision among them.
- d) Giving specific attention to “operational policies” that address issues systemically. This contrasts with the current situation in which attention is given primarily to national level policy (which is often little more than a statement of principles) and/or to action on a facility-by-facility or community-by-community basis.
- e) Ensuring that disease-specific initiatives do not undermine health systems by drawing off attention and resources, while overloading fragile capacity. Instead, disease-specific initiatives (including those addressing HIV/AIDS) must be carefully

designed to contribute to the strengthening of health systems and must be closely monitored and held accountable for ensuring that they function this way in practice.

**2) Human resources for health are in crisis. Solutions must be conceptualized globally as well as locally, with the cooperation of multiple sectors within countries and across countries.**

- a) International institutions -- including trade, immigration and labor policy bodies and regulatory regimes -- are implicated and must be part of the solution.
- b) Human resource policies for staffing the health sector in rich countries often drain the pool of skilled professionals away from poor countries. Human resource policies in rich countries are therefore part of the problem and so must be part of the solution.
- c) Most immediately, priority attention must be devoted to review of job descriptions to ensure policies designed to provide the widest possible coverage (including in rural areas) by personnel who can provide services safely and effectively.
- d) Laws and policies must be adapted to ensure greater access. Too often, policies are premised on idealistic (and debatable) notions of “highest quality” specialist care, which effectively denies any care to large segments of the population. For maternal mortality reduction, certain key functions can be “delegated” to appropriately trained nurses, midwives, surgical assistants, and general physicians, and not be restricted to specialist physicians. For child health, simple interventions such as the administration of antibiotics, often restricted to health facilities, can be delivered in communities where the greatest need for them remains.
- e) Management capacity must be fostered by donors and Ministries alike.
- f) Promotion of midwifery (and nurse-midwifery) as a recognized and valued career, well-compensated and seen as an investment, not a drain on national resources. Gender dimensions of salaries, job security and violence in the workplace require explicit attention.

**3) Sexual and reproductive health and rights (SRHR) are essential to meeting all the MDGs, including MDGs 4 and 5 on child health and maternal health.** Ensuring that SRHR concerns receive the priority they warrant in a manner that strengthens overall health system functioning, requires that:

- a) MDG strategies include the internationally agreed target of universal access to reproductive health services through the primary care system, together with appropriate indicators reflecting progress toward reducing unmet need for contraception.
- b) Initiatives addressing the HIV/AIDS pandemic, including the Global Fund and WHO’s new 3x5 strategy, be explicitly linked to SRHR programs, particularly those providing contraceptive and STI services, and sexuality information and education.
- c) Adolescents receive explicit attention with services sensitive to their increased vulnerabilities and designed to meet their particular needs.

- 4) **Maternal Mortality strategies must focus on building a functioning health system that provides access to emergency obstetric care.** The system should support, supervise and supply the skilled attendants (health professionals with midwifery skills) who should be the backbone of that system, whether they are based in facilities or in communities. This means:
- a) Strategies to ensure skilled attendants for all deliveries must be premised on integration of the skilled attendant into a strengthened health system. Therefore such strategies should be undertaken in tandem with action on the health system to accomplish such integration. Skilled attendant strategies cannot be allowed to *substitute for* health system (including EmOC) strategies.
  - b) Appropriate allocation of responsibility to different categories of health workers, within a supportive supervision system, to ensure that needed emergency services can be provided at each level of the district health system from community to district hospital.
  - c) Progress toward meeting the MDG target of three-quarters reduction in the maternal mortality ratio between 1990 and 2015, should be measured by indicators that assess both the human resource dimension (proportion of births attended by skilled health personnel) and the health systems dimension (availability and utilization of EmOC).
- 5) **Strategies to address neonatal mortality are critical for reductions in child mortality. These strategies can and should be linked to strategies to address maternal mortality, but do not substitute for them.**
- a) For averting both neonatal and maternal mortality, the goal should be to have a skilled attendant at every birth and access (through referral mechanisms) to a health system that can treat both newborn and obstetric emergencies.
  - b) A substantial proportion of newborn deaths can be averted by actions that can safely and effectively be performed by health workers with skills less sophisticated than the midwifery skills necessary to avert the great majority of maternal deaths. Countries should consider employing a staged process in which the workers currently based in the community are trained to manage newborns appropriately, as the country takes concrete and deliberate steps toward the goal of skilled attendants for all.
- 6) **Poverty reduction processes and funding mechanisms - including PRSPs, MTEFs, SWAps, and the Global Fund – should support and promote the above recommendations and not undermine them.** Progress will require:
- a) He PRSPs must develop a more nuanced and policy-relevant analysis of disparities in health and health care, moving beyond just interregional disparities to look also at gender, wealth, educational and other disparities between social groups.
  - b) Operational strategies and policies to implement strategies should be specified (especially emergency obstetric care, reproductive health and the health system as a whole).

- c) The Task Force will also consider the possibility of a health system impact statement that would assess and draw attention to the implications for health systems of policies endorsed through the poverty reduction process and in both donor-driven and nationally-owned/nationally-developed strategies
- 7) Developments in the system of global governance – especially the World Trade Organization and the TRIPS and GATS agreements – must support and promote the above recommendations and not undermine them.** Progress will require:
- a) Recognition of the potential of WTO agreements to undermine public health priorities.
  - b) Commitment by donor countries to promote the positive benefits of trade for poor countries while enabling governments to protect public health and public health systems.
- 8) The operation of health systems and the process of health policymaking are both essential elements of good governance at the global, national and local levels, with implications well beyond simply the biological health status of the population. The equitable participation of communities, of civil society organizations, and of individuals in these processes will be critical to their success and to the fulfillment of basic human rights.**
- 9) Ministries of Finance and Planning, as well as international and bilateral donors, must recognize that health is not only an important aspect of human and social development in itself, but also a crucial factor in economic growth.** Progress will require:
- a) MDGs 4 and 5 on child health and maternal and reproductive health must be seen as essential elements of poverty reduction strategies.
  - b) Political will and the commitment of vastly increased resources at the international and national levels to achieve them.
  - c) Donors and national governments must work to align new poverty-focused funding and planning mechanisms (PRSPs, MTEFs, SWAps, etc.) with the priorities set forth in this section as part of the effort toward meeting MDG 8 on partnership, and as a result, meeting the other MDGs.

The 2015 target date for achieving the MDGs should spur countries and the global community to needed action with immediate and deliberate, concrete steps. But the fundamental transformations we discuss here need to be part of dynamic, ongoing processes of revitalizing – sometimes recreating and rebuilding – health systems as part of broader social change. That requires new vision about where we are going and how we get there: 2015 is a stop along the way, not the final destination.

## 2. Overview: Global health picture and global health policy

### 2.1 Global health picture – child health and maternal health

There are multiple ways to describe the current global health picture, particularly for low and middle-income countries, where over 98% of both maternal and child deaths take place: (1) an epidemiological approach; (2) a health systems approach; (3) a power-mapping approach; and (4) an equity and human rights approach. Each yields a different, vital perspective on the problem. Each tends to structure our thinking about solutions in a different way. Together, these approaches lay the foundation for the Task Force's recommendations.

#### Epidemiological approach

The first, most conventional way to characterize the global health picture is a description of health and disease. Today, the overall picture for child health and maternal health in poor countries is worrisome indeed. While child mortality has steadily declined in the last two decades, still approximately 10.8 million children under the age of five die each year. Progress on key indicators is slowing, and in parts of Sub-Saharan Africa, child mortality is on the rise. The great bulk of the mortality decline since the 1970s is attributable to reduction in deaths from diarrheal diseases and vaccine-preventable conditions in children under five. Other major killers of children such as acute respiratory infection have shown far less reduction, and neonatal mortality has remained essentially unchanged. Malaria mortality has also been increasing, especially in Sub-Saharan Africa.

As far as the MDGs are concerned, only 16 percent of countries are on track to meet the child mortality target and, on average, the poorest fifth of the population saw child mortality falling half as fast as the general population (Wagstaff and Claeson 2003). Though not one sub-Saharan African country is on track to meet the child mortality target, overall progress toward reducing child mortality in Sub-Saharan Africa was faster in the 1990s than the 1980s. In the developing world overall, most countries are on track to meet the child health goals on reducing underweight children,<sup>2</sup> though in sub-Saharan Africa only 17 percent of countries are on track. The picture for the poorest fifth of the population is mixed depending upon the country, but there are certainly examples where malnutrition, as measured by percent children underweight, declined faster amongst the poor over the 1990s as compared to the general population (Wagstaff and Claeson 2003).

For maternal mortality progress has been even more elusive. Despite 15 years of the Safe Motherhood Initiative, overall levels of maternal mortality are generally thought to have remained unchanged, with the latest estimate of deaths standing at approximately 530,000 per year (WHO, UNICEF et al. 2003). While a handful of countries have indeed experienced remarkable drops in maternal mortality ratio (an indicator of the safety of childbirth and pregnancy), in the great majority of high mortality countries, there has been little change. Indeed, in some countries, where levels of HIV and malaria are high and growing, the number of maternal deaths as well as the maternal mortality ratio are thought to have increased. Moreover, the half million maternal deaths are the 'tip of the iceberg', for an additional 8 million

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<sup>2</sup> MDG 1 – "Eradicate extreme poverty and hunger" – includes the target, "Halve, between 1990 and 2015, the proportion of people who suffer from hunger," which is to be measured by the indicator, "prevalence of underweight children under five years of age."

women each year suffer complications from pregnancy and childbirth which result in lifelong health consequences, not the least of which is obstetric fistulae (WHO 2003).

Other aspects of maternal health present a mixed picture. While globally, the world has experienced dramatic declines in fertility – from a TFR of 5.0 in 1960 to 2.7 in 2001 -- still an estimated 134 million women who wish to space or limit their childbearing do not have access to effective contraception that would enable them to do so.<sup>3</sup> The result is approximately 70 to 80 million unintended pregnancies each year in developing countries alone (Singh, Darroch et al. 2004; WHO 2004).

Meanwhile, violence continues to shatter the lives of women in every part of the globe. Sexually transmitted infections, including HIV, ravage whole communities of men and women, with disastrous effects on families and societies. The 13 million “AIDS orphans” around the world – children who have lost one or both parents to AIDS -- are testament to this fact (UNICEF 2003).

In Section 4, we examine the epidemiological picture more closely and discuss the current state of knowledge about the interventions that can address the primary proximate causes of poor child and maternal health. We also point to the important contribution that changes outside the health sector can make.

### Health systems

These kinds of statistics are the skeleton of the epidemiological picture of health status. But people’s actual experience of health and disease – and, critically, of poverty itself – is inseparable from their experience of interacting with the health systems through which they try to manage health and illness. In poor, high-mortality countries, those systems are in profound crisis. Thus, a second way to characterize the global health picture is to examine the state of health care in poor countries. Indicia of the crisis that has overtaken health systems across developing countries include:

- Users routinely describe abusive and humiliating treatment by health providers.
- Health providers routinely describe dehumanizing and demoralizing working conditions.
- Huge gaps in the staffing of front-line facilities make reliable, quality services virtually unattainable. Many clinics stand empty; others are dangerously over-crowded.
- Ministries of Health at all levels are grossly unprepared to manage the crisis, a situation often exacerbated by rapid decentralization and by a proliferation of uncoordinated, donor-driven initiatives.
- The lack of basic drugs and equipment cripples facility functioning, damages the system’s reputation, inflates the out-of-pocket costs to patients, and fuels a spiral of distrust and alienation.

The result in many countries is:

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<sup>3</sup> If couples using traditional methods of contraception are included in the calculation of “unmet need”, this total number rises to 201 million women. Singh, S., J. Darroch, et al. (2004). Adding it up: the benefits of investing in sexual and reproductive health care. New York, The Alan Guttmacher Institute.

- “Mass exit” from the public health system into a chaotic, unregulated, wildly diverse and sometimes dangerous private sector (Standing and Bloom 2002).
- Catastrophic costs, formal and informal, but disproportionately borne by the poor, leading one commentator to coin the term “iatrogenic poverty” (Meessen, Zhenzhong et al. 2003).

The problems of health systems have now become a primary obstacle to meeting the MDGs. In Sections 5 and 6, we examine health systems, not simply as a mechanism for delivering medical interventions, but as core social institutions. As such, the experience of neglect, abuse and discrimination in the health system must be understood both as a cause of poor health and also as a defining characteristic of what it means to be poor.

### Power-mapping

This conception of health systems as core social institutions moves us beyond the simplistic view of health care as a technical, biomedical fix to a recognition that both health and health care are deeply embedded in broader webs of social and economic forces. Thus, a third way to approach the global health picture is essentially through power-mapping. Who makes the decisions that shape health and health care in poor countries? Here it is useful to distinguish among different countries. International donors have enormous power in highly aid-dependent countries. Newer techniques such as Sector-wide approaches (SWAs) and Poverty Reduction Strategy Papers (PRSPs) are meant to address the problem of “ownership” but the jury is still out. Recent policy prescriptions have changed the locus of power in many countries. With decentralization, responsibility often devolves to the district level, though power and authority do not always follow. Moreover, the power dynamics functioning along axes of age and gender within households and communities often have huge influence over health and access to health care. And, finally, what of changes brought by globalization, including the new legal and regulatory regimes emerging from the World Trade Organization, such as the TRIPS and GATS agreements? What do they mean for the changing role of the private sector and for cross-border relationships in health care?

In Section 8, we begin to address these issues by sketching out some aspects of the “architecture” of global health policy and some early findings from assessments that have been conducted by various agencies and civil society groups. Ultimately, participation and accountability, both concepts grounded in human rights obligations, will be important lenses for looking at shifting power arrangements. This area will receive increased attention by the Task Force in the coming year.

### Equity and Human Rights

Any analysis of the distribution – and potential redistribution—of power raises immediate questions of entitlement and obligation. How do evolving ideas of human rights help address the obligations of different actors? How can they shape the processes through which health policy is made and implemented? What role do they have in shaping MDG strategies at both global and country levels?

Our approach to human rights, like our approach to each of the other perspectives, is informed by a conception of health equity as an expression of social justice. Our concern with disparities in health status and in access to health care is not simply a concern with the statistical range that exists across ungrouped individuals in a population; rather our concern is with the relationship that such inequality has to the socially-defined hierarchies that exist in

every society (Braveman, Starfield et al. 2001). We therefore use the definition of “health equity” proposed by Braveman and Gruskin: “equity in health is the absence of systematic disparities in health (or in major social determinants of health [including access to health care]) between groups with different levels of underlying social advantage/disadvantage” (Braveman and Gruskin 2003).

In recent years, researchers and donors have taken up the call for health equity. But, operationally, the concept of equity is often boiled down to mean simply ‘pro-poor’ health interventions. This new emphasis is an important change in the development arena, for the recognition that the better-off groups in society will typically absorb interventions first has been slow to take hold.<sup>4</sup> However, equity in health has a far broader scope as an analytical tool than simply the development of “pro-poor” health interventions. Health equity is a multidimensional concept which encompasses “concerns about achievement of health and the capability to achieve good health, not just the distribution of health care...[It includes] non-discrimination in the delivery of health care...and broader issues of social justice and overall equity” (Sen 2001).

The coincidence of multiple inequities in health—and as an interlinked concept, the multifaceted nature of poverty—make for a very complex field. Those living at the margins of society suffer numerous and overlapping inequities in health, in voice, in agency, in living conditions. Often, their poverty and ill health keep them in a life of perpetual quicksand. Just as an intervention might spare a child from malaria only to have her die a year later of measles, a policy change in the health sector might be successful in eliminating one source of inequity (e.g. access to care) only to have another emerge or persist (e.g. gender bias). Even amongst poorer groups, which suffer one kind of inequity based upon their lack of wealth or income, gender inequities further increase poor women’s vulnerability (Sen, Iyer et al. 2002). And amongst poor women, those of a particular ethnicity or religion might face additional stigma or marginalization.

Those at the bottom of a socially stratified world are vulnerable to economic shocks, impoverishing effects of illness and co-morbidity—with one underlying condition (e.g., malnutrition or HIV/AIDS) making the development of another more likely (e.g., diarrhea or TB). Increasingly, child morbidity and mortality is seen as a function of co-morbidity, with malnutrition coinciding with other conditions such as measles, acute respiratory infection (ARI) and diarrhea. In the realm of maternal health, co-morbidities naturally exist as well, though the programmatic implications are different for maternal mortality than for child mortality. Some evidence points to the fact that malaria and anemia are more frequent in women with HIV infection (Brabin and Verhoeff 2002); sexually transmitted infections can increase the susceptibility to HIV/AIDS (UNAIDS 2001); severe anemia in pregnant women has been associated with greater risk of death from hemorrhage (Rush 2000) and so on.

It is not surprising that inequities in health would manifest themselves in co-morbidity. The idea that poverty, social exclusion and marginalization underlie disease has deep historical roots and has been articulated in theories of social epidemiology, which recognize social conditions and exclusion as fundamental causes of ill health (Link and Phelan 1995; Krieger 2001). The fact that certain groups are vulnerable to multiple and overlapping social causes of ill-health, often manifested in co-morbidity, steers us toward two kinds of solutions: first, changes which make for a more just society as a whole, and second, interventions which

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<sup>4</sup> This phenomenon, that access to care is first attained by those who need it least, has been termed the “inverse care law.” Tudor Hart, J. (1971). “The inverse care law.” *The Lancet* 1(7696): 405-412.

strengthen the health system so that it acts as a safety net and prevents people from falling into poverty or becoming sicker. A strong health system would mediate against some of the multiple dimensions of inequity as well as integrate different interventions for causes of ill health that coincide in an individual or a family. In addition, a functioning, equitable, responsive health system has the potential to mitigate, rather than exacerbate, precisely the experience of exclusion from social assets and of abuse by those in authority, which today have come to define what it means to be poor (Mackintosh 2001).

Country-level analysis of disease profiles, social inequalities, and health system functioning must underpin the priorities selected and the specific solutions proposed. We cannot generalize about a single best way to achieve equity. In one country the poor might need a social safety net, prioritization of malaria and tuberculosis and legal prohibitions on violence against women. In another, ethnic identity politics, civil conflict and food shortages might underlie inequities in health. In some cases, more vertical programs (such as immunization) might be modified to better strengthen the health sector. In others, the only hope may be a radical overhaul of the health system, including better management policies and accountability mechanisms, training of human resources and repairing trust between the community and the system.

## 2.2 Evolution of global health policy and impact on health systems

The crisis that now envelops health systems with such resounding impact on the poor must also be understood in historical context. Most countries in Asia and Africa found themselves at independence confronting the legacy of a colonial health system that had focused almost exclusively on urban, tertiary hospitals. Traditional providers of different kinds, unconnected to the state, were the major sources of health care outside the family. Newly independent states advanced a new vision of health care as part and parcel of the nationalist ideals that had inspired the struggles for independence (Mackintosh 2001). Into societies that were often marked by deep inequalities (by wealth, by gender and sometimes by race/ethnicity as well), governments advanced a strategy that would extend basic curative and preventive services through a network of health posts or health centers in “a highly organized, supervised and regulated publicly financed service which would cover the entire population” (Bloom and Standing 2001).

In this scenario, households and communities would provide basic social support and voluntary labor for public health, while the state would provide specialist knowledge, drugs and other supplies through an extensive infrastructure of basic health posts/centers (Bloom, Lucas et al. 2000). Staffing even such a system was a daunting challenge. In most countries the plan was to train massive numbers of “medical assistants” or “health assistants” to work as government employees in the most basic level of the local health infrastructure, as well as “community health workers” (CHWs), typically volunteers who were expected to work in their own communities leading public health campaigns and providing simple preventive and curative care. These cadres of workers were generally people with little formal education, who were given a limited amount of training. Therefore a strong supervision system in which medical professionals – doctors and nurses – would provide regular monitoring and back-up to the health assistants and CHWs, was an essential element of this vision. Over the 1960s and 1970s, many countries invested heavily in training and deploying community-based health workers, including to underserved rural areas. The boldest, and most successful, application of this kind of system was structured around the ‘barefoot doctors’ in China, and the Chinese experience became an inspiration for international public health policy makers. In Bangladesh, NGOs took on this task. The BRAC experience with CHWs in highlighted is Box 2.

## Box 2: BRAC's experience with Community Health Workers

In many developing countries, community health workers (CHWs) have been trained as front-line workers for healthcare. Evaluations have found that these programs have varying degrees of success. According to Walt (1990), such workers not only provide basic health services but also promote the key principles of primary health care – equity, intersectoral collaborations, community involvement and use of appropriate technology – as enunciated in Alma Ata in 1978.

One of the human resource issues faced by countries now is the migration of health workers. This is hardly an issue in case of CHWs. BRAC, a large non-governmental organization in Bangladesh, has been training female CHWs since the 1970s. The program grew out of frustrations with existing public and private healthcare system and the experience with male paramedics. Added to this was BRAC's belief in the capacity of women to deliver and serve their own communities and the potentials of going to scale. In 2003, BRAC had trained nearly 30,000 CHWs in as many villages of the country.

The BRAC-trained CHWs are married, middle-aged women eager to work for their communities. Only a few have some schooling. They are members of BRAC-organized village organizations (VO), groups of poor women designed to advance their social and economic well-being. The VO members in a given village select one of their own to be trained as the CHW for their area. They receive no salary from BRAC but supplement their income through several opportunities created/facilitated by BRAC. With small loans received from BRAC, they set up revolving funds for drugs that they sell with a small mark-up. They also sell selected health products such as contraceptives, iodized salt, ORS, soap, safe delivery kit, sanitary napkins, sanitary latrines, and vegetable seeds with a profit. However, this is not meant to be a full-time job and BRAC also provides them, as VO members, with small loans to undertake other income-enhancing enterprises.

The CHWs are provided short foundation training for four weeks and one-day refresher trainings every month. They are trained on common illnesses such as diarrhea, dysentery, common cold, scabies, anemia, gastric ulcer, and worm infestation. A subset of the CHWs have also been successfully trained on high-skill work such as treatment of tuberculosis through directly observed therapy (short course or DOTS) and acute respiratory illnesses, particularly pneumonia (Chowdhury et al 1997; Hadi 2002).

Each CHW is assigned approximately 300 households, which she visits once every month. During household visits, she provides health education and treats illnesses. She also uses this opportunity to sell health products (as mentioned above). When she encounters an illness she is not trained to manage, she refers the patient to government health centers or to BRAC facilities. While BRAC doctors and other trained health paraprofessionals provide professional supervision, the CHW is accountable to her VO and the community she serves.

The BRAC CHWs appear to be the prototype of community health workers recommended by WHO (1989):

- Members of the communities where they work
- Selected by the communities
- Answerable to the communities for their activities
- Supported by the health system (BRAC in this case, and government to some extent) but not necessarily part of its organization
- Have shorter training than professional workers.

Sources: (WHO 1989; Walt 1990; Chowdhury and et al. 1997)

### Primary Health Care

From this basic vision of an appropriate health system that responded to the needs of the entire population, grew the concept of Primary Health Care (PHC) formally articulated at the Alma Ata conference in 1978. Although PHC is now often equated only with community-based, low-tech health care, the Alma Ata declaration very clearly recognized the importance of a facility-based health system with a strong referral network of which outreach into communities was an integral part. Despite that broad conception of PHC, in practice the shift toward a focus

on the community level and toward a focus on equity had a narrowing effect for the maternal health field: it translated into a push toward training traditional birth attendants as the primary strategy for providing safer delivery care -- a strategy which eventually proved largely ineffective in reducing maternal mortality, as we discuss in section 4.2.4 (Campbell 2001).

PHC was not just a blueprint for organizing a public health system. It was a fundamental approach to health itself, which included key values: services to be delivered as close to the community as possible, in a system that the country could afford, in an integrated manner, with the participation of the community. Health was understood in its full social and economic dimensions and health care was understood as an essential part of what good governance should mean. These were optimistic times: the commitment to PHC and to "Health for All by the Year 2000" developed hand-in-hand with the vision of a New International Economic Order, which promised poor countries not only prosperity, but also control over their own destiny.

Neither the optimism nor the international commitment lasted long. In fact, some recent commentators attribute the near-immediate reversal of PHC policies to the simple idea that the "West" did not want to put priority-setting responsibilities in the hands of the developing countries (Hall and Taylor 2003). But, at the time, the lead rationale for abandoning Alma Ata was affordability, as the debt crisis of the 1980s descended on many of the poorest countries of the world. Some proposed that, if PHC was too ambitious and too expensive for immediate implementation in countries mired in debt, then a targeted approach aimed at a select few of the disease conditions responsible for the highest number of deaths could be a temporary way to have an impact on health (Walsh and Warren 1979). Much debate ensued, but the selective approach essentially won the day in the international health policy arena. Its rationale became the basis for UNICEF's Child Survival and Development Revolution, launched in 1982. The strategy was to push for massive coverage of a few key interventions that would address the most important causes of child mortality and morbidity. Known by the acronym GOBI and then GOBI-FFF, these were: Growth monitoring, Oral rehydration, Breastfeeding, Immunization, to which were added: Food supplementation, Family Planning, and Female education.

Several of these interventions have had very substantial impact on child mortality. Oral rehydration therapy (ORT) has been credited with dramatic declines in diarrhea-related deaths. Immunization has had a major impact as well. But its fate is, in many ways, emblematic of the dilemmas raised by selective approaches delivered through vertical systems. The Expanded Programme on Immunization (EPI), which garnered substantial donor support in the 1980s and 1990s, with a dedicated delivery system, was able to achieve high coverage and a measurable impact on vaccine-preventable diseases. But even when vaccination programs attained their most successful levels of performance, the overall functioning of health systems remained weak. Now, as some donors and implementing agencies withdraw from vaccination programs and turn their resources and attention to new priority diseases, coverage has ceased to increase and, in some areas, is slipping.

In fact, even as these vertical programs were being deployed in the 1980s, often quite separately from the basic health infrastructure, that infrastructure was coming unhinged, as stabilization and structural adjustment programs promoted by the IMF and World Bank started to take their toll on spending in all social sectors, including health. The effect of drastic cut-backs in health sector spending was magnified by the overall impoverishment and dislocation associated with economic crisis and with the policies pressed by the Bretton Woods agencies and adopted by national governments to address it. At least in some parts of sub-Saharan Africa, for example, not only was the health system in a state of collapse (Simms, Rowson et al.

2001), but “the economic context was experienced locally as a crisis of extended family support systems, a crisis to which social sectors were unable to respond” (Mackintosh 2001).

### The Marketization of Health Care

By the early 1990s, health systems were already in serious disarray. Now, in some quarters of the international health policy world, PHC conjured up not images of self-reliant communities engaged with committed health workers and professionals in locally relevant health structures; rather it evoked images of empty clinics, lacking staff, drugs and equipment, and a public system riddled with corruption, abuse and waste (Filmer, Hammer et al. 2000).

By the 1990s, the World Bank had become the leading funder of health sectors, and its view of the problems and prescriptions for solutions dominated the field. The highly influential *World Development Report 1993*, entitled *Investing in Health*, introduced new priority-setting techniques for public spending and ushered in a new orthodoxy in health policy. Drawing on the neoliberal ideology that framed policies of the international financial institutions in other sectors as well, the core of the new orthodoxy was the view that the private sector could most efficiently meet most health care needs and should be allowed – indeed, actively encouraged -- to do so. The public sector would be assigned the task of “gap-filling”: It would provide a set of cost-effective services determined on the basis of burden of disease measures, which would become an “essential service package” offered to the poorest through public sector facilities.

The consequence of this approach was the marketization of health care: in every part of the health system (whether nominally public or nominally private), health care – professional services, drugs, transport, basic access and decent, humane treatment – came to be bought and sold. “The marketisation of public services has become so ubiquitous in some countries that parts of the health system are more appropriately understood as government subsidized private services than as a publicly-funded service with minor problems with corruption.” (Bloom and Standing 2001). Health policy, still grounded in an idealized model of public-private sectors, was becoming dangerously disconnected from the reality on the ground.

Bloom and Standing have argued persuasively that instead of premising policy discussions (or prescriptions) on the increasingly insupportable view of discrete public and private health sectors, the situation in many – perhaps most – poor countries can be more accurately described as pluralistic, and more appropriately divided into “organized” and “unorganized” categories. The choice that people confront is not between a private health system that charges for a maximum choice of high quality services, and a public health system offering essential services for free or at low cost. Instead, all users, rich and poor alike, are confronted with a bewildering array of sources for health care: from drug peddlers, to traditional healers, to highly trained specialist physicians, to civil servants setting up private practices of wildly uneven quality. Indeed, the CHWs who had been given minimal training with the expectation that they would be the backbone of a public health service working under careful supportive supervision of health professionals -- these CHWs are, in some places, a substantial portion of the private sector providers. As Bloom and Standing point out, the weakening of government supervision systems is “an important factor contributing to the *de facto* marketisation of health services” (Bloom and Standing 2001).

Yet, for CHWs and other health providers, faced with woefully inadequate salaries, the selling of services is sometimes the only way to survive (Van Lerberghe, Conceicao et al. 2002). Studies examining workers’ survival strategies in the face of health sector reforms help make the link between structural policies and the individual behavior that is often addressed simply as

widespread corruption (Kyaddondo and Whyte 2003). Coping mechanisms and their implications are addressed in later sections of the report on human resources.

The marketization of health care and mushrooming of unorganized markets alongside collapsing organized ones have profound ramifications for health equity. Far from the scenario of the poor seeking essential health services in public clinics, “unorganized markets are not only used by the poor but do their greatest harm to the poor. They suffer the greatest information asymmetries and are much more likely to be at the purchasing end of shoddy or dangerous goods and services” (Standing and Bloom 2002).

In societies where inequality is deeply entrenched, the marketization of health care implicitly, but powerfully, legitimizes exclusion (Mackintosh and Tibandebage 2002). As we discuss in Section 5, any approach to rebuilding health systems – essential for meeting all of the health MDGs – must confront this fact.

This disintegration of the public health system – or, indeed, the failure ever to reach a functioning point from which it could disintegrate -- is a core factor in the grim failure of many countries to address maternal mortality. The obstetric complications that kill women in pregnancy and childbirth cannot be managed outside of a functioning health system. Even when families are willing to pay – willing to incur truly catastrophic costs (Borghi, Hanson et al. 2003) – women with life-threatening complications will need professional, skilled health care, and the drugs and equipment on which it depends, in order to survive.

#### Population and Family Planning: a Parallel Evolution

The slow progress on maternal mortality reduction in most countries – and the rapid progress in others – can also be understood from the perspective of a second narrative sketching the evolution of reproductive health policy and its implications for health systems. We take up the broader analysis of reproductive health in later sections of the report (and in multiple other task forces of the Millennium Project). Here, in an account of the evolution of health systems, our point is a narrow one. Historically, family planning programs have been justified and shaped by three different rationales receiving different weight in different times and places. These rationales are: demography (reducing population growth), health (initially of children, but also of women), and human rights (of women and men both) (Seltzer 2002). Does it matter for health system functioning which rationale is the force behind a contraceptive program? Evidence from the family planning field suggests that it does.

In the 1950s and 1960s, rounds of censuses conducted in newly independent nations revealed the fact and challenge of rapid population growth. Some policymakers felt that the ability to provide (publicly-funded) social services and generate savings for investment necessary for economic development would be imperiled if ongoing mortality declines were not accompanied by equilibrating fertility declines. International donors, influenced in part by geopolitical concerns, offered support to family planning services in an effort to hasten the demographic transition. The earliest policy and program developments were in South Asia.

Driven primarily by demographic concerns, these early family planning programs were constructed as vertical programs with their own infrastructure of facilities, staff, logistics and supplies. In countries such as India, where political energy was intensely focused on family planning as a primary tool of “population control,” the distortions to the health system were enormous (Visaria, Jejeebhoy et al. 1999). The fate of Auxiliary Nurse Midwives (ANMs) in the Indian system is a good example. Initially intended as community-based midwives who would

provide skilled care for deliveries, ANMs were de facto converted into family planning workers when they were held to numerical targets for bringing in “contraceptive acceptors” and were monitored and held accountable for only this aspect of their job (Mavalankar 1997). While in some cases, family planning enhanced the value of ANMs within their communities, to a certain degree all other aspects of women’s health were accorded less importance. Moreover, the reliance on targets, on incentives/disincentives, and on the promotion of sterilization as the only available method of contraception, created a potentially coercive situation for clients, thereby sowing distrust in the government system as a whole.

In some countries, particularly in Sub-Saharan Africa, health rationales dominated family planning programs and policy (Seltzer 2002). In these settings population growth was also rapid as traditional birth-spacing practices were eroding, but motivation for fertility limitation was weak. It was primarily children’s health that concerned governments. Donors recommended and funded family planning as a child survival strategy. Indeed, strong evidence does support the important link between family planning and improved child health and survival (National Academy of Sciences 1989). Thus MCH-FP (Maternal Child Health – Family Planning) programs were the mode of service delivery adopted in many countries (Stewart, Stecklov et al. 1999). It was not until the influential 1985 *Lancet* article by Rosenfield and Maine subtitled “Where is the M in MCH?” that the international health community even recognized what was missing: programs that viewed maternal health primarily as a means to improve the health of children were failing to address the health system capacities necessary to avert the death of mothers (Rosenfield and Maine 1985). Indeed, international actors shared responsibility for the skewing of services. Even programs for improving delivery practices, which had been a concern for many donors in the 1950s and 1960s, were crowded out through the 1970s and 1980s as WHO, USAID and UNICEF turned the bulk of their attention to family planning and child health (Campbell 2001).

Several countries adopted broader approaches. In Malaysia and Sri Lanka family planning services developed in conjunction with an expanding primary health care system (including development of a cadre of professional midwives linked to and supported by that system) and a complementary set of policies and services advancing girls’ education and women’s status more generally. The impact on both fertility and maternal mortality, and even on child mortality, has been dramatic. Once modern contraceptive methods were introduced in these countries’ primary health care system in the 1960s and 1970s, TFR declined together with maternal mortality to quite low levels. As the World Bank study explains, “it can be expected that when a health system provides credible and attractive basic services in key areas of women’s health (that is, maternal health care and contraceptive care), those services will reinforce each other. Maternal mortality and fertility declines are thus interwoven through increased uptake of both services.” (Pathmanathan and Liljestrand 2003)

Human rights rationales for family planning first appeared in international documents in the late 1960’s (Seltzer 2002). Although the earliest statements justified a right to decide on the number and spacing of children by its importance for population stabilization and child health (Freedman and Isaacs 1993), with the entering into force of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1981, the “right to decide freely and responsibly on the number and spacing of their children and to have access to information, education and means to enable them to exercise these rights,” (CEDAW Article 16.1) was codified in formal law as a woman’s human right. (United Nations 1981). Indeed, evidence from social science research confirms the position put forward by women’s health and rights advocates that, from the perspective of women themselves, contraceptive services are an

essential tool in their struggle not only to protect their own health and that of their children, but also to participate as full citizens in their societies (Correa 1994; Petchesky and Judd 1998).

From this perspective, it mattered very much how contraceptive services were organized and delivered (Freedman 1995). If “health system functioning” is understood to include the experience of users interacting with that system – and not simply the technical capacity to deliver contraceptives – then a human rights rationale for family planning introduced a range of issues, from technical questions about contraceptive safety to policy questions about who should have a voice in decisions affecting health systems and services (Maine, Freedman et al. 1994). The rights-based, user-centered perspective was an important factor in the policy dialogue and programmatic recommendations that, over the 1980s, increasingly came to see informed choice and access to information, technically competent providers, a range of methods offered in a context of respectful interpersonal relations and an appropriate constellation of services, as the key features of good quality of care (Bruce 1990).

By the 1990s, a growing body of evidence had confirmed the importance of contraceptive services for health, for human rights, and for reduction in population growth as well. Simultaneously, a substantial research effort had been devoted to the question of how best to deliver such services. That research, developed over several decades, overwhelmingly demonstrates that the mere supply of contraceptives is not sufficient to ensure that even those who want to limit or space their births can or will use them. Utilization depends on many variables, including factors outside the formal health system, such as gender and age dynamics within households, economic survival strategies, education, and so on. But utilization also depends on the very nature of the services themselves. Thus quality of care, in addition to its intrinsic value from a human rights perspective, has been shown to have significant impact on the level of contraceptive use (Samara, Buckner et al. 1996; Koenig, Hossain et al. 1997; Seltzer 2002).

Quality of care, in turn, requires a functioning health system that can, for example, appropriately integrate an expanded range of contraceptive methods (Diaz, Simmons et al. 1999) or that can address the problems facing providers so that they can better address client needs (Shelton 2001). A particularly important question relates to the integration of family planning services with the broad set of services necessary to address a range of women’s reproductive health concerns, such as reproductive tract infections, HIV/AIDS and other sexually transmitted infections, cervical cancer, antenatal and delivery care, and gender-based violence (Berer 2003).

The ferment within the family planning field reflected changes happening in the post-Cold War world more generally, including the growing recognition that women, as full citizens in their communities and countries, are essential to the development process – and that sexual and reproductive health and rights are fundamental to the ability of both women and men to exercise that citizenship. At the international policy level, the expanded dialogue on rights, the roles of women, participation and development culminated in the consensus of the Programme of Action of the International Conference on Population and Development (ICPD) held in Cairo in 1994. That consensus amounted to a paradigm shift that consolidated new thinking that had been emerging in the international health community in response to both new evidence and the growing voices of civil society movements. The ICPD paradigm shift was captured in the concept of reproductive health endorsed by the 179 countries that signed the conference declaration (see Boxes 3 and 4).

Reproductive health entails both an approach to health generally and a set of health care services aimed at improving the reproductive and sexual health status of all people (WHO 1999). As an approach, reproductive health actually shares much with the original notion of Primary Health Care articulated at Alma Ata in 1978. Reproductive health is understood broadly, linking biomedical to social, economic and political dimensions, and conceptualized as an essential part of development and as a fundamental human right. Translating the commitment to human rights into reproductive health policies and programs means new attention to individual dignity and autonomy, to the right to make decisions free from coercion, violence and discrimination, and to broader systemic questions of equal access and social justice (Copelon and Petchesky 1995; Helzner 2002).

### **Box 3: Reproductive and sexual health defined**

Paragraph 7.2, Programme for Action of the UN ICPD reads: “Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the right of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility which are not against the law, and the right of access to appropriate health-care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant. In line with the above definition of reproductive health, reproductive health care is defined as the constellation of methods, techniques and services that contribute to reproductive health and well-being through preventing and solving reproductive health problems. It also includes sexual health, the purpose of which is the enhancement of life and personal relations, and not merely counseling and care related to reproduction and sexually transmitted diseases.”

Source: *Report of the International Conference on Population and Development, A/CONF.171/13*. 1994, New York: United Nations.

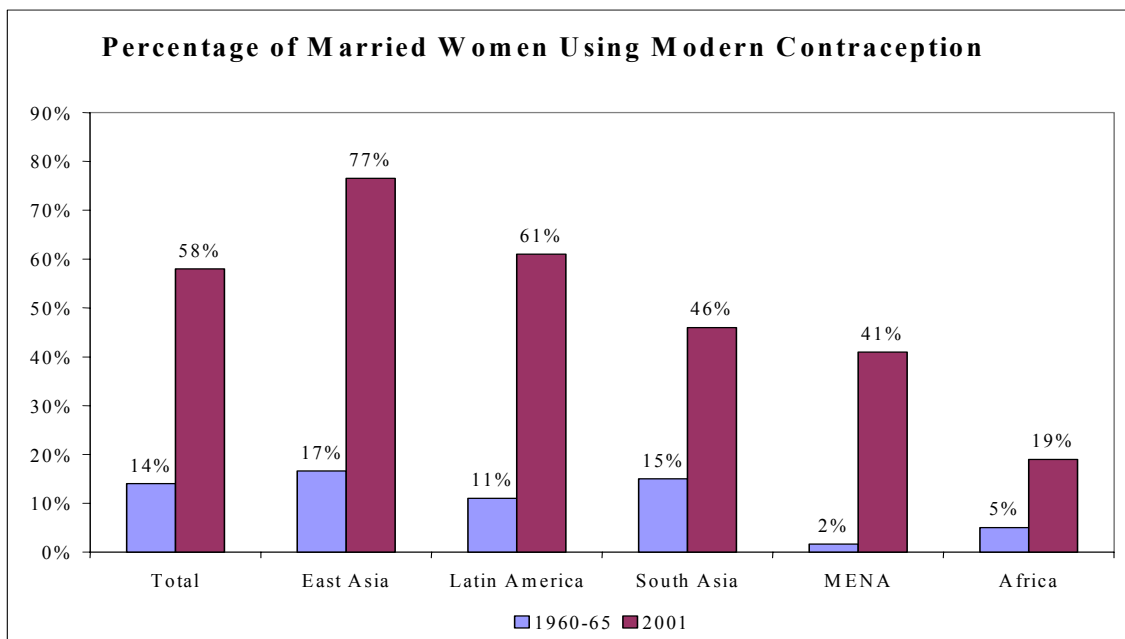
### **Box 4: Reproductive and sexual rights defined**

Paragraph 7.3 reads: “Bearing in mind the above definition, reproductive rights embrace certain human rights that are already recognized in national laws, international human rights documents and other consensus documents. These rights rest on the recognition of the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health. It also includes their right to make decisions concerning reproduction free of discrimination, coercion and violence, as expressed in human rights documents. In the exercise of this right, they should take into account the needs of their living and future children and their responsibilities towards the community. The promotion of the responsible exercise of these rights for all people should be the fundamental basis for government- and community-supported policies and programmes in the area of reproductive health, including family planning. As part of their commitment, full attention should be given to the promotion of mutually respectful and equitable gender relations and particularly to meeting the educational and service needs of adolescents to enable them to deal in a positive and responsible way with their sexuality. . .”

Source: *Report of the International Conference on Population and Development, A/CONF.171/13*. 1994, New York: United Nations.

In the four decades since modern contraceptive methods have become available, government policies regarding their use have changed dramatically. By 1998, 179 out of 193 governments were facilitating contraceptive use by directly or indirectly supporting access to services. Over 99 percent of the world's population resides in these countries (Seltzer 2002). Yet, despite such a clear mandate for the importance of contraception, and despite huge increases in contraceptive prevalence rates over the last 40 years, as shown in Figure 1, still approximately 134 million women lack access to the means to implement their own reproductive intentions, and a far greater number lack access to the full range of services necessary to protect and promote their sexual and reproductive health and rights (Singh, Darroch et al. 2004).

**Figure 1: Contraceptive prevalence trends in the developing world, by region**



*Source.* Constructed from data from *Findings From Two Decades of Family Planning Research* by J. Ross and E. Frankenberg, 1993, p. 2, New York: The Population Council; and *World Population Data Sheet* by the Population Reference Bureau, 2002, Washington, DC: Population Reference Bureau, in (Lule, Oomman et al. 2003), p. 13

This brief account of the evolution of health policy in the maternal, child and reproductive health fields and its impact on health systems has exposed the perennial tension that exists between, on the one hand, strategies such as PHC and reproductive health committed to the development of integrated health systems as part of equitable development, and, on the other hand, vertical programs such as immunization or contraceptive delivery, often supported by outside donors looking for clear and fast impact on discrete health outcomes. Yet, today, this dichotomy is, in one sense, almost moot. Whether due to vertical programs that draw off the resources of fragile health systems, or to the impact of macroeconomic conditions and policies, to poor management, or simply blind neglect, it is now indisputable that health systems are in deep trouble. With the resurgence of tuberculosis and malaria and the devastating rise of HIV/AIDS, this stark fact is laid bare once again. There is serious question whether TB or HIV

can even be effectively managed without strengthening health systems more generally (Buve, Kalibala et al. 2003; Mahendradhata, Lambert et al. 2003)

As the world swings toward addressing HIV/AIDS with a new seriousness of purpose, a new page in the narrative of global health policy is being written. The question is whether the MDGs, and the strategies that they inspire, will enable that page to be written well, to have lasting effect on all aspects on health and on the critical role that health systems will play in strengthening – or tearing apart – the fabric of societies in poor countries around the globe.

### 3. The Millennium Development Goals

The Millennium Development Goals frame the current approach to health in the international policy arena. Each of the goals has been assigned targets and indicators that are meant to assist countries in monitoring and measuring progress toward achievement of the goals. In the public health field, what we count is often what we do, and thus targets and indicators inevitably shape programs and policies. If the MDGs are to inspire bold new strategies for improving health and reducing poverty in all its dimensions, then the targets and indicators must be used not only for measurement, but also for mobilizing political commitment around specific actions. It is therefore vitally important that the targets and indicators we use reflect and support the programmatic priorities that are actually necessary to reach the goals.

Goal 4, “reduce child mortality,” is fairly straightforward and the target – two-thirds reduction in the under-five mortality rate (U5MR) – flows directly from it. Goal 5, “improve maternal health,” is somewhat more complicated. The target, three-quarters reduction in the maternal mortality ratio by 2015, highlights a critical aspect of women’s health -- i.e., death in pregnancy and childbirth – that has long suffered from inadequate attention and resources. We welcome this heightened sense of urgency about maternal mortality and demonstrate in this report that strategies to dramatically lower maternal deaths can have far-reaching impact on the operation of the health system and on important dimensions of poverty reduction.

But there is a serious problem of “fit” between the goal and the target, when it comes to operationalizing this MDG. To improve maternal health, the goal set by the Millennium Declaration, requires a policy vision and programmatic interventions that include, but go beyond those needed to reduce maternal mortality. In this respect, the maternal health goal is markedly different from the child health goal. The difference lies in the relationship between health and death. For infants and children, the biological causes of poor health are the same as the biological causes of most deaths. Child mortality can therefore be understood with a cumulative model: assaults of illness and poor health (e.g., infection, malnutrition) increasing in number and/or severity ultimately lead to death. Programs and policies that address the most important causes of poor health and poor development in children will, by definition, also be addressing causes of death and so have an impact on mortality.

Maternal health and maternal death have a fundamentally different relationship to each other. Pregnancy itself is not an illness. Yet the care a woman receives during her pregnancy and around the time of delivery can influence how she experiences those events, both physically and emotionally, and so can do much to optimize her health. A woman’s care during pregnancy and delivery can also have enormous influence on the survival and early health status of the child she bears. But, somewhat counter-intuitively, most of the elements of routine care during pregnancy have little impact on the chance that a woman will experience a life-threatening obstetric complication -- and once a woman does experience a complication, the routine care given in pregnancy will not save her life. To dramatically reduce maternal *mortality* and meet the MDG target, emergency care must be accessible to and utilized by those pregnant women who experience complications.

Consequently, the strategies for reducing maternal mortality and meeting the MDG *target* will be quite different from the strategies for protecting and promoting other aspects of maternal health and meeting the maternal health *goal* overall. Those aspects are best captured by the broader concept of sexual and reproductive health (SRH), endorsed in the Cairo and Beijing conferences. Protecting and promoting SRH has ramifications not just for health but also for multiple other MDGs, including poverty reduction (UNFPA 2003). Although SRH

requires action in multiple sectors, health sector interventions are at the core of SRH strategies. To ensure that development strategies built around the MDGs capture the non-mortality aspects of SRH, we propose the addition of a target modeled on the target endorsed by the global community during the ICPD and ICPD+5 conferences: universal access to reproductive health services through the primary health care system.

For this target as well as the other maternal and child health targets, we suggest an additional modification to ensure that priority is given to the critical issue of equity. A drawback of both the child and the maternal health goals, targets and indicators as currently framed, is their failure either to track the reduction in mortality for the poorest and other marginalized members of society, or to track the gap itself between rich and poor. The strategies we propose for the health sector pay careful attention to health as a part of poverty reduction, and this should be reflected in the targets, as shown in Box 5 below.

**Box 5: Proposed Targets for the Child and Maternal Health MDGs**

GOAL	TARGET
Goal 4: Reduce child mortality	Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate (U5MR), ensuring the same rate of progress or faster amongst the poor and other marginalized groups.
Goal 5: Improve maternal health	<p>Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio, ensuring the same rate of progress or faster amongst the poor and other marginalized groups.</p> <p>Universal access to reproductive health services by 2015 through the primary health care system, ensuring the same rate of progress or faster amongst the poor and other marginalized groups.</p>

In Section 7, we address some of the technical issues raised by the specific indicators initially put forward in the Road Map (United Nations 2001), and by the modified targets we have proposed. We also discuss the challenges of developing additional indicators to measure, monitor, and guide the development and strengthening of health systems, essential for meeting all of the health-related MDGs.

## 4. Epidemiological picture: prevalence, distribution and key interventions

### 4.1 Child health

#### 4.1.1 *The Context*

As discussed in the Background Paper of this Task Force of the Millennium Project (Freedman, Wirth et al. 2003) and reiterated above, it is widely believed that important gains were made in the area of child survival during the second half of the twentieth century. Globally, the under-five year mortality rate declined from 159.3 deaths per 1000 live births per year to 70.4 deaths per 1000 live births per year from the period 1955-59 to 1995-99 (Ahmad, Lopez et al. 2000). This decline was most rapid during the 1970s and 1980s. Although the rate of decline slowed during the 1990s, the drop in childhood mortality was still about 30%, globally, during that decade. This can be, and should be, thought of as an impressive achievement, given the circumstances that have recently affected international public health development programs – economic stagnation, increasing political instability in much of the world, and the advent of the HIV/AIDS pandemic, among other things. Overall, the number of children under the age of five years who die in the world each year fell from about 13 million in 1980 to an estimated 10.5 million by the end of the century.

Nevertheless, more current trends suggest that there is serious reason to be concerned. The rate of decline seems to have slowed considerably in recent years, partly due to the fact that very low rates have already been achieved in Europe, the Americas, the Western Pacific, and the Eastern Mediterranean regions (to use the geographical divisions of the World Health Organization). More importantly, however, is the failure to make progress in sub-Saharan Africa and in South-East Asia. In fact, in a few countries, notably those in southern Africa, where the AIDS pandemic is taking its greatest toll, child mortality rates have stagnated and even begun to increase.

During the course of 2003 a major review of child mortality was undertaken. Disease-specific causes of death and the potential of public health interventions to prevent childhood deaths were addressed. In a series of papers published in the medical journal *Lancet*, and subsequently in a number of meetings held to discuss the findings and recommendations of the *Lancet* papers, five themes consistently emerge: 1) a small number of diseases and underlying biological factors are responsible for the large majority of childhood deaths; 2) existing interventions, if implemented appropriately (in a way that reaches those who need to be reached) could prevent a substantial proportion of existing mortality; 3) childhood mortality is distributed in an extremely uneven manner – not only between regions and countries, but even within countries, socioeconomic inequities determine which children live and which ones die; 4) existing interventions can be implemented most effectively in those countries where health systems work best; 5) child health programs in developing countries are grossly underfunded – major new investments will be needed in order to achieve the Millennium Development Goal.

#### A. Geographical distribution and causes of death

The most recent widely distributed global estimate of the number of children who die each year is 10,800,000 (Black, Morris et al. 2003). Forty-one percent (41%) of these deaths occur in sub-Saharan Africa, and 34% in south Asia. Only six countries account for 50% of all child deaths (Table 1) and 90% of the deaths occur in forty-two countries.

**Table 1: Six countries with the most annual deaths of children <5 years**

Countries in order of number of child deaths	Number of annual child deaths (000)
India	2,402
Nigeria	834
China	784
Pakistan	565
Democratic Republic of Congo	484
Ethiopia	472
<b>Total of six countries</b>	<b>5,541</b>
<b>Global annual deaths</b>	<b>10,800</b>

Five diseases – diarrhea, pneumonia, malaria, measles, and AIDS – are responsible for an estimated 56% of under-five deaths (Table 2). An additional one-third of all deaths occur in the first month of life. These neonatal deaths have also been attributed to a small number of biological conditions – 29% are due to birth asphyxia, 24% are due to sepsis, an additional 24% to complications of prematurity, and 7% are caused by neonatal tetanus.

**Table 2: Under-5 deaths by cause (modeled from 42 countries responsible for 90% of all deaths)**

Disease or Condition	Proportion of all under-5 deaths
Neonatal	33%
Diarrhea	22%
Pneumonia	21%
Malaria	9%
Measles	1%
AIDS	3%
Other	9%

Two issues, both forms of co-morbidity, complicate an attempt to portray the causes of childhood deaths as simply as is presented above. For one thing, two or more infectious diseases of childhood can occur simultaneously, particularly if they are associated with shared risk factors, e.g., if unsanitary environmental conditions contribute to the incidence of both diarrhea and pneumonia. Where the occurrence of these conditions, together, results in more deaths than might be expected from the occurrence of each individually, attribution of a death to one or the other condition is complicated.

Moreover, the occurrence of an associated health condition, such as malnutrition, to which deaths are not usually specifically attributed, can greatly influence mortality. As reported in the *Lancet* paper previously cited, mildly underweight children have a two-fold risk of dying compared to those who are of normal weight; in moderately-to-severely underweight children, the risk increased to 5-8 fold (Fishman, Caulfield et al. 2004 [forthcoming]). Overall, more than 50% of deaths from diarrhea, malaria, and pneumonia, and 45% of deaths from measles, are associated with underweight. Micronutrient deficiencies, especially vitamin A deficiency and zinc deficiency, have also been shown to increase the risk of dying from the common infectious diseases listed above.

## B. Potential interventions

Knowing the causes of death of under-five children allows one to develop interventions that are aimed either at reducing the incidence of potentially fatal diseases, or at treating those conditions when they occur. It is widely believed that at least part of the reason for the reduction of childhood mortality rates during the last quarter of the twentieth century is due to the development and implementation of a relatively small number of proven safe and effective interventions. While a portion, perhaps a sizeable fraction, of the reduction might be due to increased economic growth in developing countries, and by extension to improved socioeconomic status of families and households, or to interventions that are implemented outside of the health sector *per se*, such as improvements in the quantity and quality of the water supply, this discussion is restricted, for the most part, to those interventions that are health-sector related.

The second paper in the *Lancet* series lists twenty-three interventions (15 preventive and 8 curative) that are most likely to have an impact on childhood mortality (Jones, Stekettee et al. 2003). The number of child deaths that could be prevented, based on estimated mortality in the year 2000 and assuming universal (100%) coverage with these interventions, was calculated (Table 3). The interventions listed in the table below are only those for which the authors determined that there is at least limited evidence of an effect.

**Table 3: Under-5 deaths that could be prevented in 42 countries with 90% of global child deaths (assuming 100% coverage)**

Interventions	Deaths (in 000s)	Proportion of all deaths
<b>Preventive Interventions</b>		
<i>Breastfeeding</i>	1301	13%
<i>Insecticide-treated materials</i>	691	7%
<i>Complementary feeding</i>	587	6%
<i>Zinc</i>	459	5%
<i>Clean delivery</i>	411	4%
<i>Hib vaccine</i>	403	4%
<i>Water/sanitation/hygiene</i>	326	3%
<i>Antenatal steroids</i>	264	3%
<i>Newborn temperature mgt.</i>	227	2%
<i>Vitamin A</i>	225	2%
<i>Tetanus toxoid</i>	161	2%
<i>Nevirapine &amp; feeding</i>	150	2%
<i>Antibiotics for premature rupture of membranes</i>	133	1%
<i>Measles vaccine</i>	103	1%
<i>Intermittent presumptive treatment of malaria during pregnancy</i>	22	<1%
<b>Treatment Interventions</b>		
<i>Oral rehydration therapy</i>	1477	15%
<i>Antibiotics for sepsis</i>	583	6%
<i>Antibiotics for pneumonia</i>	577	6%
<i>Antimalarials</i>	467	5%
<i>Zinc</i>	394	4%
<i>Newborn resuscitation</i>	359	4%
<i>Antibiotics for dysentery</i>	310	3%
<i>Vitamin A</i>	8	<1%

Taking into account the fact that several interventions can contribute to the saving of only one life, the authors estimated that, of the 9,992,000 deaths in the 42 countries that occurred in 2000, 6,040,000 (60.6%) could have been prevented. A few points are worth noting:

- Several interventions, if fully implemented, could reduce child mortality by at least 5%; these include breastfeeding (the proportion of lives saved was adjusted for countries with a high prevalence of AIDS, where breastfeeding could contribute to increased mortality), oral rehydration therapy,<sup>5</sup> use of impregnated bednets, appropriate weaning and use of complementary foods, the use of antibiotics for the treatment of antenatal sepsis and for childhood pneumonias, and the prevention of zinc deficiency;
- Several of the interventions that are of proven effectiveness can be implemented at the household and community levels – the role of the health system in allowing mothers and families to utilize these lifesaving measures is supportive, not essential;
- Global health policies today may place undue emphasis on a number of interventions that are not directed at diseases that are responsible for the most deaths – for example, emphasis on the prevention of mother-to-child transmission of AIDS, which currently accounts for only 3% of global deaths, may divert resources from increasing coverage with oral rehydration or with antibiotics for pneumonia, for example.
- Current coverage with many of the most essential interventions, including those that are of proven effectiveness, is quite low, ranging from 1% for the intermittent presumptive treatment of malaria during pregnancy to 68% for measles vaccine. Only breastfeeding, with a mean estimated coverage of 90%, approaches full coverage (UNICEF 2003).

Jones et al. point out that their estimates are conservative. The interventions for which estimates of mortality reduction are presented are only those for which cause-specific mortality prevention data are available. So, for example, birth spacing, which may reduce childhood mortality by close to 20% in India and by more than 10% in Nigeria (the two countries with the most deaths of children under five), is not included. In addition, there are new interventions on the horizon – both rotavirus vaccine and pneumococcal vaccine are on the horizon and could make substantial contribution to increased mortality reduction from diarrhea and pneumonia.

The conclusion that one can draw from this review of existing effective interventions and their potential impact, if ‘scaled-up’ to universal coverage, is that about two-thirds or current childhood mortality can be reduced. Given that the MDG for child health is based on a two-thirds reduction of annual under-five year old mortality from 1990 levels, it is clear that the goal is theoretically achievable.

### C. Inequities in child health

If child mortality is due to a limited number of known causes, and if interventions for preventing and/or treating those causes are currently available, why do 10.8 million children die each year? A 2001 report of the World Bank found that only one of forty-seven countries in sub-Saharan Africa was “on track” to reduce child mortality by two-thirds by 2015, while ten

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<sup>5</sup> Many feel that the reduction in child mortality during the 1980s was, in part, due to the impact of oral rehydration therapy on reducing diarrhea deaths.

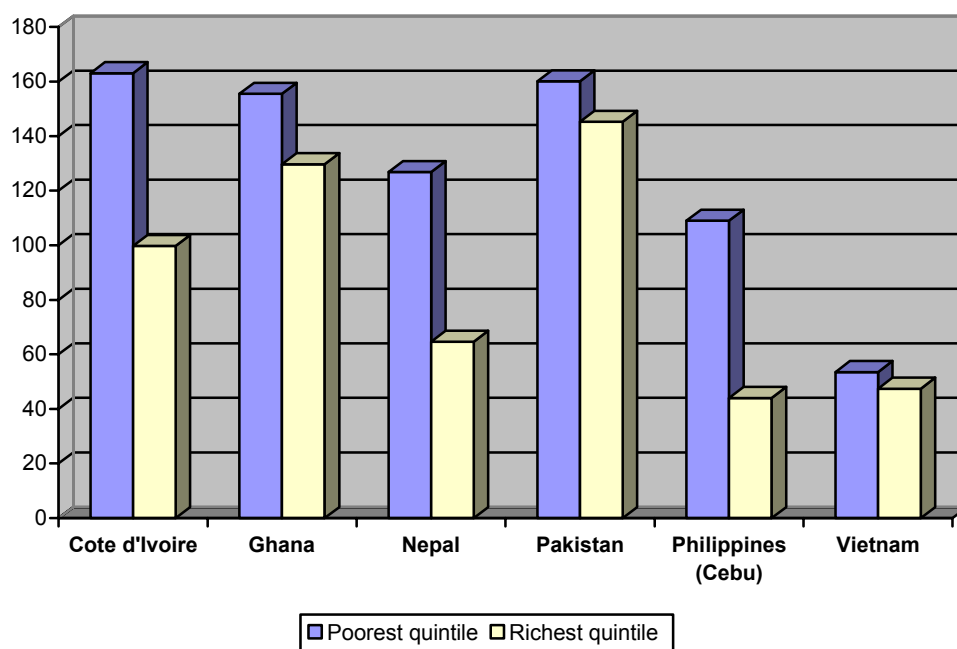
countries were “moderately off track” and thirty-six were “seriously off track”. For infant mortality, the situation was similar (Naimoli 2003).

Poverty clearly influences survival rates. The poorer people are, the more likely their children will die in childhood. In fact, globally, there is a 20-fold difference in child mortality between rich and poor:

	<b>Under-five mortality rate</b>
<b>High-income countries</b>	6/1000 live births/year
<b>Developing world</b>	88/1000 live births/year
<b>Poorest countries</b>	120/1000 live births/year

This influence of wealth on child survival is evident in every region of the world.

**Figure 2: Under-five Mortality Rates by Socioeconomic Status, 1978-1996**



Source: (Wagstaff, Bryce et al. 2003)

While children of poor families living in unhealthy environments may be more likely to become ill due to increased exposure to health risks, including higher levels of undernutrition, they also have greatly limited access to care. In rural Nigeria, for example, children from the lowest socioeconomic quintile of the population need to travel seven times farther than those in the highest to reach the nearest health facility. Similar disparities are found in Bolivia, Dominican Republic, and India, amongst others (WHO 2004).

Even among the poor, living in the same area, inequities on the basis of income can be found. In a recent study of ill children in rural Tanzania, where the likelihood of children falling ill was the same, care-seeking behaviors differed markedly. Caretakers of children in the highest economic quintile were more knowledgeable regarding the potential danger of their children’s illness and were four times as likely to bring sick children to a primary care facility. Accordingly,

children from richer households were much more likely to receive antimalarials and/or antibiotics (Schellenberg, Victora et al. 2003).

As part of the *Lancet* series on child survival, potential approaches to improving equity for decreasing child mortality are presented (Victora, Wagstaff et al. 2003). These include:

- Improving knowledge and changing care seeking behavior of poor mothers
- Improving access to water and sanitation for poor families
- Empowering poor women (through microcredit schemes, for example)
- Making health care more affordable for the poor
- Making health facilities more accessible to the poor
- Providing an adequate number of trained health workers in poor communities
- Making health facilities more inviting
- Matching health expenditures to the needs of the poor

The *Lancet* authors point out that there are essentially two strategies for redressing inequities in child health. One could specifically target the poor, either by identifying individual poor households and providing them directly with cash, goods, and/or services, or by redistributing health services preferentially towards geographic areas within which a high proportion of poor households are found.

The other way to improve health status of the poor is by seeking universal coverage of health services. If everyone is offered better access and health interventions reach the entire population, then both rich and poor will benefit. The risk of this approach is that, because it is easier to reach the better off with improved services, program may run out of steam before benefiting the poor – allowing this to happen would increase, not decrease, the equity gap. Specific measures need to be taken to ensure that the poor are not left behind if universal coverage targets are, for one reason or another, not met. One measure is, as we propose below for the MDGs, to incorporate equity-specific indicators into programs. Holding national and local health authorities accountable for reducing the equity gap by making improvements in health status among the poor a criterion for evaluating the success or failure of their programs could be an important intervention in and of itself.

This section of the Report reviewed the disease-specific causes of mortality in children under the age of five and interventions aimed at addressing those biological conditions. Throughout the Report we contend that the political, social, and economic dimensions of maternal and child health are those that have, to date, been the most neglected. Increasing the ability of the poor to access health services to the same degree as the wealthier elements of society can provide major impetus toward achieving the MDG for child health. In fact, as pointed out in the *Lancet* paper already cited, if the under-5 mortality rate in developing countries could be reduced to that which prevails in the richest 20% of the population of those countries, the child mortality rate could be reduced by as much as 40%.

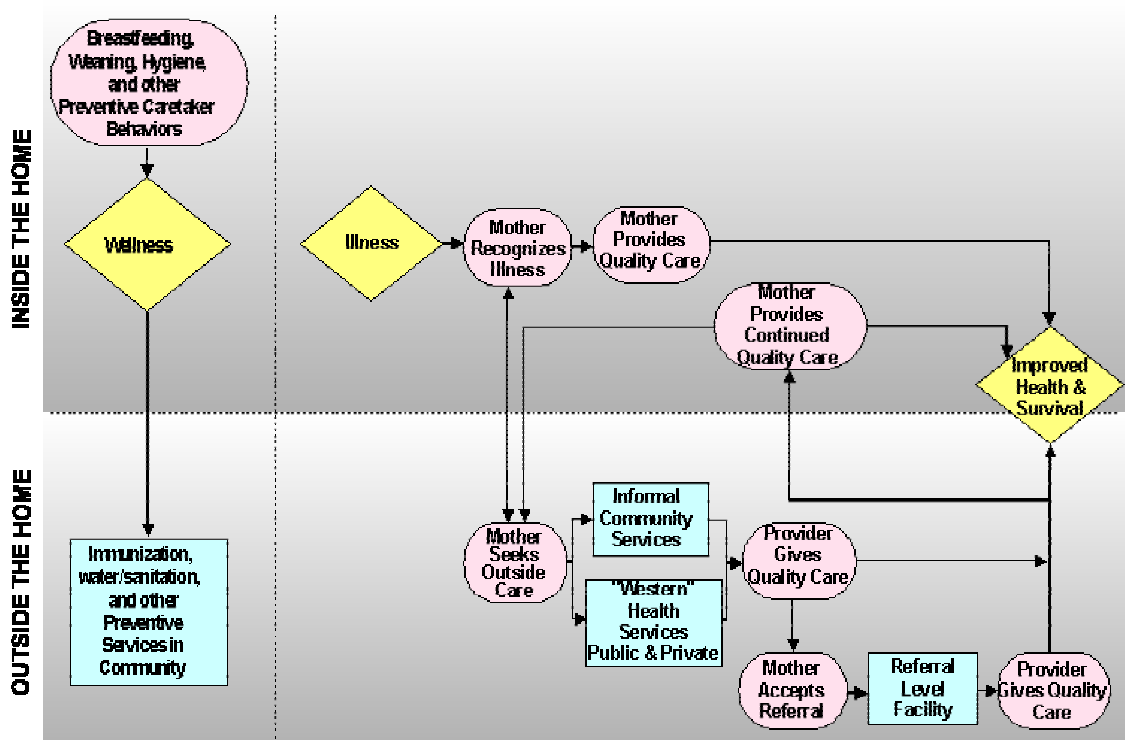
#### D. Implementing Child Health Programs

As shown above, access to health services and coverage of the child population, especially those of lower socioeconomic status, with existing safe and effective interventions, is woefully inadequate at present. If mortality is to be further reduced and the MDG reached, the implementation of child health programs will have to be pursued far more aggressively than is currently the case. Doing so will require an improved policy environment, a stronger health

system (see below) and, importantly, improved performance of mothers, other child caretakers, and health workers at the household and community levels. A profound understanding of the relationship between the community and the health system (these are frequently mentioned as separate entities, although the best functioning health systems are those that are fully integrated within the community) is important.

For child health, the relationships between different levels of the health system for both preventive and curative interventions have been described. A useful depiction of the relationship between the household and the health system is presented below (Figure 3).

**Figure 3: Pathway to Survival**



Source: (Waldman, Bartlett et al. 1996)

In this figure, the dotted horizontal line separates actions that need to take place in the home from those that need to take place outside of the home in order for child mortality to be reduced. The dotted vertical line separates things that are done to prevent illness from actions that are needed to treat an ill child. For example, on the prevention side of the figure, those interventions that can be implemented by mothers alone, such as breastfeeding, improved complementary feeding, and the use of insecticide-treated materials, are shown above the line, while those which require the more active participation of the facility-based health system or its extension, such as vaccination, improved water supply, and improved management of the newborn, are situated below.

Although universal coverage with key interventions in the 42 countries in which 90% of childhood deaths occur has the potential to reduce mortality substantially, it is inevitable that children will continue to fall ill. For all potentially fatal illnesses, it is essential that mothers or other caretakers learn to recognize the signs of disease and take prompt action. For some of the more common childhood conditions, such as diarrhea, mothers can administer oral

rehydration fluids and continue feeding at home. Appropriate management of the child at home, without recourse to facility-based care at any time during the illness, can result in reduced mortality.

For other diseases, like pneumonia, it has been recommended that the mother seek care outside the home. The diagnosis of pneumonia, and the prescription of antibiotics for its management, has usually been the role of facility-based health care worker. For other conditions, malaria for example, official policies regarding treatment and common practice have differed substantially. Policy has tended to emphasize the role of health facilities and professional health care workers, while mothers have frequently preferred to treat without seeking professional advice. Antimalaria drugs, effective or not, have been widely available in the open marketplace. For example, Deming et al. found that of 507 children whose mothers felt that treatment was required for fever, only 20% were seen at a health center during the course of their illness, while 83% were treated at home with an antimalarial drug that was usually obtained from a street vendor (Deming, Gayibor et al. 1989). It is notable, in addition, that the median dosage of chloroquine (the officially recommended antimalarial at the time) given to children by mothers was one-half of that recommended by the Ministry of Health.

Improving care-seeking behaviors is clearly a critical function of the health system. Not only knowing when to seek care for potentially fatal childhood illnesses, but also where to go are important. As discussed elsewhere in this paper, mothers have a wide variety of choices once they make the decision to seek care outside the home. In addition to the marketplace where they can purchase drugs without consulting professional advice, they can, and often do, seek first recourse from a traditional healer (termed “informal community services” in the Pathway diagram). If “modern” or “Western” care is sought, mothers have a choice between private sector and public sector providers. In many, and even in most, cases, mothers will seek care from multiple sources. In any event, mortality will only be reduced if care of appropriate quality is available. Training of first-level health workers is clearly necessary, but hardly sufficient in order to reduce childhood mortality.

Whichever provider the mother consults, another choice quickly becomes apparent – the provider can either decide that he/she is competent to deal with the illness, or can decide that referral to a more sophisticated, better equipped facility is required. For many of the more severe cases of illness, the ones that are most likely to result in death, the child should be referred. Attention must be paid to strengthening the referral level of the system, especially, in most countries, the district hospital. However, in many cases the mother may not comply with the recommendation of referral -- distance, cost, and competing priorities may determine whether or not she follows medical advice.

For most cases, after consultation with a health care worker, the care of the child for the duration of the episode of illness will revert to the mother. Compliance with professional advice again becomes a critical issue – completion of a course of prescribed antibiotics or antimalarials, maintaining an adequate state of hydration until diarrhea subsides, continued breastfeeding, and so forth, all contribute to the determination of whether or not a child will survive any single episode of illness.

In summary, considering the various steps on the pathway to child survival as depicted in Figure 3, it is clear that a limited number of non-disease determinants make important contributions. Mothers (or other caretakers) need to know how to recognize the signs of serious illness, how to treat an illness at home, where to seek care if it is determined that care outside the home is required, and need to be aware of the importance of compliance with

prescription advice and counseling. But good decision-making along the Pathway is not a function of knowledge alone. Before deciding to seek care outside the home, for example, a mother will take into consideration physical access to health services, the cost of those services, their quality, and the reception she will receive.

Health workers need appropriate knowledge and skills in order to be able to provide high quality care to children. In addition, they need to be properly motivated – they need a clear understanding of norms and standards of care, upgraded skills in order to be able to provide the best care in accordance with national child health policies, constructive oversight by supervisors and community members, and incentives in the form of career advancement and, of course, adequate financial compensation.

The intention of this section of the interim report is to emphasize that although the epidemiology of childhood diseases in developing countries has been reasonably well described, and the medical and public health interventions to address them for the most part exist, much more attention will need to be paid to the ‘non-biological’ aspects of health care in order for the MDG to be achieved. Appropriate preventive and care-seeking behaviors by mothers is essential. Opportunities to provide treatment outside of health facilities, while well accepted for diarrhea, need to be further explored for pneumonia and malaria. Finally, the ability of primary care facilities and referral hospital to make a maximum contribution to the health of the communities they serve must be seriously addressed.

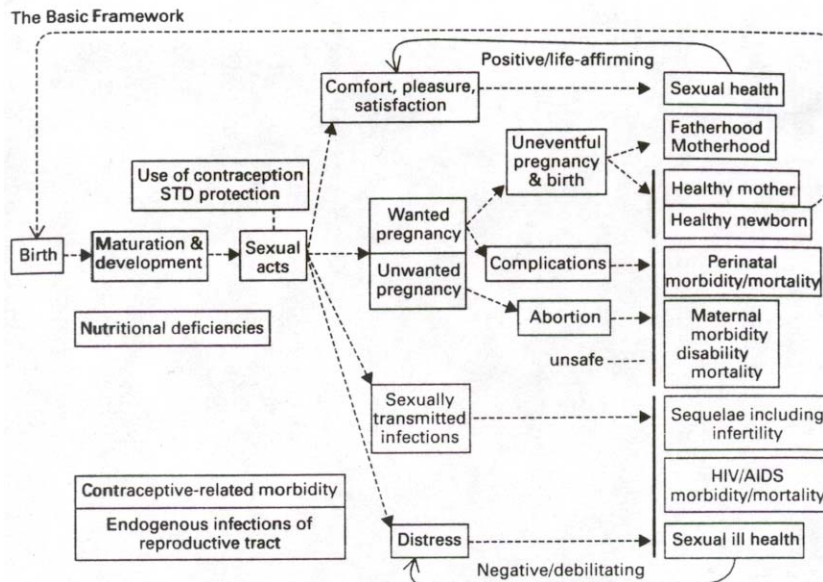
## 4.2 Maternal health

### *4.2.1 The context of sexual and reproductive health and rights*

The non-biological aspects of health and health care carry particular significance in the area of maternal health. Sexuality and reproduction – each separately and both together – lie at the heart of many of the intimate, the economic, and the institutional arrangements that drive development. Although our focus is on the health sector, for any health sector interventions in sexual and reproductive health (SRH) to make sense on the ground, to be appropriately assessed and to be effectively and ethically implemented and used, they must also be understood in the context of an individual woman’s life – and her life must, in turn, be understood in the context of the wider social, economic and cultural setting in which she lives.

Cottingham and Myntti (2002) provide a useful conceptual framework by mapping the different aspects of SRH as they occur through a woman’s life cycle. Their conceptual map is shown in Figure 4. The point of this particular map is not to explicate causal relationships, but to trace the sequence of interactions/events that frame the experience of sexual and reproductive health.

**Figure 4: Conceptual map of sexual and reproductive health**



Source: (Cottingham and Myntti 2002)

In Figure 4, the map is flat, simply moving through the stages of life<sup>6</sup>. But, as the authors point out, the map can also be imagined in layers. If Figure 4 depicts the base layer as a framework including processes, events and outcomes, we can also imagine superimposed on it a multidimensional complex layer of social and institutional arrangements that will influence the way in which the different stages in the map are experienced. These social and institutional arrangements include intimate and family relationships; community institutions such as schools, religious institutions, media and the market; preventive and curative health care services; as well as governmental institutions including the laws and policies they are responsible for implementing (Cottingham and Myntti 2002).

As a health matter, such social and institutional arrangements influence the way that the events on the map are experienced because these arrangements function as the repositories of power and resources that individuals draw on in order to protect their health and to prevent or treat disease (Link and Phelan 1995). By “resources”, we mean not simply economic resources, but also such non-monetary assets as social networks, prestige, education, information, legal claims and so on. To demonstrate with just one hypothetical example: an individual who, because of access to resources such as education, legal claims to ensure gender equality, and strong social networks, has been able to obtain formal employment and achieve financial independence, is likely to have greater power to negotiate the conditions of intimate relationships, including use of contraception, and to have the resources to obtain the contraceptive that best meets her needs. The constellation of power and resources – the assets – that this woman accesses through multiple social and institutional arrangements thus influences her experience of the box in the SRH map labeled “use of contraception/STD

<sup>6</sup> Although the map appears to end with childbearing, cycling back to birth, both sexuality and aspects of reproductive health continue to be important determinants of well-being and illness through menopause and into old age.

protection” and the subsequent SRH stages in the map: sexual acts, wanted/unwanted pregnancy, comfort/pleasure/satisfaction and so on.

However, such assets are not evenly distributed in any society. Gender, class and race/ethnicity are intersecting social hierarchies often acting as a grid of inequality through which an individual’s experience of the social and institutional arrangements is filtered. Imagined this way, the map helps to conceptualize the mechanisms by which inequality in access to power and resources ultimately affects health.

The map also helps to clarify the critical relationship between sexuality and reproduction, making the important point that many aspects of sexuality are separate from reproduction and will have consequences – both positive and negative – for physical and mental health independent of pregnancy and childbearing (Miller 2000). This point becomes critical for developing effective interventions, including strategies for preventing transmission of HIV. It is also a crucial point in understanding some of the controversy that has sometimes blocked health interventions.

Sexuality and reproduction – again, each separately and both together – are at the core of the intimate, economic and institutional relationships that characterize both women’s oppression and their potential for determining the course of their own lives, i.e., for their agency. As Task Force 3 elaborates in their background paper and interim report, agency is a basic component of gender equality, itself an MDG. Agency, as assessed through various indicators of women’s status and empowerment (such as control over income and education), is in turn positively correlated with aspects of women’s health (Barnett and Stein 1998; Lule, Oomman et al. 2003) and child health (Hobcraft 1993; Wagstaff and Claeson 2003).

Thus agency becomes a core principle of SRH, best expressed in the legal concept of sexual and reproductive rights. At the international level, these rights have been codified in various provisions of international treaties and succinctly stated in the ICPD Programme of Action (Boxes 3 and 4). As such, they are an important part of formal legal systems at both the international and country levels. Sexual and reproductive rights include not only the principle of agency, but also entitlement to the social, economic and cultural conditions that make agency meaningful. For example, a right to choose to use contraception to space or limit childbearing or to protect against disease will have little meaning if there is no access to appropriate contraceptives.

These ideas about sexual and reproductive rights are important not only for their operation in formal law and policy. They also provide a touchstone for actual work on the ground in multiple sectors. The incorporation of sexual and reproductive rights principles into government health programs is one step toward full enjoyment of rights. Of course, the true fulfillment of SRHR in women’s lives does not happen by governmental (or donor) fiat. It is, instead, a process that occurs within the intimate spaces of their lives, in a process of negotiation and accommodation (Petchesky and Judd 1998) and through the essential process of building legitimacy and credibility for rights-based standards in different cultural settings (An-Na’im 1992; Imam 2005 [forthcoming]). Actions in the health sector that recognize and support women’s agency and entitlements can play a supportive role in these processes.

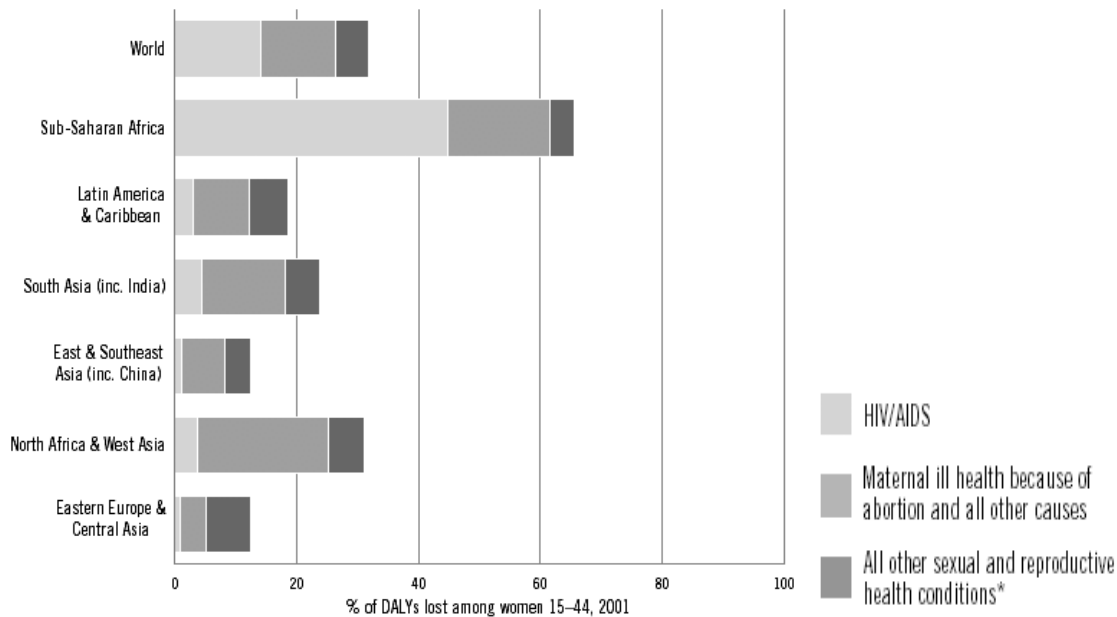
Rights can also have an important influence on how we think about entitlement and obligation at different levels, and we will return to this throughout the report.

#### 4.2.2 *The epidemiological profile*

Among the multiple dimensions of SRHR depicted in the map, health conditions do, of course, play a central role. The enormous burden of SRH conditions can be expressed in terms of absolute numbers: 60-80 million infertile couples; 120 million couples with unmet need for contraception; 4 million newborn deaths; 8 million life-threatening maternal morbidities; 529,000 maternal deaths including 68,000 from unsafe abortion – the list goes on. The aim of DALYs as a measure of the burden of disease is to put these and other health conditions into a unit that will allow comparison across different health conditions and will enable cost effectiveness comparisons for priority-setting. Notwithstanding serious flaws that bias downward the burden of disease calculations for SRH (Hanson 2002), DALYs can be useful for giving a general sense of the scale of SRH conditions and their overall importance in relation to other disease conditions.

According to the most recent calculations by WHO, sexual and reproductive health conditions account for a substantial portion of the global burden of disease: 17.8% of all DALYs lost. But for women in their reproductive years (ages 15-44), the burden of sexual and reproductive health conditions is far higher than any other category of illness, a full 31.8% of DALYs lost. Of these, sexually transmitted infections including HIV account for 16%. Maternal health conditions, i.e., death and disability resulting from pregnancy and childbirth, account for 12.4%. For women in Sub-Saharan Africa, the burden of SRH conditions is particularly alarming, as shown in Figure 5.

**Figure 5: Percent of DALYs lost among women 15-44 by cause**

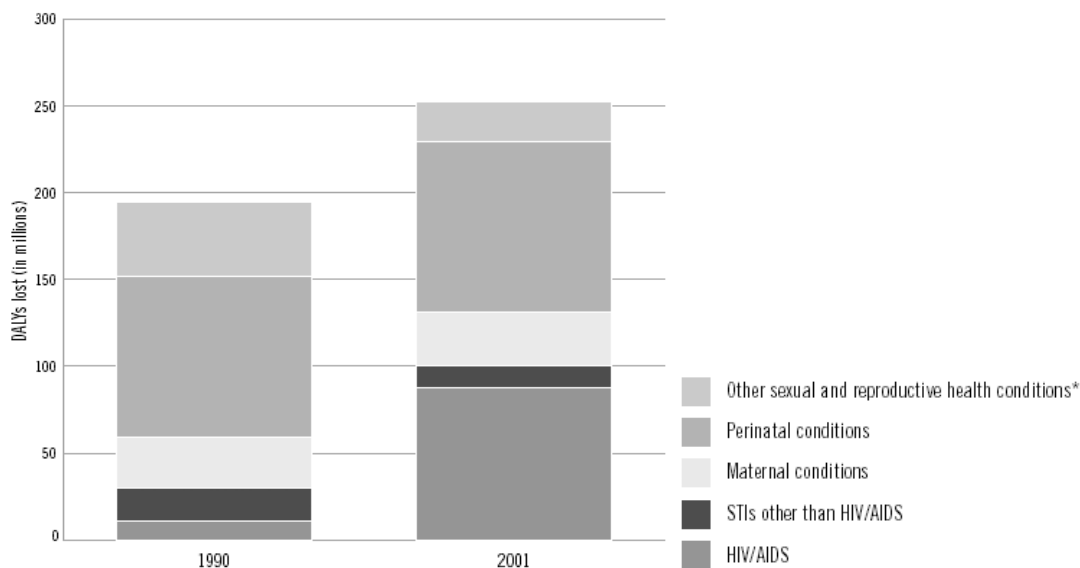


\*Sexually transmitted infections other than HIV/AIDS; iron deficiency anemia for women of reproductive age; breast, ovarian, cervical and uterine cancer; and genitourinary diseases, excluding nephritis and nephrosis. Source: (Singh, Darroch et al. 2004)

The burden of sexual and reproductive health conditions has worsened in the last decade, mainly due to the rise of HIV/AIDS. Figure 6 shows the dramatic rise in DALYs lost due

to HIV/AIDS from 1990 to 2001, but it also demonstrates that virtually no improvements have been made in other areas of sexual and reproductive health during this period.

**Figure 6: DALYs lost in women 15-44 due to sexual and reproductive health conditions**



\*Iron-deficiency anemia for women of reproductive age; breast, ovarian, cervical and uterine cancer; and genitourinary diseases, excluding nephritis and nephrosis. Source: (Singh, Darroch et al. 2004)

These data showing DALYs by region or by disease categories of course tell us very little about the actual context in which the people who suffer these burdens live -- and what that context will mean for ensuring access to and effectiveness of health interventions. Although there is obviously enormous diversity in women’s situation throughout the world, two populations are particularly vulnerable on issues related to SRH and will require special attention.

#### A. Adolescents

Adolescents represent a new generation of one billion—the largest generation in history to make the transition from childhood to adulthood. This presents a tremendous opportunity. As the Committee on the Rights of the Child expressed it in a General Comment reinforcing the status of adolescents as rights holders and elaborating the obligations of States Parties to promote their health and development: “The dynamic transition period to adulthood is also generally a period of positive changes, prompted by the significant capacity of adolescents to learn rapidly, to experience new and diverse situations, to develop and use critical thinking, to familiarize themselves with freedom, to be creative and to socialize.” (Committee on the Rights of the Child 2003). Yet, adolescents’ reproductive and sexual health needs have long been ignored and their views silenced by decision makers influencing health and education policy and programs.

For both biological and social reasons, adolescents, and particularly adolescent girls, are a vulnerable group. In many areas of the world, especially in West Africa and South Asia, East and Central Africa a large percentage of girls are already married by their mid- to late- teenage years and have given birth at least once by the age of 18. Early marriage reduces girls’ educational opportunities, starts them on a path toward early childbearing with its resultant health risks (including mortality) and often locks them into highly unequal relationships with

much older men (Mathur, Greene et al. 2003). Adolescents, particularly those living in highly-dependent, precarious circumstances – e.g., in intense poverty, in refugee settings, or as orphans -- are subject to high rates of abuse, including sexual abuse (McGinn 2000; Luke and Kurtz 2002; UNHCR and Save the Children-UK 2002; UNICEF and UNAIDS 2002).

Indeed, in many countries in Africa, to be young and female means substantially higher risk of HIV/AIDS: women ages 15 to 24 are 2.5 times as likely as their male counterparts to be infected with HIV (UNAIDS 2003). Significantly, countries at the ICPD+5 recognized this fact and set a specific target for reduction of HIV in men and women aged 14-25 (50% by 2010) in countries most affected (United Nations 1999). The Millennium Development Goal on HIV includes a target for the reduction of HIV/AIDS amongst pregnant women age 15-24.

Of course, HIV is not the only reproductive health issue for adolescents. 15 million girls, ages 15 to 19, give birth every year and an additional five million adolescent pregnancies end in abortion (Pillsbury, Maynard-Tucker et al. 1999). The risk of dying from pregnancy related causes is twice as high for women aged 15-19 years than for women in their twenties, making pregnancy the leading cause of death for girls age 15-19 in the developing world (UNFPA 2003).

These bare statistics hint at the complex set of social, cultural and even economic forces that shape and constrain the social worlds in which adolescents struggle to make choices and, all too often, confront violence, coercion and discrimination. Due to a complex entanglement of social taboos, gender inequities and policy voids, younger women are more likely to lack accurate information about reproductive health, family planning and sexually transmitted infections including HIV/AIDS. As a result, married and unmarried adolescents engage in sexual activity in ways that place them at risk—they do not have the knowledge, access to health services or family planning to protect themselves from STIs or from unplanned births. Even when girls are aware of modern methods of birth control, they often lack knowledge or skill in using them and so experience contraceptive failure more often than adults do (Alan Guttmacher Institute 1998; Malhotra and Mehra 1999). Adolescents are more likely to resort to unsafe and self-induced abortion and to postpone abortion until later in pregnancy (Friedman 1994).

Studies show that younger women are less likely to recognize complications during pregnancy, even after controlling for parity (Miller and et al 2003). And even when adolescents deliver their babies in health facilities, they suffer higher rates of mortality. In some settings, institutional maternal mortality ratios in adolescents have been shown to be higher than in non-adolescents (Kwast, Rochart et al. 1986).

Adolescent childbearing affects infants and children as well. There is an increased risk of stillbirths and an increased perinatal mortality rate in infants born to adolescents (Miller and et al 2003). In both developed and developing countries, adolescents are at greater risk of preterm delivery (the most significant cause of infant mortality in the developed world) and of having low birth weight infants, including very low birth weight (Scholl, Hediger et al. 1994; WHO 2003). Very young adolescents (under age 15) are at even greater risk of having a low birth weight baby. The higher mortality rates of children born to mothers younger than age 20 persist through the age of five (Malhotra and Mehra 1999).

As with all other members of society, health services for adolescents must be tailored effectively to address their unique needs and circumstances (Alan Guttmacher Institute 1998; UNFPA 2002; Committee on the Rights of the Child 2003).

## B. Conflict-affected and displaced populations

For vast numbers of people in the world today, these needs are intensified by the fact that they live in societies coping with armed conflict. Today, more than forty countries, 90% of which are low-income nations, are dealing with conflict. Implementing reproductive health care for a population is never a simple matter, but emergencies and displacement pose special challenges. While persons affected by armed conflict have the same reproductive health needs as others, the effects of conflict render them exceptionally vulnerable. They have often lost their loved ones, their possessions, their livelihoods, their social status, even their way of life. Maternal and neonatal mortality and morbidity may increase as health services are destroyed or births occur on the roadside during flight (Ahuka 2004); rates of infection of HIV and other STIs may increase with population mixing, exposure to armed men, societal breakdown and increased sexual assault. Lack of traditional support systems, different cultural pressures and changing men's and women's roles in society, are major barriers to implementing adequate reproductive health programs (McGinn 2000; Doedens and Burns 2001; Purdin 2002).<sup>7</sup>

### *4.2.3 Health sector interventions for sexual and reproductive health*

In the sections that follow, we examine three categories of SRH conditions that can be addressed by health sector interventions: (1) unwanted and mistimed pregnancies; (2) sexually transmitted infections; and (3) maternal mortality and morbidity. In Section 5 we turn this around and look again at the interventions – but not only one-by-one, as the epidemiologic profile tends to suggest. Rather, we will look at them in the way that they exist in reality, as part of a health system with multiple important implications beyond their ability to prevent or treat the specific disease conditions.

## A. Unwanted and mistimed pregnancies

Pregnancy itself is obviously not a disease, but an unwanted or mistimed pregnancy can lead to serious health consequences for women and children alike. These include complications of the pregnancy itself, which we address in the section below on maternal mortality and morbidity. But the very number and spacing of pregnancies also has potential health consequences. Birth spacing has well-documented effect on child health. Studies have shown that children who are born before or after a short birth interval and children who are born as a result of an unwanted pregnancy have a greater risk of negative health outcomes (Setty-Venugopal and Upadhyay 2002).

Undesired fertility also contributes directly to the level of maternal mortality. Put simply, if a woman does not get pregnant, she will not die in pregnancy or childbirth. Therefore access to methods to control fertility can have a significant impact on the number of maternal deaths, simply by reducing the number of times that a woman, by becoming pregnant, runs the risk that a complication will occur and that she will die from it. It has been estimated that if unmet need for contraception were filled and women had only the number of pregnancies at the interval they wanted, maternal mortality would drop by 20-35% (Maine 1991; Daulaire, Leidl et al. 2002).

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<sup>7</sup> An international working group developed a set of recommendations for providing reproductive health services to address the needs of conflict-affected populations. These are found in United Nations High Commissioner on Refugees, *InterAgency Manual on Reproductive Health in Refugee Situations*, Geneva: UNCHR, 1999. See also Bartlett, L., S. Purdin, et al. (2004). "Forced migrants - turning rights into reproductive health." *The Lancet* **363**(9402): 76-77.

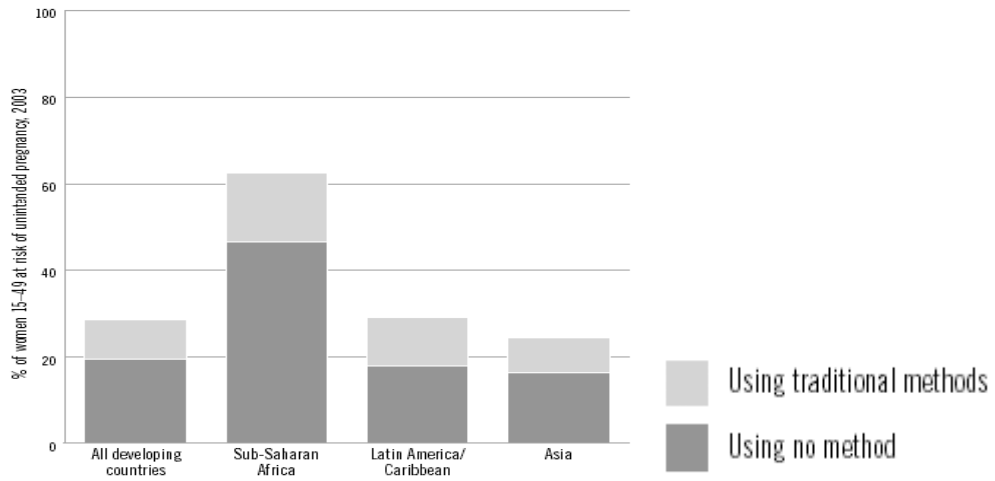
However, family planning will not change the maternal mortality *ratio* (the MDG indicator). MMR is a measure of the risk of dying *once a woman becomes pregnant*. The health sector interventions that enable a woman to go through pregnancy and childbirth safely and to have the best chance of having a healthy baby are discussed in Section 4.2.4.

A substantial proportion of unwanted pregnancies are ended by induced abortion, whether or not it is legal and whether or not it is safe. Of the estimated 45 million abortions that take place in the world each year, some 19 million occur in countries where the procedure remains unsafe (WHO 2004). Approximately 95% of unsafe abortions – those characterized by a lack or inadequacy of skills of the provider, hazardous techniques and unsanitary facilities (Division of Family Health 1993) – occur in developing countries, despite the fact that, of countries with populations over one million, all but two legally permit abortion for one or more indications (Germain and Kim 1998). Yet unsafe abortions are estimated to account each year for more than 68,000 deaths (WHO 2004), approximately 13% of all maternal mortality. Indeed, complications of unsafe abortion are the one category of fatal obstetric complications that could be almost totally prevented through the provision of appropriate services (Maine 1991). Hence, the world community has repeatedly agreed that where abortion is legal, it should be provided safely and, in all cases, complications of unsafe abortion should be treated through high quality health services (United Nations 1994; United Nations 1999). As abortion is legal in almost every country for at least one reason, and in three-fifths of all countries to preserve the physical and mental health of the woman (WHO 2003), the international community agreed in 1999 that “health systems should train and equip health-service providers and should take other measures to ensure that such abortion is safe and accessible (ICPD+5, ¶63iii)(United Nations 1999).

The primary health intervention for preventing unwanted or mistimed pregnancies is contraceptive services. Although contraceptive prevalence rates have steadily risen since the 1960s (Lule, Oomman et al. 2003), according to UNFPA, some 350 million women still do not have access to safe and affordable contraception (UNFPA 2002). For our purposes, the critical question is how large is the “unmet need for contraception,” i.e., how many of these women want to space or limit their children but do not have access to effective contraception that will enable them to do so. The estimate usually cited is 120 million (WHO 2004). But recent estimates for developing countries, using a methodology that includes couples using traditional methods, put the unmet need at approximately 201 million women, resulting in 76 million unplanned pregnancies each year (Singh, Darroch et al. 2004).

Neither the level of unmet need nor its health impact is evenly distributed. Levels of unmet need are particularly high in Sub-Saharan Africa (Figure 7)

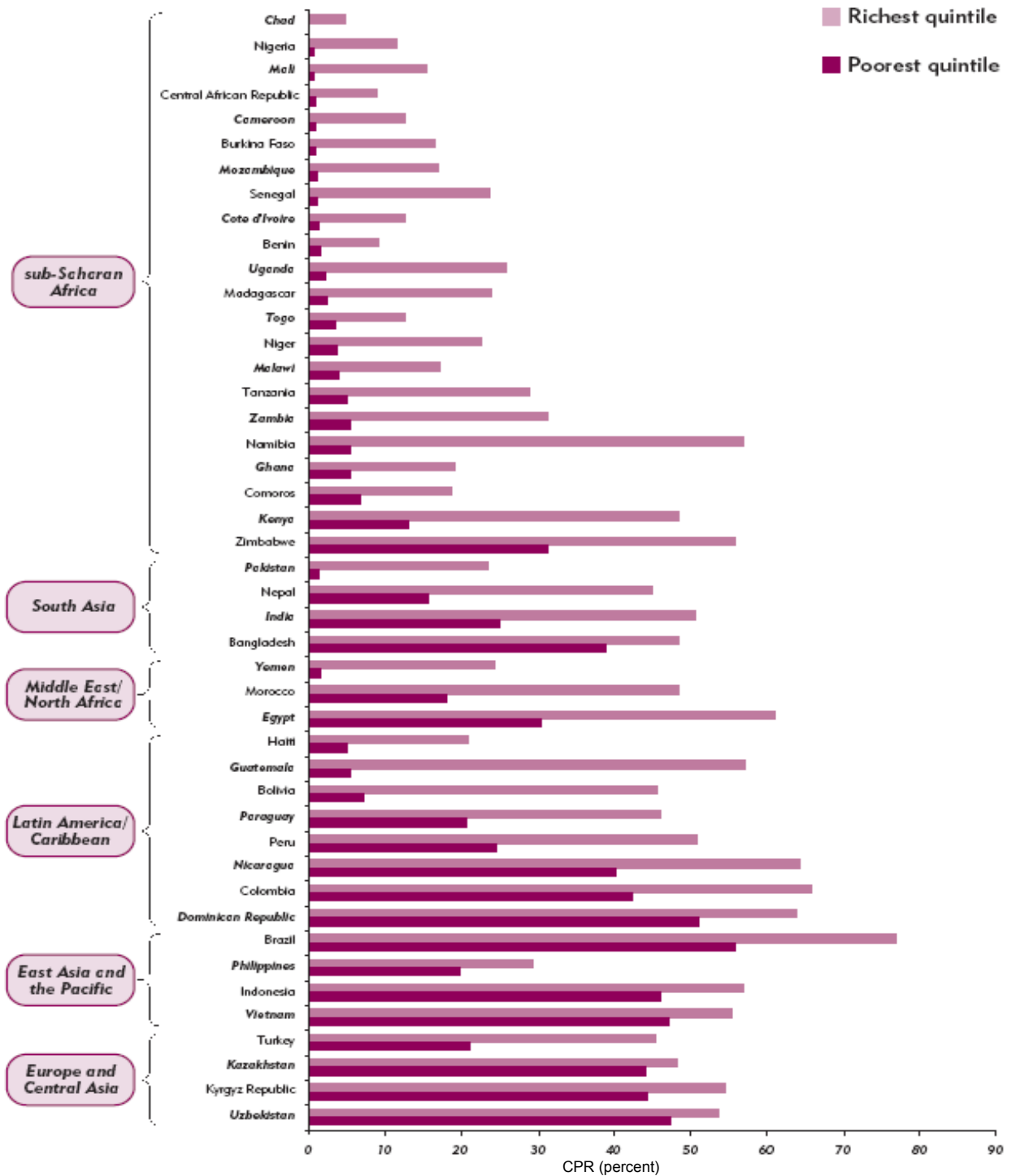
**Figure 7: Percent of women 15-49 at risk of unintended pregnancy by region**



Source: (Singh, Darroch et al. 2004)

Differences in contraceptive use also exist within countries. Not one of the 45 countries in Figure 8 contradicts the familiar pattern of disparity between rich and poor in use of services, although the extent of disparity differs quite dramatically among countries.

Figure 8: CPR for richest and poorest quintiles in 45 countries, mid-1990s to 2000



Source: (UNFPA 2003)

## B. Sexually Transmitted Infections

The full impact of the HIV pandemic on women is addressed by Task Force 5. But the inability of women to protect themselves from HIV infection is a function of lack of access to safe and appropriate contraception and meaningful sexuality information, as well as the power imbalances in sexual relationships that leave many women vulnerable. Separate from HIV, there are some 340 million new cases of curable STIs each year (WHO 2003) – and a person with an STI other than HIV is more likely to contract HIV, thus significantly magnifying the impact of STIs (UNFPA 2002).

STI services must be integrated into other reproductive health programs in order to improve access for women. Because women are often asymptomatic or reluctant to seek treatment because of stigma, programs that provide only STI services fail to reach them. Programs offering integrated services, including education and counseling, family planning and maternal health services, in addition to STI diagnosis and treatment, are more likely to have an impact on STI rates (Lule, Oomman et al. 2003).

Additional necessary and effective reproductive and sexual health interventions fall in whole or in part outside of the health sector. Sexuality education that stresses partner communication, redress of power imbalances, and promotion of gender equality, as well as programs that address women's educational and economic advancement, have substantial impact on reproductive and sexual health outcomes including STIs among others (Singh, Darroch et al. 2004).

### *4.2.4 Maternal mortality and morbidity*

Maternal mortality is the death of women from causes related to pregnancy and childbirth.<sup>8</sup> Maternal mortality ratio (MMR) is the number of deaths per 100,000 live births. It is a measure of the risk of dying once a woman is already pregnant and therefore can be understood as a measure of the safety of childbirth in the area for which it is calculated. However, both the number of maternal deaths and the MMR are extremely difficult to calculate accurately. Even in a country such as the United States with a strong vital registration system, it is estimated that maternal deaths are underreported by approximately 50% (WHO, UNICEF et al. 2003). Using several different statistical techniques, WHO, UNICEF and UNFPA have estimated MMRs for most countries in the world. However, as the authors of the WHO/UNICEF/UNFPA publication has carefully explained, MMR should be used only to give a sense of the scope of the problem, not to measure short-term trends, and cross-country comparisons should be undertaken only with great caution (WHO, UNICEF et al. 2003).

Keeping these caveats in mind, the geographic distribution of the approximately 530,000 maternal deaths that occur each year is telling. As shown in Table 4, sub-Saharan Africa has dramatically higher maternal mortality ratios (MMRs) than any other part of the world. It also accounts for 47% of all maternal deaths. Although Asia as a whole has a lower MMR than Sub-Saharan Africa, it has a much larger population, and so this region (including both some very high and some very low mortality countries) still accounts for 48% of maternal deaths. The

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<sup>8</sup> The technical definition is “the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes” *International Classification of Diseases, 10<sup>th</sup> Revision*. World Health Organization, Geneva, 1992.

lifetime risk tells an even more chilling story. This statistic, the chance that a woman will die in pregnancy or childbirth at some point in her life, is a function of both the total fertility rate (i.e., the number of times that a woman gets pregnant) and the MMR (i.e., the chance that she will die each time she gets pregnant). While women in developed countries have a 1 in 2800 chance of dying in childbirth, women in Africa have a 1 in 20 chance; in several countries the lifetime risk is higher than 1 in 10.

**Table 4: Maternal mortality around the world**

UN region	Maternal mortality ratio (maternal deaths per 100,000 live births)	Number of maternal deaths	Lifetime risk of maternal death 1 in:
<b>World Total</b>	<b>400</b>	<b>529,000</b>	<b>74</b>
<b>Developed regions</b>	<b>20</b>	<b>2,500</b>	<b>2,800</b>
<b>Developing regions</b>	<b>440</b>	<b>527,000</b>	<b>61</b>
Africa	830	251,000	20
Asia*	330	253,000	94
Latin America and the Caribbean	190	22,000	160
Oceania*	240	530	83

\*Japan and Australia/New Zealand have been excluded from the regional averages and totals

Source: (WHO, UNICEF et al. 2003) WHO, UNICEF, and UNFPA, *Maternal mortality in 2000: estimates developed by WHO, UNICEF, UNFPA*, Geneva: World Health Organization.

These dramatic disparities by region may be echoed by significant disparities within countries as well. Building on the sisterhood method for calculating maternal mortality, Graham and colleagues use DHS data to link maternal deaths to data on poverty status. In an analysis of ten countries with dramatically different maternal mortality ratios, overall levels of human development and GDP per capita, in each of the countries maternal death is associated with poverty-related characteristics. For example, in Indonesia in 1997 the risk of death was four times higher in the poorest quintile than in the richest (Graham, Fitzmaurice et al. 2004).

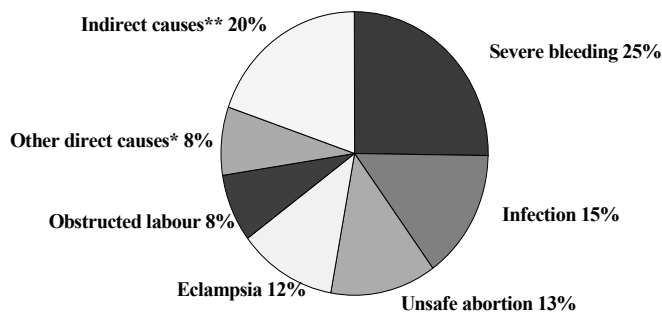
Data on the proportion of births attended by skilled health personnel similarly indicate huge disparities in access to this aspect of pregnancy care. Indeed, among major child and maternal health interventions, the presence of a skilled attendant at delivery is the most inequitably distributed by asset quintile (based upon DHS data), followed by use of modern contraception (Gwatkin, Rutstein et al. 2003). Furthermore, a stepwise gradient in presence of a skilled attendant exists across educational groups and level of literacy as well—and often is even steeper than that by wealth quintile (Kunst and Houweling 2001). Within countries, the disparities are often far more extreme. In Chad and Niger the difference between rich and poor in skilled birth attendants is 14 fold or more, while in Sierra Leone and Angola these differences are closer to three or four fold. In Ethiopia, the rich are 28 times as likely as the poor to be attended in a delivery by a medically trained health provider, while in India, the rich:poor ratio is 7.

Causes of maternal mortality are shown in Figure 9. Globally, approximately 80% of maternal deaths are due to direct obstetric complications: primarily hemorrhage, sepsis, unsafe abortion, pre-eclampsia and eclampsia, and prolonged/obstructed labor. The remaining 20% of maternal deaths are indirect, i.e. they are due to existing medical conditions, aggravated by pregnancy or delivery. There is variance from country to country in the proportion of deaths by

cause, and, since cause of death reporting is inadequate, here again the percentages given in Figure 9 are also estimates.

In countries and geographic areas with high HIV or malaria rates, the proportion of indirect deaths may be higher. This interim report focuses on direct obstetric death. In the coming year Task Force 4 will continue to coordinate with the Task Force addressing the communicable diseases MDG, since gender-sensitive strategies for the control of malaria, HIV and tuberculosis will certainly have an impact on maternal mortality as well.

**Figure 9: Causes of maternal death**



\* Other direct causes include: ectopic pregnancy, embolism, anaesthesia-related

\*\* Indirect causes include: anaemia, malaria, heart disease

Source: "Maternal Health Around the World" poster. World Health Organization and World Bank, 1997

Of course, obstetric complications do not always kill the women who experience them. In fact, for every woman who dies, an estimated 30 to 50 women survive the same complications, but with short- or long-term disabilities, although these numbers are also hard to verify (Safe Motherhood Initiative 2003). Short-term morbidity can include hemorrhage, convulsions, cervical tears, shock and fever, while long-term, and often chronic, sequelae of childbirth and pregnancy can range from infertility to uterine prolapse, depression and vesico-vaginal fistulae (Fortney and Smith 1996).

Fistulae are holes between the vagina and urinary tract or between the vagina and the rectum usually caused by obstructed labor. Unless the fistula is surgically repaired, there is an uncontrollable leakage of urine and feces through the vagina. The implications for the woman's quality of life are enormous. Many women with this humiliating condition become social outcasts, abandoned by their husbands and families, thrown into deeper poverty, and suffering elevated rates of suicide (Fortney and Smith 1996; Reed, Koblinsky et al. 2000; UNFPA 2003). While this complication can be repaired, there are very few centers in Africa providing the service and, as a result, there are long waiting lists for repair, with many women suffering for years from the complication. The same interventions (described below) that reduce maternal mortality will also reduce the incidence of fistulae and other disabling conditions caused by obstetric complications. A large proportion of maternal morbidity is treatable, but due to lack of knowledge and social stigma, as well as lack of services, millions of women suffer this burden in silence.

## A. Effective interventions for reducing MMR

In the early years of the Safe Motherhood Initiative, launched in 1987, most program recommendations rested on the hypothesis that obstetric complications could be prevented or predicted by good care during pregnancy and delivery. Antenatal care programs were expanded and improved in hopes that routine monitoring and improved health practices during pregnancy (such as good nutrition) would prevent or enable early recognition of complications. Recognizing that most women in high mortality countries deliver at home, early programs also focused on training traditional birth attendants (TBAs) in safe and hygienic practices. Although antenatal care and TBA training programs may very well improve the overall *health* of mothers, it turned out that these interventions were ineffective in reducing maternal *deaths*. Neither antenatal care nor trained TBAs prevented the vast majority of complications from happening, and once the complication occurred, there was almost nothing TBAs, by themselves, could do to alter the chance that death would ensue. Thus neither of these interventions proved to have substantial impact on maternal mortality levels (Rosenfield and Maine 1985; Greenwood, Greenwood et al. 1987; Greenwood, Bradley et al. 1990; Maine 1991; Goodburn, Chowdhury et al. 2000; Smith, Coleman et al. 2000).

Another set of early recommendations was based on the hypothesis that obstetric complications could be predicted by screening for known risk factors and that high-risk women could then be carefully monitored and treated. Indeed, women with certain attributes – e.g. young age, high parity – do have a higher risk of dying than do other women and, in some settings where a functioning health system already exists, attention to high-risk pregnancies can bring already low MMRs even lower (Danel and Rivera 2003; McCaw-Binns 2003). But high-risk women account for only a small percentage of all maternal deaths; the vast majority of deaths occur in women with no known risk factors. Thus, risk-screening programs had little impact on overall maternal mortality levels (Maine 1991).

Recognizing these flaws in the early recommendations put forward in the Safe Motherhood Initiative, today the clear consensus internationally is that scarce resources should not be spent on trying to predict which women will have life-threatening complications (Safe Motherhood Initiative 2003). Instead, maternal mortality reduction programs should be based on the principle that every pregnant woman is at risk for life-threatening complications. For MMR to be reduced dramatically (certainly, for it to drop by 75%, as the MDGs demand), all women must have access to high-quality delivery care. That care has three key elements:

- A skilled attendant at delivery<sup>9</sup>
- Access to emergency obstetric care (EmOC) in case of a complication
- A referral system to ensure that those women who experience complications can reach life-saving EmOC in time.

### **Skilled attendants at delivery**

Evidence concerning the effect of skilled attendants at delivery is somewhat muddled by different definitions that have been used and by the variation across countries in the training of

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<sup>9</sup> “Skilled attendant” refers to the person attending the delivery. Some use “skilled attendance” to refer to trained personnel plus the enabling conditions of EmOC and a referral system. To avoid confusion between “skilled attendants” and “skilled attendance”, recent publications use the phrase “skilled care” to refer to these three elements. [www.safemotherhood.org/resources/publications.html](http://www.safemotherhood.org/resources/publications.html)

midwives and in the regulations governing the specific procedures they are permitted to perform. In 1999 UN agencies agreed on a definition of skilled attendant that focuses on midwifery skills, and that is the one we use here.

#### **UN definition of skilled attendant**

“The term ‘skilled attendant’ refers exclusively to people with midwifery skills (for example, doctors, midwives, nurses) who have been trained to proficiency in the skills necessary to manage normal deliveries and diagnose, manage or refer complications. Ideally, the skilled attendants live in, and are part of, the community they serve. They must be able to manage normal labour and delivery, recognize the onset of complications, perform essential interventions, start treatment, and supervise the referral of mother and baby for interventions that are beyond their competence or not possible in a particular setting.”

Source: *Reduction of maternal mortality: A joint WHO/UNFPA/UNICEF/World Bank statement*. Geneva: WHO, 1999.

There is wide variation in the extent to which skilled attendants are supported and supervised in the broader health system. There is also wide variation in the number of deliveries skilled attendants perform. In a country such as Malaysia that dramatically lowered maternal mortality in the 1960s and 1970s, the midwives who were the backbone of the program delivered approximately 100-200 births per year. But in many other countries, birth attendants deliver far fewer births. This has implications for the competence even of trained professionals, because specific skills, such as manual removal of placenta, require regular practice in order to be maintained (Koblinsky and Campbell 2003). For example, in Indonesia where tens of thousands of community midwives have been trained and deployed into villages around the country, each attendant typically delivers less than 36 births per year. Assessments within three years of their placement found that their confidence and their competency-based skills were both exceedingly low: among the village midwives only 6 % scored above a 70, the level considered necessary for competence (McDermott, Beck et al. 2001; Koblinsky 2003).

The first job of the skilled attendant is to conduct routine deliveries. In this role, there are two potential ways that she can influence maternal mortality levels. First, she can use safe and hygienic techniques, thus ensuring that she does not actually *cause* a complication through mismanagement of the delivery. This is the theory behind the promotion of “safe birth kits”, for example. Although the attendant’s techniques will certainly be important to the health and well-being of each individual client, poor hygiene in routine deliveries accounts for only a small portion of maternal deaths today. In fact, many life-threatening infections are not exogenous (introduced from the outside, e.g., introduced by the birth attendant), but rather are endogenous (arising from within, e.g., due to delayed treatment of complications such as prolonged labor, ruptured uterus and retained products of conception) (Cunningham, MacDonald et al. 1993).

A second, more promising route for the skilled attendant to affect maternal mortality levels is by doing active management of third stage labor routinely, in every delivery (McCormick, Sanghvi et al. 2002). The third stage of labor – i.e., the period after the baby is born in which the placenta is being expelled – is the time in which most post-partum hemorrhages (PPH) occur. In many high-mortality settings, PPH is the leading cause of maternal death. Several large clinical trials provide evidence that the use of manually performed techniques (controlled cord traction and uterine massage) as well as a single dose of an oxytocic drug immediately after delivery, can significantly reduce PPH (WHO 2000; WHO

2002). But the training and competence of the skilled attendant is crucial. The same techniques of active management of third stage labor that can prevent some PPH, can also cause serious damage if they are done incorrectly. This is not just a theoretical risk. Incorrect use of oxytocic drugs, for example, can cause the uterus to rupture, which, in the absence of surgical intervention, can lead to a painful death.

Finally, what if a routine delivery suddenly, unexpectedly, becomes a complicated one? For most of the potentially fatal obstetric complications, the skilled attendant must have the back-up of a functioning health care system in order to save the woman's life. No matter how skilled the attendant is, if s/he is performing deliveries in a setting without the drugs, equipment and infrastructure to deliver EmOC – and cannot get her patients quickly to that care – a certain percentage of patients will die. The large majority of maternal deaths entails this kind of unexpected complication and so falls into this category.

### **Emergency obstetric care (EmOC)**

Even under the very best of circumstances, with adequate nutrition, high socioeconomic status and good health care, a substantial proportion of pregnant women – greater than 15% -- will experience potentially fatal complications (Lobis, Fry et al. 2004 [forthcoming]). But virtually all obstetric complications can be successfully treated. Thus, when the EmOC necessary to treat complications is universally accessible and appropriately utilized, MMRs are extremely low and maternal mortality ceases to be a public health problem.

EmOC is generally categorized as basic EmOC and comprehensive EmOC.<sup>10</sup> For a facility to be considered a basic or comprehensive EmOC facility it must be performing a set of signal functions (Table 5). UN guidelines recommend a minimum of one comprehensive EmOC facility and four basic EmOC facilities per 500,000 population (UNICEF, WHO et al. 1997). To meet the MDG target of 75% reduction, high-mortality countries must substantially improve access to emergency care. It is therefore critical that the indicators for tracking progress on the MDGs include some measure that is sensitive to this variable. In Section 7 on indicators, we discuss and recommend use of a set of process indicators issued by the UN in 1997 to assess the availability and utilization of EmOC. Importantly, these indicators assess the actual current level of functioning and not simply the theoretical level assigned in national policy instruments. The Task Force has commissioned a paper reviewing the experience using these indicators over the past five years and the Task Force recommendations may be refined in response to its findings. A second paper examines the way in which mapping population density and clinic location (as well as major transport corridors) can highlight areas of a country in greatest need of EmOC (Balk, Storeygard et al. 2004).

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<sup>10</sup> Some publications use the term “essential obstetric care” (EOC) interchangeably with “emergency obstetric care” (EmOC). For the sake of clarity, we follow the practice of using the term “EmOC” to refer to the interventions for treating obstetric complications and using “EOC” to refer to the broader range of services that includes the management of routine pregnancies. Koblinsky, M., *Essential obstetric care and subsets--basic and emergency obstetric care: what's the difference?* MotherCare Policy Brief 1. 1999, Arlington, VA: John Snow, Inc.

**Table 5: Signal functions of basic and comprehensive EmOC services**

Basic EmOC services	Comprehensive EmOC services
Administer parenteral* antibiotics Administer parenteral oxytocic drugs Administer parenteral anticonvulsants for pre-eclampsia and eclampsia Perform manual removal of retained products (e.g. manual vacuum aspiration) Perform assisted vaginal delivery	All those included in Basic EmOC <i>plus</i> :  Perform surgery (Caesarean section) Perform blood transfusion

\*administration of drugs by injection or intravenous infusion ('drip'). Source: (UNICEF, WHO et al. 1997)

Of course, one input vital to these functions is the presence of skilled health personnel who can perform them. Significantly, the WHO definition of the competencies of the skilled birth attendant is nearly identical to the functions that must be performed in a basic EmOC facility (Maine and Paxton 2003). Thus, no matter what mix of strategies is pursued, human resources lie at the heart of the solution. We address the challenge of human resources for maternal mortality reduction in Section 6 below.

### Referral systems

Widely available, good quality EmOC is necessary but not sufficient to reduce maternal mortality. Appropriate utilization is also necessary. A helpful way to analyze the barriers to utilization is through the "Three-Delays Model" (Thaddeus and Maine 1994). Once a complication occurs the key to saving a woman's life is to get her adequate care in time. The delays leading to death can be divided into:

- (1) delay in deciding to seek care
- (2) delay in reaching care
- (3) delay in getting treatment at the facility

One important element of strategies to reduce delays is the strengthening of the referral system. This requires adequate information and communication from the household to the birth attendant and up through the level of a comprehensive EmOC facility, as decisions are made. It also implies a transportation system and the existence of EmOC facilities close enough to every community to be reached in time. Finally, it implies a system with providers trained, equipped and supported to provide the services appropriate at each level, as well as a system in which patients choose and are ultimately treated at the level in that system which is most appropriate for their conditions.

Referral and utilization are both complex problems that have received insufficient attention in health research (Macintyre and Hotchkiss 1999; Murray, Davies et al. 2001). They concern not only the existence of information, transportation, and facilities – but also the ability to access and use them. That, in turn, raises questions about financial barriers, about relationships between facilities and communities (including issues of demeaning treatment and discrimination), about the relationship between private and public sectors, about culturally-embedded views of appropriate childbirth practices and many other locally-specific issues (Ronsmans, Achadi et al. 2001; Schuler, Bates et al. 2002; Schellenberg, Victora et al. 2003).

In the area of maternal mortality, a particularly important issue is "by-passing," when, instead of going to the closest or theoretically most appropriate, lowest level facility, users go

directly to higher level or higher cost facilities. One result can be under-utilization of lower-level facilities and even dangerous crowding of higher level (but not necessarily better performing) facilities (Filmer, Hammer et al. 2000; Leonard 2000; Miller, Tejada et al. 2002) On the other hand, it is often the case that lower level facilities are not functioning well, suffering from lack of drugs, staff and equipment; word-of-mouth can be powerful and people faced with life-threatening emergencies make entirely rational decisions to by-pass such facilities, based on the information they have.

Research and analysis of issues concerning referral systems and utilization more generally should get high priority. The Task Force is commissioning papers that should shed more light on these questions in the coming year.

### **Prioritizing Interventions for Mortality Reduction**

There are multiple additional interventions that will be useful in promoting a healthy pregnancy, and that contribute to women's overall health and to the birth of a healthy newborn as well. It is important to recognize, however, that these interventions do not necessarily have a significant impact on maternal death. For example, tetanus toxoid immunization of the mother will prevent tetanus for both baby and mother; but, while tetanus is a significant cause of neonatal mortality, it accounts for only a tiny proportion of the total maternal deaths. Another example is anemia. It is estimated that approximately half of pregnant women in developing countries are anemic, a condition often due to malaria or parasites and not simply a lack of iron-rich foods (UNICEF, WHO et al. 2001). A recent review of the evidence on anemia and maternal mortality found that there is a strong, probably causal, relationship between severe anemia and maternal deaths, but little or no relationship between moderate anemia and maternal deaths (Rush 2000).<sup>11</sup>

The Task Force expects in the next year to give closer attention to the broader issue of maternal nutrition and child nutrition in collaboration with the Hunger Task Force. For now, the point we want to make is that iron-supplementation in pregnancy does not, by itself, solve the very serious problem of anemia for women. It certainly does not solve any substantial proportion of maternal deaths, even where a high proportion of women who die in childbirth are anemic (Rush 2000). In fact, as Rush points out, nutrition and health services function interdependently; in the case of pregnant women, a food supplementation program where there is no access to health services can even be dangerous by increasing fetal size in small-stature women living in areas without access to cesarean section in the event of obstructed labor (Rush 2000). Having noted that, however, it still is good practice, wherever possible, to provide iron and folate to all pregnant women.

Antenatal care (ANC), a basic part of routine pregnancy care, is a potentially important way to connect a woman with the health system which, if it is functioning, will be critical for saving her life in the event of a complication -- although the link between the two is far from automatic (AbouZahr and Wardlaw 2003).<sup>12</sup> In highly malarial areas, ANC may also provide an

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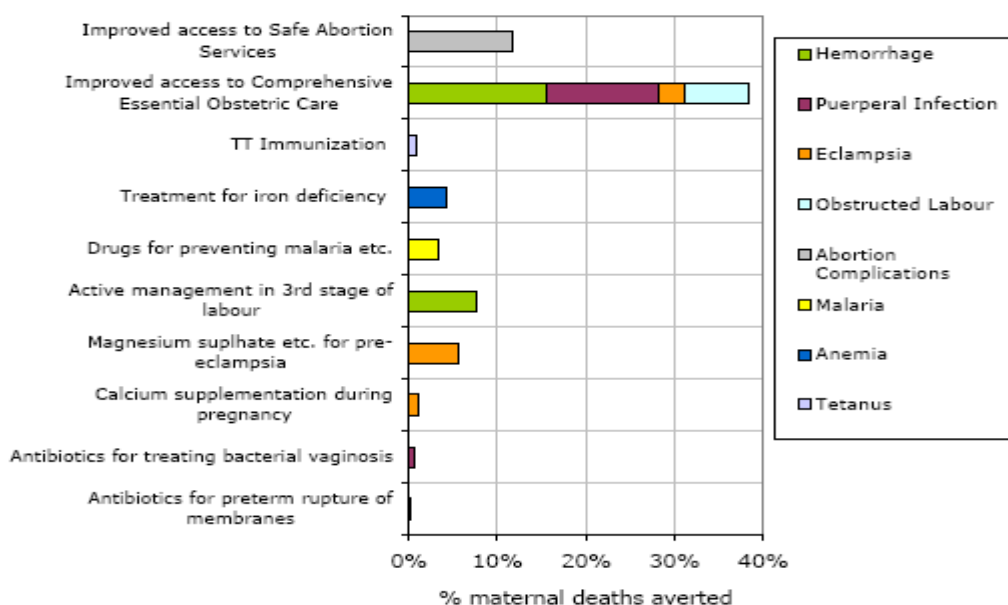
<sup>11</sup> Rush also discusses the methodological problems in attributing deaths to anemia, which is different from the question of whether anemia increases the risk of death.

<sup>12</sup> A study in Bangalore, India found that the presence of an ANM in the area was associated with lower use of professional delivery care (by a doctor or midwife at a facility) both overall and in complicated cases. Nanda, G. (2003). Utilization of professional delivery care by rural women with intrapartum complications in Karnataka, India. Poster presentation at the AMDD Network Conference, Kuala Lumpur, Malaysia.

opportunity for treatment or prevention of malaria. But ANC, by itself, will do little to reduce maternal mortality. In many countries in Sub-Saharan Africa, for example, there are high levels of ANC coverage (over 85%), but very high MMRs (over 1000) as well. Kenya, Tanzania and Malawi are examples (WHO; WHO, UNICEF et al. 2003). In fact, maternal mortality can decline dramatically without any increase in ANC: over the 1990s, Egypt cut its MMR by half (from 174 in 1992 to below 84 in 2000), while utilization of ANC stayed basically level, at just over 50% of pregnant women (Campbell 2003).

The key point we want to make here is that, put quite simply, not all interventions are equal in their effect on maternal mortality. A sense of the significant variation in the contributions that different interventions make to maternal mortality reduction is given by Figure 10 below, using estimates developed by the World Bank (Wagstaff and Claeson 2003):

**Figure 10: Full utilization of existing services would dramatically reduce maternal deaths**



Source: (Wagstaff and Claeson 2003)

We emphasize this point about the relative contributions that different health interventions have to maternal mortality reduction because of the history of maternal mortality programs (Maine and Rosenfield 1999) and because of the Task Force’s core recommendation regarding health systems. Perhaps more than any other major child health or maternal health condition – or any major communicable disease for that matter – maternal mortality reduction depends on a facility-based health system that functions. When international actors or national governments make policy decisions that – deliberately or not – allow the health system to collapse, or when they choose to prioritize investment in vertical programs designed to detour around, rather than engage and strengthen, fragile health systems, then they in effect give up on maternal mortality.

In the area of maternal health, in high-mortality settings, where health systems are dysfunctional and failing, investment solely in an intervention deployed outside the health system (e.g. trained TBAs or semi-skilled birth attendants), whose effectiveness in addressing maternal mortality *depends on* the existence of the health system is worse than simply an inefficient use of resources. It is arguably a violation of women’s very right to health. In making

this point, we are careful to distinguish conceptually between interventions that are helpful for maternal health and for newborn health, on the one hand, and interventions necessary to avert maternal death, on the other. A strategy designed to address maternal mortality as its true aim – and not just as a welcome, but coincidental, by-product of a health intervention designed primarily for another purpose (averting newborn death, for example) – must include interventions that prevent and treat the complications that kill women. Anything else, as a *first line maternal mortality strategy*, arguably fails to meet the fundamental obligations of governments to progressively realize the right to health of many millions of women in the world today (Yamin and Maine 1999; Freedman 2001).

It is almost routinely written that MMR is indicative of women's status in a society. We agree. But this is not because the standard markers of women's status, such as literacy or income, themselves have significant impact on maternal mortality.<sup>13</sup> Rather, a society, a global health community, that takes the death of women seriously -- that finds it unacceptable that a woman in Africa will, on average, face a 1 in 20 chance of dying because she becomes pregnant -- will stop imagining that by addressing child health or even newborn health, they have thereby done enough for women. They will, instead, come to grips with prioritizing health system interventions so that the most serious obstacles to reducing maternal mortality actually do get the most serious attention in maternal mortality strategies.

### **Getting from here to there: strategic choices and lessons learned**

Still, the question remains: how does a country struggling with high levels of maternal mortality get from where it is today to the ideal described above, in which every woman has access to emergency obstetric care, a skilled attendant, and a referral system that ensures she gets to life-saving care in time to save her life? First, all three elements are part of an overall health system. Until the system functions as a *system*, dramatic reductions are not possible. We address the challenge of building functioning, equitable health systems in the next section. But even having made that general point, where does a country committed to reducing its maternal mortality and meeting the MDG begin?

In the safe motherhood community today, the issue is often posed as whether to give highest priority to training a cadre of workers with midwifery skills who can attend *every* birth (since, indeed, every pregnant woman is at risk of complication) *or* whether to focus on establishing EmOC services (including the human resources necessary to staff them) in order to treat the approximately 15% of pregnant women who will experience complications. The World Bank estimates that with a crude birth rate of 40 and an assumption that a skilled attendant would manage 200 births a year (which is vastly more than most community-based birth attendants manage today), developing countries would have 60 million births per year requiring 400,000 trained and supported skilled birth attendants (Lule, Oommen et al. 2003) – a conservative, if still daunting, estimate. Although only 15% of pregnant women will need EmOC services, it is impossible to know which individual women will make up that 15%. Under the EmOC-first strategy, therefore, emergency services need to be accessible to all, but used by all.

The two interventions – skilled attendants for all births and EmOC for complicated ones – are not *prima facie* contradictory, but as strategies in resource-constrained settings they fit far less easily together. Ultimately, both interventions appear to be necessary to reach very low maternal mortality levels – at least there is no country with MMR below 50 or even below 100 that does not have a high proportion of births attended by skilled health personnel as well as wide access to EmOC. Yet the reality in high mortality countries today is that policymakers are

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<sup>13</sup> The World Bank's analysis of factors associated with maternal mortality reduction shows that health sector interventions have a far stronger explanatory power than literacy or wealth (Lule, Oommen, et al. 2003).

indeed confronted with this choice, at least as a matter of emphasis or priority-setting: where to put scarce financial, human and managerial resources? How to sequence interventions?

Some have looked for guidance to historical examples or to contemporary cases of the few countries or sub-national units where MMRs of less than 100 have been achieved. The World Bank has published impressive studies of Sri Lanka and Malaysia demonstrating that a step-by-step approach, starting with coverage of basic facilities that can deliver EmOC, followed by a focus on utilization and quality, went hand-in-hand with the professionalization of midwifery and a governmental commitment to ensuring universal access to health services, including for the rural and the poor. Over the course of several decades, both countries halved their MMR every 6-12 years, going from over 500 in 1950 to less than 30 by the early 1990s (Pathmanathan and Liljestrand 2003).

A second volume examines several other countries, including Egypt, Honduras, and Yunnan, China, where MMRs in the 200 range have been cut by about half, down to less than 100. Although the strategies used in all of these countries (and historically in Europe and Scandinavia as well) do carry important lessons, it helps to do a reality check against the situation faced today in meeting the MDG target. Globally, 13 countries account for 67% of all maternal deaths. These are shown in Table 6 (here again, we must stress that these numbers, while appearing to exact, are, in actuality, only estimates, but almost never over-estimates).

**Table 6: Top countries by number of maternal deaths**

Country	Number of maternal deaths	MMR 2000 (Maternal deaths per 100,000 live births <sup>1</sup> )	Lifetime risk of maternal death, 1 in: __ (2000) <sup>1</sup>	Skilled attendance at delivery 1995-2001 <sup>2</sup>
India	136,000	540	48	43%
Nigeria	37,000	800	18	42%
Pakistan	26,000	500	31	20%
Congo, Dem. Repub. of the	24,000	990	13	61%
Ethiopia	24,000	850	14	6%
Tanzania	21,000	1,500	10	36%
Afghanistan	20,000	1,900	6	DNA
Bangladesh	16,000	380	59	12%
Angola	11,000	1,700	7	23%
China	11,000	56	830	89%
Kenya	11,000	1,000	19	44%
Indonesia	10,000	230	150	56%
Uganda	10,000	880	13	39%

The 13 countries in the table account for 67% of all maternal deaths worldwide (357,000/529,00)

<sup>1</sup> Maternal Mortality in 2000: Estimates Developed by WHO, UNICEF and UNFPA

<sup>2</sup> Human Development Report 2003, UNDP

With the exception of China (which makes this list because of the sheer size of its population), virtually every one of these countries has an MMR over 500, with most being closer to 1000. Moreover, if we consider the challenge of meeting the MDGs country-by-country, we find 46 countries with MMRs over 500 (38 of them in Sub-Saharan Africa, or which 17 countries have MMRs over 1000). See Table 7.<sup>14</sup>

<sup>14</sup> We include in this table the range of uncertainty for the MMR estimates as a reminder once again of just how difficult it is to accurately count MMR, and to reinforce the message of WHO that these numbers are to give a sense of the scale of the problem, and not to track changes, particularly short term changes such as the MDGs address.

**Table 7: Countries with MMR over 500, ranked by MMR**

Country	Number of maternal deaths	Lifetime risk of maternal death: 1 in:	MMR 1995 per 100,000 live births	Range of uncertainty on MMR estimates	
				low	high
Sierra Leone	4,500	6	2,000	510	3,800
Afghanistan	20,000	6	1,900	470	3,500
Malawi	9,300	7	1,800	1,100	2,600
Angola	11,000	7	1,700	420	3,100
Niger	9,700	7	1,600	420	3,100
Tanzania	21,000	10	1,500	910	2,200
Rwanda	4,200	10	1,400	790	2,000
Mali	6,800	10	1,200	680	1,700
Central African Republic	1,600	15	1,100	670	1,600
Chad	4,200	11	1,100	620	1,500
Guinea-Bissau	590	13	1,100	280	2,100
Somalia	5,100	10	1,100	270	2,000
Zimbabwe	5,000	16	1,100	620	1,500
Burkina Faso	5,400	12	1,000	630	1,500
Burundi	2,800	12	1,000	260	1,900
Kenya	11,000	19	1,000	580	1,400
Mauritania	1,200	14	1,000	630	1,500
Mozambique	7,900	14	1,000	260	2,000
Congo, Dem. Repub. of the	24,000	13	990	250	1,800
Equatorial Guinea	180	16	880	220	1,600
Uganda	10,000	13	880	510	1,200
Benin	2,200	17	850	490	1,200
Ethiopia	24,000	14	850	500	1,200
Nigeria	37,000	18	800	210	1,500
Liberia	1,200	16	760	190	1,400
Zambia	3,300	19	750	430	1,100
Guinea	2,700	18	740	420	1,100
Nepal	6,000	24	740	440	1,100
Cameroon	4,000	23	730	430	1,100
Djibouti	180	19	730	190	1,400
Cote d'Ivoire	3,900	25	690	170	1,300
Senegal	2,500	22	690	180	1,300
Haiti	1,700	29	680	400	970
Timor-Leste	140	30	660	170	1,200
Laos	1,300	25	650	160	1,200
Eritrea	930	24	630	380	890
Sudan	6,400	30	590	150	1,100
Togo	1,000	26	570	340	810
Yemen	5,300	19	570	330	810
Lesotho	380	32	550	140	1,000
Madagascar	3,800	26	550	310	780
Gambia	270	31	540	140	1,000
Ghana	3,500	35	540	140	1,000
India	136,000	48	540	430	650
Congo	690	26	510	160	960
Pakistan	26,000	31	500	130	940

What do MMRs of this magnitude tell us about the nature of the health systems in these countries? Is there a difference in the strategies that should be considered by countries with MMRs in the 1000-2000 range versus those in the 500 range? The 200 range?

In countries where maternal mortality levels are very high and health systems exceedingly weak, one sometimes hears an argument that goes like this: (1) the vast majority of births (often more than 80%) take place at home, very often attended by family members or neighbors; (2) TBAs or other kinds of minimally-trained community health workers are present in communities; (3) the health system is so weak that there is no hope of having EmOC or even a true skilled birth attendant in rural areas at any time in the foreseeable future. Therefore, the argument goes, the strategy should be to provide some additional training to the CHWs or TBAs who are there, making them, in effect, semi-skilled attendants.

We recognize the enormous pressure that concerned policymakers feel to do something for the millions of women who give birth in these circumstances. We also recognize that a semi-skilled worker of this sort may have the potential to save a substantial number of newborns who otherwise would die (see Section 6). But it must be clearly stated that a strategy of training tens of thousands of semi-skilled workers who will not be backed up by a supervision system, a supply system, or a referral system – is not a strategy that will significantly reduce maternal mortality. Indeed the proliferation of unsupported, unsupervised, semi-skilled workers (“certified” after short training courses to manage deliveries), who are deployed in the context of policies that effectively marketize and privatize health care, has the potential even to increase the dangers for pregnant and delivering women. Indeed, in some cases where such a strategy is being considered, the explicit objective is to train such workers on the assumption that, within a specified period, they will set up their own private practices (Mavalankar 1997). Such private provision will be quite outside of any government supervision, any effective regulatory system, or even any self-policing professional body. At the same time, it is important to stress that we are not suggesting that specialists are necessary to meet the challenge. Many categories of health personnel can be taught to provide various health services, as long as effective systems of support, supervision and supplies are established.

As we discuss in the next section, the interventions necessary to save women’s lives can all be delivered in a district health system – i.e. primary care and first referral level. This does not mean that women must give birth in facilities. Nor does it mean that TBAs and other private providers have no place in a delivery system. The case studies of countries that have substantially reduced maternal mortality demonstrate that success is possible with multiple different combinations of home or institutional births, and even attended by different categories of health workers – but, in all cases, with access to EmOC staffed by skilled health personnel (Koblinsky 2003).

This Task Force believes that the time has come for all countries, even high mortality countries, to invest in their district health systems as a matter of urgent priority. Ultimately that system is essential for saving women’s lives. It is essential for saving many newborns and under-fives, and it will also be essential in coping with other major killers in poor countries today, including tuberculosis (Mahendradhata, Lambert et al. 2003) and HIV (Buve, Kalibala et al. 2003) – both the subject of MDGs as well.

## 5. Health systems

Health systems will be a primary area of work for the Task Force in the coming year. A number of papers have been commissioned by Task Force 4 and by a cross-Task Force Working Group on health systems. We expect that these papers and discussions they stimulate will make a significant contribution to our ultimate recommendations. For now, we make a number of provisional observations on aspects of health systems, which will be fleshed out in the weeks and months to come.

### 5.1 Defining health systems

We use the WHO definition of health systems: “all the activities whose primary purpose is to promote, restore, or maintain health” (WHO 2001). This includes interventions in the household and community and the outreach (health information and education, etc.) that supports them, as well as the facility-based system and broader public health interventions, such as food fortification or anti-smoking campaigns. It includes all categories of providers: public and private, formal and informal, for-profit and not-for-profit, allopathic and indigenous. It also includes mechanisms, such as insurance, by which the system is financed as well as the various regulatory authorities and professional bodies who are meant to be the “stewards” of the system.

Equally important, we understand health systems to be a vital part of the social fabric of any society. As such, health systems “are not only producers of health and health care, but they are also purveyors of a wider set of societal norms and values” (Gilson 2003). In societies marked by deep inequality, the experience of neglect or abuse by the health system is part of the very experience of what it means to be poor. Conversely, the existence, legitimacy and vindication of health claims – i.e., demands of entitlement pressed against the web of actors (including the state) and relationships that make up the health system – should be seen as valuable assets, as among the tools of citizenship in a democratic society (Mackintosh 2001). This understanding of health systems as social institutions grounds our view of health equity and of the role of health systems in reducing poverty and in meeting the MDGs.

As elaborated in Section 4, virtually all child health and maternal and reproductive health conditions can be addressed with effective interventions within the household and/or within the facility-based health system at the district level and below. The obstacle to meeting the MDGs is not, therefore, a technical one. Rather, the obstacle is scaling up (implementing policies and programs to make the interventions available and accessible to all) and utilization (implementing policies and programs that encourage and enable those who need the interventions to use them).

On this basic point, there is little disagreement. The World Bank, WHO, other UN and bilateral agencies and various expert groups have all made the same basic argument. The Commission on Macroeconomics and Health (CMH) came to essentially the same conclusion, using the term “Close-to-Client” (CTC) system to refer to the same set of institutions that we call the “District Health System,” i.e. primary care and first referral level (Commission on Macroeconomics and Health 2001). The CMH also commissioned a series of papers on constraints to scaling up (Hanson, Ranson et al. 2003; Oliveira-Cruz, Hanson et al. 2003; Ranson, Hanson et al. 2003). These papers usefully clarified obstacles and set them in an analytic framework based on the levels of the health system at which those constraints

function.<sup>15</sup> Although recognizing that scaling up would require more than simply additional money, the aim of the CMH Working Group was to determine what portion of these obstacles could be “bought out” by injections of substantial new funding.

## 5.2 What is lacking in approaches to scaling up?

We attempt to bring an additional set of questions to the challenge of scaling up:

Analytically, our central point is that scaling up is a systemic challenge that entails different actions, different priorities, and a different evidence base from initiatives packaged as a set of disease-specific interventions. Put differently, disease-specific initiatives and “essential service packages” should not necessarily be understood as building blocks to be stacked up in a smooth, incremental process of scaling up to reach a larger population and a wider geographic area. Systemic operational policies – e.g. human resources, management capacity, supervision systems – grounded in the social, political and economic realities that pertain on the ground must get heightened attention.

Methodologically, we will need to re-consider questions of evidence: How do the evidentiary standards and methodologies used in epidemiology relate to the political questions and social contexts so basic to health policy? What methodologies and literatures outside of medicine and public health can usefully be mined to address these issues? How do we balance the need and desire for a strong evidence base with the real and urgent need for policies and programs functioning at scale? In some countries, on some issues, that tension has been resolved within the political/legal system based not only on the epidemiological evidence but also on the historical legacy and current operation of structures of social inequality (e.g., the South African courts’ rulings that access to nevirapine to prevent maternal-to-child-transmission of HIV must be extended throughout the public health system.<sup>16</sup> (Freedman 2002; Heywood 2003).

Clearly, massive national programs that are poorly designed, inadequately supported and implemented, and barely monitored can have negative ramifications beyond just wasting money (Mavalankar n.d.) How can we ensure that monitoring and ongoing adjustment/revision of large-scale programs gets at least the same attention – immediate and long-term – as their original design? How do we learn from experience and from new research without creating “paralysis by analysis” (Unger, De Paepe et al. 2003)? If the death of women and children at the scale and in the patterns that we see today is, as we contend, a violation of human rights, then these are not simply technical questions for researchers. They are problems that require broader debate, a perspective of entitlement and obligation, and a commitment to real and effective action (Committee on Economic Social and Cultural Rights 2000).

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<sup>15</sup> These are: (I) community and household level, (II) health services delivery level, (III) health sector policy and strategic management level, (IV) public policies cutting across sectors, and (V) environmental and contextual characteristics Hanson, K., M. K. Ranson, et al. (2003). "Expanding access to priority health interventions: a framework for understanding the constraints to scaling-up." Journal of International Development **15**: 1-14.

<sup>16</sup> The Constitutional Court held that “[t]he policy of confining nevirapine to research and training sites fails to address the needs of mothers and their newborn children who do not have access to these sites. It fails to distinguish between the evaluation of programmes for reducing mother-to-child transmission and the need to provide access to health care services required by those who do not have access to the sites.” Minister of Health v. Treatment Action Campaign (No 2) 2002 (5) SA 721 (CC).

Strategically, the tension between disease-specific initiatives and systemic initiatives often presents itself as a tension between short-term, interim solutions (disease-specific and targeted) and long-term and sustainable solutions (health systems). This tension must be openly faced and resolved. In some situations, disease-specific initiatives can be appropriate short-term, high-impact responses to true crises. But the MDGs, formulated in disease-specific terms, must not become the excuse for failing to prioritize systemic solutions. The perpetual problem is that we – certainly in the international community, but often at the country level as well – have the tendency to leap from one interim solution to another, in an urgent push to meet disease-specific goals and, when all is said and done, never get to grappling with the long-term problems of health systems.

One reason why discussion – much less resolution – of these issues so often eludes us, is that truly transforming health systems so that they work for all people, including the poor, requires policymakers to identify the workings of power that keep dysfunctional, even abusive systems and practices in place. Fixing those problems means finding a way to redraw the lines of power and alter the flow of resources. It also requires sustained commitments, differently calibrated goals and time horizons, careful sequencing of interventions – and political courage and savvy.

#### *5.2.1 Individual interactions/organizational cultures: implications for utilization*

The thinness of conceptual work on scaling up is also partly attributable to the thinness of conceptual work on health systems themselves. In much of the health policy literature, health systems are treated as “oddly transparent”: “a set of rules and formal organizations that can be rewritten, reorganized, and redirected, given the political will.” (Mackintosh 2000). In this vision of health systems, government becomes the central actor determining outcomes in a policy-making process that is implicitly understood as linear: from problem identification to policy formulation to policy implementation. The content and flow of the linear process is assumed to be determined by the objective scientific evidence that is marshaled in the process (Keeley and Scoones 1999).

The result is an approach to policymaking and policy research that is overwhelmingly “prescriptive” in style and content. Specific elements of the system are tested against specific outcome objectives such as cost, coverage, and quality (Mackintosh and Tibandebage 2002). Systems are understood mechanistically, as though re-calibrating each moving part will have a quantitatively verifiable effect on another part. Though behavioral dimensions, such as provider-patient relations, are acknowledged, efforts to explore deeper determinants and dynamics of those behaviors are often implicitly dismissed as too soft for serious policy relevance. Yet, it is striking how often evaluations of programs and projects identify precisely such issues as the barrier to success.

Health system policy and research is thus rightly criticized for its heavy focus on organizational arrangements, while neglecting the behavioral glue that holds – or fails to hold – the different pieces of the organization together in a functioning system. At the same time, behavioral issues need to be addressed in a way that acknowledges their link to the broader institutional environment in which they take place. The failure to make that connection sometimes leads to behavioral interventions that have little chance of success.

Take the issue of patient-provider relationships, for example. In health policy and programs today, this issue is often approached as a problem of patients’ rights or of ethics/professionalism. We agree that rights principles can provide a useful framework for

addressing these issues in the clinical setting (Freedman 2001). However, far too often this translates into a finger-wagging exercise with an exhortation to providers to “be nice!” A more useful approach views human rights in facilities with a “whole site” perspective. Embedding provider behavior and patient reactions in the broader dynamic brings to the surface important questions about management systems, human resource policies, community support, and a more nuanced approach to obligation and entitlement, to accountability.

For example, in many countries, the worker most often interacting with patients (especially in relation to child, maternal and reproductive health) is a female worker, and it is regularly asserted that because of culturally-based sensitivities, only a female worker will be acceptable. Yet the very same systems of gender hierarchy that “require” such workers to be female, also function within the health system in ways that undermine their effectiveness and sour their interactions with patients.

A recent study of Lady Health Workers (LHWs) and Lady Health Visitors (LHVs) in Punjab, Pakistan forcefully demonstrates this point (Mumtaz, Salway et al. 2003). Over 40,000 LHWs have been deployed in villages throughout Pakistan. Despite government policies about levels and configurations of staffing and massive training programs, nearly 60% of sanctioned posts for women health care providers in the public sector remain unfilled. Seeking to identify and document barriers to the recruitment, retention and performance of female staff, the study found that these workers “must operate within the same gender systems that necessitate their appointment in the first place” (Mumtaz, Salway et al. 2003). LHWs, in particular, were forced to cope with uniformly male management structures that, reflecting the “‘status-centric’ norms and values of the wider feudal society”, were routinely unsupportive and even abusive.<sup>17</sup> They reported widespread sexual harassment from their male colleagues, with serious implications for their own motivation in their jobs. They struggled with nepotistic systems of rewards and career structures that disadvantaged them because of their gender, and working conditions that consistently undermined their efforts or intentions to deliver quality care. Indeed, LHWs felt themselves to be undermined by the deficiencies of the broader infrastructure: the poor referral system had particularly damaging effects. As one LHW put it,

“The referral system is not good. We were told that if we refer a patient to the hospital, that the patient will get treatment on a priority basis, whereas the real situation is very different . . . They say that they are treated badly, nobody listens to them. As a result they do not listen to us here and prefer to go to private doctors.” (LHW, age 25, 10 yrs education) (Mumtaz, Salway et al. 2003)

LHWs were forced to work under conditions that sapped their own self-confidence and self-respect, that placed them under condemnation and ridicule from their own communities and families. Some, nevertheless, used their position to assert themselves in new and meaningful ways, while others acknowledged that the mistreatment and pressure they suffered led, in turn, to their own maltreatment of patients: “I feel so bad and insulted that when I reach the Basic Health Unit I misbehave with my patients” (Mumtaz, Salway et al. 2003). Indeed, the authors found that under-resourced, inadequately supplied, problematically gendered working conditions as well as the lack of appropriate rewards and remuneration, led to a whole series of problems that have become familiar in dysfunctional health systems today: demanding cash payments, steering patients to their private practices rather than treating them free in the public system (Mumtaz, Salway et al. 2003).

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<sup>17</sup> The authors noted that LHWs struggled with the intersecting effects of gender and class in ways that were different from the LHVs who generally came from a more privileged class background.

A human rights approach needs to address the whole problem, not just rap the knuckles or otherwise preach to the frontline worker. Accountability systems designed simply to “vindicate” the patient’s rights by blaming and punishing the LHW is accountability in form not substance. Indeed, we have elsewhere elaborated the notion of “constructive accountability” that entails a process of establishing multiple relationships of obligations and entitlement – not only between individuals, but also between social institutions – that work to build responsive, quality services (Freedman 2003; George 2003). The pressures that confront the women workers relate to wider social institutions such as gender hierarchies and class structures. But the specific expression of those institutions within the clinical setting can be addressed immediately, even before broad-based societal change is achieved, by tackling management structures, career paths, employee solidarity systems, community involvement, and improved supplies and infrastructure – not to mention gender training (Mumtaz, Salway et al. 2003). Experiences from quality of care work in family planning (Simmons, Mita et al. 1992) and maternal mortality programs (UNICEF 2003) provide useful examples.

An alternative approach often adopted in the health literature, positions these issues of patient-provider interactions as problems of ethics and professionalism. But, as with human rights, the critical question is not just whether certain behavior is unethical, but what are the conditions (such as failure of supervision systems) that make unethical practices so pervasive? Put the other way, what are the conditions that support professionalism, even in such challenging conditions?

Low utilization of health services is often cited as among the most serious obstacles to meeting the MDGs. There is widespread recognition that poor treatment in facilities is a factor in users’ decisions about seeking care. Nevertheless, utilization is typically identified as a “demand side” issue. In practice, even if not in economics theory, responding to “demand side” problems too often translates into simply “demand creation” and, programmatically, into IEC (information, education and communication) or BCC (behavior change communication) programs designed to help people recognize medical problems in the hope that they will seek care more quickly and medically appropriately – but with little regard for the actual barriers to care or even the (non)existence of a functioning facility to deliver care.

In fact, we know far too little about what underlies people’s decisions when it comes to utilization in different circumstances (e.g. routine preventive care such as vaccination vs. emergency care such as an obstetric complication). Even the public health literature has not been fully analyzed for evidence that would help us distinguish among different child health and maternal health issues, in order to understand how demand relates to the nature of the supply and to the terms of the interaction between them.<sup>18</sup> More effective “demand side” interventions would put decision-making in political and social context and would consider information as more than technical data; information can be seen as a tool for empowering users to deal with an unregulated market by enabling them to “judge provider competence, purchase safe and effective drugs and know where they can get cost effective treatments” (Bloom and Standing 2001). From a human rights perspective, information can also be the basis for establishing entitlements, understanding and exercising claims, eliciting responses, demanding accountability. In short, demand side interventions can usefully link to specific supply side deficiencies.

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<sup>18</sup> The Task Force has commissioned a paper on utilization, which will look particularly at what we know about the utilization of EmOC services, although it will draw on the wider public health literature.

Others have looked outside the public health literature for insights into these problems. In a recent article on trust and health policy, Lucy Gilson points out that the dominant theoretical models used in epidemiology and biomedicine shed little light on the inter-personal dynamics in health care and, furthermore, that “the core behavioural assumption of traditional economic analysis, that human behaviour is primarily rational and calculative, is flawed” (Gilson 2003). She reviews the large social science literature on trust and carefully teases apart the multiple different kinds of trust-based relationships that underpin various aspects of social life, and then demonstrates why these matter to health policy.

The most obvious (though not the only) trust-based relationship in health care is, of course, between patient and provider. In a field such as medicine that turns so centrally on expert knowledge, patients have little choice other than to “trust” that providers will give them appropriate medical treatment.<sup>19</sup> Where there is no choice of provider, the trust may be better understood as involuntary and therefore more accurately as dependency than as trust (Gilson 2003). But, when there are multiple providers to choose from – and where information about what constitutes appropriate treatment is so severely asymmetrical – how is trust formed? And what role does it have in utilization decisions? Can better accountability systems or certification schemes such as UNICEF’s Baby-Friendly Hospitals and Women-Friendly Hospitals initiatives effectively address the informational barriers?

The pervasive phenomenon of “by passing” – which stymies the best-laid plans of policy makers – raises these issues. Leonard and Ndeso-Atanga, studying rural health care in Cameroon, found that 79% of visits were to a provider who was not the closest provider and 39% were to hospitals that were not the closest hospitals. They found that patients’ choice of providers depended, in part, on their perception of what was needed to treat their particular conditions (what level of patient effort, provider effort, medical skill?) and on their perception of the providers’ ability and incentives/motivations to give good and appropriate care (Leonard 2000; Ndeso-Atanga 2000).

What kinds of incentives are operating for providers? Certainly there are many motivated, very fine public servants, NGO workers, and private providers dedicated to patients, professional in their work. But sometimes providers’ sheer survival needs and the unlivable wage they are paid, are understood by users as motivation for engaging in practices that are not in the patient’s best interest. For example, a study of injection practices and fears about HIV transmission in public facilities in Uganda found that some users “indicated that because of low salaries, nurses were too careless and unconcerned about sterilizing equipment” (Birungi 1998).

Moreover, in the public health system, providers are agents of the state. Their good service may help build the legitimacy of the state, and their bad service may hurt it (Mackintosh and Tibandebage 2002; Gilson 2003). Conversely, the state’s basic legitimacy – the trust people do or do not have in the state and the intentions of its agents – will affect people’s trust in public sector health providers. This is a longstanding problem in family planning programs when aggressive population control agendas and target-based incentive systems for providers, have led to coercive practices and a deep well of suspicion that is not easily dispelled.

The way that information and trust interact is complex but with important implications for the organization of services. In a detailed study of household demand for childhood vaccinations in Garhwal region in India, Das and Das find that informational deficiencies play a role: parents are unable to use observation of the occurrence (or not) of vaccine-preventable

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<sup>19</sup> Gilson also notes that providers often have a serious distrust of patients.

diseases in order to verify the provider's claims of the vaccine's efficacy. Rather, "households use concurrent interventions with easily observable outcomes to evaluate the veracity of a provider's claim regarding preventive care." In this case, the ANM was responsible for both child vaccination and maternity care. In communities with no access to facility-based care to treat obstetric complications, ANMs were blamed for maternal deaths that occurred in deliveries they attended. Unable to achieve a good result in one service for which they were unsupported and unequipped (obstetric care), ANMs were not trusted to deliver another service (vaccination) for which they were adequately trained and well-equipped (Das and Das 2003).

Our point here is not to offer a full review or analysis of the literature on informational asymmetries or incentives or trust. Rather, our intention is to highlight the operative question for strategies necessary to strengthen the health system and meet the MDGs: The question is not just what can we do in any given community or clinic to improve patient-provider interactions; rather what aspects of the structure and process by which health systems function provides the basis for building the trust on which utilization, in part, depends? And, further, what do these kinds of analyses mean specifically for the poor and marginalized where health care costs drive the poorest even deeper into poverty? How do we understand user behavior – utilization – in situations where health care has become heavily marketized and markets can no longer be seen in the simple dualistic terms: public/free and private/fee-based?

### *5.2.2 Institutional arrangements*

Early in this report, we noted the strong shift toward the marketization of health care as health policy came to be dominated over the 1980s and 1990s by economic policy.<sup>20</sup> There is, of course, a large literature on user fees and their effect on utilization and on the exclusion of the poor from public services. Even the World Bank, once the strongest proponent on user fees, has retreated somewhat on this issue. We expect that the Task Force will look at the literature on cost as a barrier to care and make a recommendation on this point.

Here, however, we want to suggest that "user fees – yes/no?" may not be the only – or even the most -- pertinent question (Bloom, Lucas et al. 2000). Marketization of health care has led to the collapse of the public-private distinction. Not only do users incur demands for cash payments in every part of the health system, public and private, but the very same people who were trained and sometimes even employed in the regulated, public sector are also primary players operating businesses in the private, unregulated sector. Bloom and Standing describe this as a shift in the location of expert knowledge: with the proliferation of training programs and social marketing initiatives of different kinds, "a plurality of agents gains access to knowledge as a saleable commodity." Of course, buyers of health care "simultaneously partake increasingly in this knowledge market and are its victims. With the breakdown in regulation, there are few reliable route maps for users to assess what is on offer, what is the competence of those providing goods and services, and whether the costs are justified and reasonable." (Bloom and Standing 2001)

Rather than continuing to approach this situation as though a firm distinction between (free) public sector and (profit-making) private sector existed, they call for policy-makers to acknowledge that the health care market has become pluralistic and suggest use of the terms "organized-unorganized" to describe it. They redraw the map of the market like this:

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<sup>20</sup> By marketisation, we mean that health services and health goods, whether provided by the state or by other actors, become commodities bought and sold for cash in an increasingly complex health marketplace.

**Table 8: Pluralistic health systems at the beginning of the 21<sup>st</sup> Century**

Health-related function	Unorganised health care economy		Organised health care economy
	Non-marketised	Marketised	
<ul style="list-style-type: none"> <li>Public health</li> </ul>	<ul style="list-style-type: none"> <li>Household/community hygiene</li> </ul>		<ul style="list-style-type: none"> <li>Government public health service and regulations</li> <li>Private supply of water and other health-related goods</li> </ul>
<ul style="list-style-type: none"> <li>Skilled consultation and treatment</li> </ul>	<ul style="list-style-type: none"> <li>Use of health related knowledge by household members</li> <li>Some specialised services such as traditional midwifery provided outside market</li> </ul>	<ul style="list-style-type: none"> <li>Traditional healers</li> <li>Unlicensed and/or unregulated health workers</li> <li>Covert private practice by public health staff</li> </ul>	<ul style="list-style-type: none"> <li>Public health services</li> <li>Licensed health workers and facilities</li> <li>Licensed/regulated NGOs</li> </ul>
<ul style="list-style-type: none"> <li>Medical-related goods</li> </ul>	<ul style="list-style-type: none"> <li>Household/community production of traditional medicines</li> </ul>	<ul style="list-style-type: none"> <li>Sellers of traditional and western drugs</li> </ul>	<ul style="list-style-type: none"> <li>Government pharmacies</li> <li>Licensed pharmacies</li> </ul>
<ul style="list-style-type: none"> <li>Physical support of acutely ill, chronically ill and disabled.</li> </ul>	<ul style="list-style-type: none"> <li>Household care of sick and disabled</li> <li>Community support for AIDS patients, people with disabilities</li> </ul>	<ul style="list-style-type: none"> <li>Domestic servants</li> <li>Unlicensed nursing homes</li> </ul>	<ul style="list-style-type: none"> <li>Government hospitals</li> <li>Licensed or regulated hospitals and nursing homes</li> </ul>
<ul style="list-style-type: none"> <li>Management of inter-temporal expenditure</li> </ul>	<ul style="list-style-type: none"> <li>Inter-household/inter-community reciprocal arrangements to cope with health shocks</li> </ul>	<ul style="list-style-type: none"> <li>Money lending</li> <li>Funeral societies/informal credit systems</li> <li>Local health insurance schemes</li> </ul>	Organised systems of health finance: <ul style="list-style-type: none"> <li>Government budgets</li> <li>Compulsory insurance</li> <li>Private insurance</li> <li>Bank loans</li> <li>micro-credit</li> </ul>

Source: (Bloom and Standing 2001)

In considering how the poor experience health systems, and deciding what role state policy, public expenditures or donor aid should play, it is vital to look past the formal documents that describe health systems according to some bureaucratic or other ideal and to confront the reality of what is happening in different ways in different countries on the ground. The question of how best to intervene in these markets – through government legal regulation, professional standards, consumer empowerment, community pressure, etc – so that they benefit and do not endanger especially the poor is a huge question for future analysis. The answer must turn, at least in part, on how we understand problems of social exclusion in health care, and on the political context for addressing it.

### *5.2.3 Taking redistribution seriously<sup>21</sup>*

With the Millennium Project as a whole, we recognize that strengthening health systems, meeting the MDGs, will require large new injections of funds. But experience, if nothing else, tells us that simply pouring money into the system or even allocating funds to seemingly “pro-poor” interventions, does not guarantee a more equitable system: “allocation matters greatly,

<sup>21</sup> This section draws heavily on the work of Maureen Mackintosh, Paula Tibandebage, and Lucy Gilson.

but resources are made effective through the operation of the health care system as a whole, and where markets dominate, public resources are employed, diverted, invested and recirculated through them. The distributional outcomes depend on the interactions within the system, and between system and users.”(Mackintosh and Tibandebage 2002). If we care about equity, about what happens to the poor, about the way in which health systems function as social institutions, then we need to take redistribution seriously. We use Mackintosh and Tibandebage’s definition of redistribution: “all social processes that create increasingly inclusive or egalitarian access to resources” (Mackintosh and Tibandebage 2002).

But the crux of the problem is not just how to use resources to target a needed intervention to a population with low access or utilization ( what is often labeled a “pro-poor” intervention). Rather, the core issue is how to create a system that encourages, supports and sustains increasing inclusion, i.e. redistribution. Ideally, the commitment to redistribution comes both from the government and policy makers and from the more privileged in society who already have better access to the power and resources of all kinds – including health care – that are necessary to protect and promote health.

How do the prescriptions that currently dominate health policy affect redistribution? Mackintosh contends that marketisation of health care “exposes and drives out cross-subsidy” as it creates a segmented health system: private services for those who can pay and targeted “gap-filling” for those who cannot.<sup>22</sup> When access to health care explicitly depends on the ability to mobilize cash resources, then it explicitly legitimates exclusion of the poor. In a marketized system, cross-subsidy or redistribution is increasingly seen as an “unrequited gift” from rich to poor. A system that constructs subsidy to the poor as an unrequited gift is difficult to sustain, since it turns on the questionable assumptions that government can successfully mandate that those with power and resources shall act benevolently and share their assets with those less fortunate, and that a public system openly premised on such benevolent reciprocity between rich and poor will ultimately function equally for all (Mackintosh and Gilson 2002).

By contrast, a system built around health care relationships conceived not as gifts, but as entitlements, may move in a more sustainable direction. We can draw on human rights ideas to work toward a system that recognizes and responds to claims. Frenk and Londono, for example, assert that “essential service packages” should be framed not as “minimums” but as a “nucleus of universality” that constitutes a social commitment grounded in citizenship principles (Londono and Frenk 1997). A rights-based approach – one based on entitlement and obligation – can function not only as a principle for national governments and their citizens, but within the global community and in transnational relationships as well. As human rights law evolves, it can begin to capture an emerging understanding of the complicity of wealthy countries in the crisis affecting health today, and can begin to shape a norm of obligation on which claims for action by international actors can be based (International Council on Human Rights Policy 2003).

In fact, redistribution may need to be managed through explicit “social settlements” that permit a level of inequality to persist in order to maintain the stability needed to implement policies that do advance redistribution and equity (Mackintosh 2001). The better off cannot be encouraged to break away from the system; rather the system needs to work for them too (Bloom 2001). This has implications for how we think about using public funds for “pro-poor,

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<sup>22</sup> Of course, policy that is explicitly designed to create such a system can nevertheless result in the organized/unorganized markets described by Bloom and Standing, in which the poor do indeed end up paying – often driving them further into impoverishment – but are more likely to receive goods and services of poor quality.

targeted interventions” as compared to “universal coverage” standards, as two possible routes that are often suggested for closing gaps in health status.

This brief discussion of redistribution has left open the question of how, politically, to encourage redistribution to happen. An effective argument must be made for public investment in health care and health systems – particularly in those aspects of health care such as sexual and reproductive health, and for those populations such as adolescents or the poor, where market failure is routine. The argument will need to demonstrate that it is ultimately in the interest of those with control over power and resources to support a system that steadily increases inclusiveness; that it is their obligation and responsibility to do so; and that, when investment is combined with the correct changes in policy, it can work.

### 5.3 Rebuilding health systems: operational issues

Even when policies are well-designed and developed through appropriate processes, implementing them has been difficult (Thomas and Grindle 1990; Dickinson 2003; Toole, Snell et al. 2003). In this section we focus primarily on the district health system but also look briefly at important constraints at the national level including policies, legal barriers and financing. Over the course of 2004 we expect to review these issues in much greater depth. They are presented here to set the stage for further discussion.

It is important to clarify what we mean by ‘rebuilding’ health systems. In many countries, much of the public health infrastructure exists, but it does not function as intended: the staff have been assigned, but they are absent; information is gathered but not analyzed; drugs are ordered but not available; protocols have been written but are not followed. The challenge is to transform static infrastructure into a well-functioning system. Of course, in post-conflict and other settings, physical rebuilding of infrastructure itself is also an issue, and many countries (or areas within countries) clearly also suffer from an absolute deficit in skilled human resources and financial resources. It is important that we distinguish between what exists, what functions, and the quality with which it functions.

#### 5.3.1 District health system

The District Health System – primary care and referral to the district hospital level – will be a focus of our analysis of health systems over the next year. District health systems may be seen as the intersection between “vertical” and “horizontal” programs and the point at which many of the tensions between these approaches play out. As the locus of decentralization, the focus of primary health care and the key to reducing child and maternal mortality, the strength of the district health system will make or break progress to meet many of the MDGs. For progress on all of the health-related MDGs -- child mortality, maternal health, HIV/AIDS, malaria, and TB - - countries will require the capacity to deliver at least some of the following services at the rural and urban district level and into the community<sup>23</sup>:

- Extension into the community of some basic services generally reserved for use at facility level; these include appropriate use of antimalarials and antibiotics for childhood pneumonia and the use of antibiotics, oxytocics and anticonvulsants for the treatment of potentially fatal complications of pregnancy;

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<sup>23</sup> This list is adapted from Toole et al. (2003), a Background Paper prepared for the cross-Task Force Working Group on Health Systems

- Community-based health promotion aimed at increased uptake of antenatal and postnatal care, delivery by trained attendants within reach of emergency obstetric care, improved maternal nutrition and infant feeding practices; at enabling people to plan the number and spacing of children; and at behavior change to prevent HIV, malaria, and TB transmission;
- Community-level information systems to identify and monitor pregnancies, births, and deaths;
- Community health and nutrition volunteers to provide health promotion messages, and follow-up TB and malaria treatment;
- Sub-district level health center antenatal and postnatal services, family planning services, basic delivery care, neonatal and child health promotion and treatment services, management of sexually transmitted diseases, supervision of patients on DOTS, and the diagnosis and treatment of malaria, with outreach capacity to remote villages;
- Health center personnel trained to provide health education, supervise village volunteers, support revolving drug funds (or equivalent schemes), and collect information from communities;
- Transport of women requiring emergency obstetric care, newborn babies requiring treatment, and children with severe diarrhea, pneumonia, and malaria, to the nearest referral hospital;
- District level collation and analysis of health information gathered at health centers and communities and use of information in annual program planning;
- Training and regular supportive supervision of health center staff, community volunteers and health committees by district health staff;
- Provision, distribution, and monitoring of oral rehydration salts, antibiotics, anti-TB and malaria drugs, condoms, iron and folate, impregnated bed nets, and other essential medical supplies by district health staff;
- District hospitals able to diagnose TB and administer DOTS, treat severe cases of pneumonia and malaria, and provide quality assurance for health center diagnosis, provide emergency obstetrical and perinatal care, including screened blood transfusions and Caesarian Sections, conduct voluntary counseling and HIV testing; treat opportunistic infections and eventually provide highly active antiretroviral treatment (HAART), and provide clinical training to health center and district health office staff.

In a background paper for this Task Force, Toole and colleagues point out that over the past decade, decentralization has been supported by bilateral and multilateral agencies as part of a broader effort to democratize and modernize states (Toole, Snell et al. 2003). Decentralization has been promoted on the grounds that it brings decision-making closer to the people, increases accountability, and decreases corruption—with the promise of improving both efficiency and equity. In some settings, decentralization does appear to be promoting increased funding for primary health care—in Uganda, financing of the district health services

increased over four-fold while the hospital share of the budget declined (Ssenooba and Oliveira-Cruz 2003). However, after ten years of experience (more in some countries), there is little evidence of the impact of decentralization on health outcomes among the poor (Toole, Snell et al. 2003).

Addressing the system barriers to a well-functioning district health system also means addressing constraints beyond the control of this level of the system, including policy and legal barriers, human resource policies, management competency and financing.

### *5.3.2 Policy and Legal Barriers*

Laws and policies can be a major constraint to progress in many aspects of health system functioning – and changing them often requires that entrenched interests be challenged. For example, in the area of human resources:

- In many countries nurses are barred from prescribing medicines for STIs or allowed to prescribe only when a doctor is not present (Lush 2002).
- Nurses are prohibited from providing such basic emergency care procedures as intravenous oxytocics, antibiotics and anticonvulsants—the key pharmaceutical armament against maternal death (Mavalankar 2002).
- National policies support reducing maternal mortality, but general practitioners are not trained or enabled to perform Caesarean sections despite massive shortages of obstetricians (Mavalankar 2002).
- Even in countries where liberal abortion laws exist, providers are not trained and not supplied with appropriate technologies (Ganatra and Johnston 2002).
- Antibiotics and other commodities for the early treatment of neonatal and childhood illnesses cannot be prescribed or administered outside health facilities.

In some cases, some of these limitations are built into the law. Legal change can, of course, be an essential prerequisite and even a stimulus for real change in practices on the ground. But when the law or policy concerns alterations in medical practices or in job descriptions, sometimes the deeper problem lies with medical professionals – particularly specialists – and their associations. Just as these groups can block needed changes, they can also be the most influential in making them happen and so should be enlisted in initiatives to meet the MDGs.

### *5.3.3 Drug supply and essential medicines*

A discussion of this topic is found in the report of Task Force 5, Sub-group on Access to Essential Medicines. Further elaboration on this topic, with specific attention to drugs and commodities for use in reducing child and maternal mortality may be included in the final report.

### *5.3.4 Human resources*

We briefly make mention of human resources here as this element of the health system, has been, until now, grossly neglected. For this reason, we devote a separate section below to this issue (section 6).

### 5.3.5 Management competency

Not only have issues concerning health providers been neglected in health reforms – for health sector managers, the situation has perhaps been even worse. (Filerman 2003; Green and Collins 2003). Managers are expected to negotiate the tensions and contradictions facing the health system—and the scale of the challenges they face is expanding (Segall 2000; Green and Collins 2003; Ssengooba and Oliveira-Cruz 2003). Rapidly changing health systems make for a difficult management environment. It has been argued that weak management capacity “encourages vertical programming because it fosters a lack of confidence, if not distrust, and discourages decentralization, program integration, local participation and initiative” (Filerman 2003).

Ideally, managers would work within a set of sustainable structures and processes which could adapt flexibly these rapid changes. The effective delivery of key services at the district level requires an adequate financing mechanism and a supportive network of technical supervision, communications, policy guidance, skills training, human resources management, procurement, and logistics at the national and sub-national levels as well as community ownership and support (Toole, Snell et al.).

Yet managers are not consulted in reform plans, not empowered to *manage* rather than just administer, not supported by strong systems and clear policies, and not trained to deal with change (Green and Collins 2003). And a distinction must be made between *general management competency* encompassing control of and accountability for resources, effective management of human resources and assurance of results and *public health competencies*—including good clinical practice in the community or program planning and evaluation (Filerman 2003). The two are complementary but not interchangeable. These issues are too often overlooked or not understood. An effective initiative on human resources will involve explicit attention to management in the public health sector.

### 5.3.6 Issues in service integration: child health, maternal health, reproductive health and communicable diseases

Health programs require management structures. A recent programmatic evaluation of the Integrated Management of Childhood Illnesses initiative (IMCI) found that in countries that did not have a program dedicated to managing the implementation of this important initiative, results were less than what might have been expected (Bartlett January 2004). However, even if health programs are structured ‘vertically’ at the national level, personnel at the district and more peripherally are inevitably charged with the responsibility of implementing all of the approved programs that are intended to reach the population. Programs to which exceptionally high priority is accorded, such as polio eradication, for example, or other well-funded, externally-supported initiatives, no matter how worthwhile they might be, have a tendency to diminish the capability of peripheral level health services to discharge all of their designated functions.

To cite the most recent example, one for which the results have not yet been observed, the Task Force will consider the potential (and real) impact of WHO’s “3X5” initiative on the capacity of peripheral health systems to provide maternal and child health services. As with tuberculosis control, and the DOTS strategy, treatment of individuals with AIDS, unlike disease eradication programs, cannot have short-term objectives with a definable endpoint. For this reason, establishing parallel program structures, as was done successfully for smallpox eradication, and as is in the process of succeeding for polio eradication, is unlikely to work.

Treatment of individuals is a life-long proposition, and new patients will be begun on treatment for an unforeseeable time. It seems reasonable to propose that the best strategy for delivering antiretroviral treatment to those in need is through the health system, but it is equally clear that in many countries, and especially in those countries where the need is greatest, the health system is currently incapable of supporting a program that requires accurate laboratory diagnosis, intensive patient education, infallibly regular prescription and distribution of medications, and follow-up, including identification of defaulters.

This is not to say that providing patients with AIDS appropriate treatment is undoable. In the short-term, intensive efforts of dedicated staff working parallel to existing health services may be able to launch this undeniably important program, and given the AIDS situation in many parts of the world, a strong case may be made for implementing emergency measures. However, observers of the health system in some developing countries have begun to report that HIV/AIDS services, funded by bilateral donors or through the Global Fund, are beginning to dwarf those of the governmental health system. “AIDS clinics” are newly painted, with new furniture, well staffed, and well equipped. Government health facilities intended for the treatment of, among others, expectant mothers and children, do not benefit from the “AIDS money”. It is the contention of this Task Force, and that of Task Force #5’s sub-group on HIV/AIDS, that the best long-term approach to providing AIDS treatment would be through an integrative process that provides for the overall strengthening of peripheral health systems. During the course of the coming year, in preparation for the final report, we intend to concentrate further on this issue.

#### 5.4 Financing health services

Financing for health services may be analyzed through a set of lenses that start from the overall resources available for health and end with the type of resource allocations within the health budget. First, the overall resource envelope for health including domestic and international funding must be sufficient (and clearly we know that for low-income countries dramatic increases are needed). Second the national methods of resource mobilization must be examined—in particular to determine whether they are progressive or regressive—noting that user fees are particularly regressive (Hsiao and Liu 2001). The way in which health services are financed—and the extent to which the poor have to pay out of pocket—is, in many countries a critical cause of poverty. For the poor, user fees are a barrier to health care and health systems inadequately protect the poor against catastrophic health expenditures (Xu, Evans et al. 2003). Even when official dictums, including the *World Development Report 1993*, state that basic public health services should be provided for free, they all too often end up having a cost – indeed, out-of-pocket expenditures for maternal and child health services can be considerable (Toole, Snell et al.). Various mechanisms including community-based insurance, social reinsurance, universal coverage and MCH-specific insurance programs have been suggested though further review is needed before we can make specific recommendations on this issue. In addition, a priority on equity in expenditure is essential. Research is increasingly pointing to the fact that publicly financed health care fails to reach the poor in almost all developing country settings (Wagstaff and Claeson 2003).

The third level of analysis is the percent of the budget allocated to priority health issues—including those of direct relevance to this Task Force—child mortality and maternal mortality. Studies show tremendous variation in the amount of the health budget allocated to Safe Motherhood activities. In a study of high maternal mortality countries in Southeast Asia, Laos, Cambodia, Nepal and Pakistan were found to spend less than \$.50 per capita on Safe Motherhood services (including family planning, antenatal care *and* delivery care) while

Indonesia spent three times as much per capita (Futures Group International 2002). And even within Safe Motherhood services, if, as is the case in India, an inordinate proportion of funds are spent on population control through sterilization, then emergency obstetric care will remain underfunded (Mavalankar 2002). PRSPs and MTEFs offer an opportunity for realigning funds within the health sector to redress historical inequities and misallocation toward tertiary care (see Section 8). Similarly, the *Lancet* series on child health alluded to above calls for a major scaling up of spending, on the order of \$7.5 billion a year (a figure derived by the Commission on Macroeconomics and Health) (The Bellagio Study Group on Child Survival 2003). At a micro level, the soundness of the management and logistics of financial flows is critical to a functioning health system—and under decentralization this has proven particularly difficult (Ssengooba and Oliveira-Cruz 2003; Toole, Snell et al.).

Though an overall focus of the Millennium Project is on increasing the level of funds for key areas of development—including the health sector—we must emphasize that the specific allocation of the funds within the health sector, the explicit inclusion and protection of the poor and the strength of policies are just as important as the aggregate amount allocated to the health sector. In preparation for the final report of the Task Force, we also intend to undertake a study of how funds allocated for child and maternal health flows to those programs, and how it is spent.

#### 5.5 Health impact statement

To ensure that international health initiatives – particularly those designed to accelerate progress toward the MDGs – ultimately strengthen rather than weaken countries' health systems, we recommend the use of a "health system impact statement" that will consciously assess the effect of the initiative on health systems themselves (and not just on immediate changes in disease-specific health status). It is important that Poverty Reduction Strategy Papers (PRSPs) include health system impact statements as part of an integrated approach to reducing poverty. Furthermore, we recommend that PSIA (Poverty and Social Impact Assessments) include explicit analysis of the effect of new programs of the international financial institutions on the health system, including human resources for health. The Task Force will further develop the concept of the health system impact statement for inclusion in the final report.

## 6. Human Resources

Health systems are comprised of “hardware”—infrastructure, buildings, drugs, supplies, and information—and “software” – the actual people who link together these inputs and make the system function, as well as the processes, procedures and institutions that shape the people and the conditions in which they work. Yet, human resources has been one of the more neglected areas in health policy.

Health staffs not only deliver services but also *manage* the system and foster change. In an increasingly complex world, where HIV/AIDS and non-communicable disease including mental health issues complicate the already muddled field, an adaptive, flexible health work force should be a priority for all developing countries. Planning such a work force will involve the collaboration of diverse actors—education, labor, planning, finance and health ministries included. The global nature of health policy -- and the international dimensions of health services -- demands another vantage point on the issue of human resources. National boundaries are becoming more permeable, making the flow of workers between countries and ‘brain drain’ a critical factor in the demise of health systems, particularly in sub-Saharan Africa. Nursing and midwifery shortages are endemic and HIV/AIDS further threatens the work force in many countries. Any initiative to revitalize the health system must have a human resources strategy at its core.

In this section we highlight some emerging work on human resources for health and development and the importance of sound human resources policies for primary health care at the district level, particularly focusing on the much overlooked area of maternal health. In the context of our overall emphasis on health systems, we assert that human resource issues should be recognized as a systemic bottleneck to achieving the health-related MDGs.

### 6.1 A brief synopsis of the status quo

The diagnosis of the problems and bottlenecks associated with human resources for health is becoming increasingly sophisticated and the evidence base is growing (Martinez and Martineau 1998; Kowalewski and Jahn 2001; Haque 2003; Mavalankar and Maheshwari 2003; Mercer, Dal Poz et al. 2003). The purpose of this section is not to review this literature, but rather to summarize the key themes and identify strategic entry points, which will specifically help to meet the MDGs. A current component of the World Health Survey is expected to extend what is known about health professionals in developing countries. However, the literature to date fairly consistently identifies human resource bottlenecks, which can be grouped into three categories as follows:

#### Macro

- Lack of overall funds for the health system (and therefore human resources)
- Lack of donor attention to human resources as part of the health system
- Brain drain and emigration to more developed countries, likely to be exacerbated by GATS
- Lack of an overarching global policy on human resource flows between countries

#### Policy/Systems Issues--often national or district

- Insufficient attention to the importance of human resource *management* and the role of incentives in improving performance and quality

- Insufficient attention to long-term human resource planning in the health sector
- Resulting preoccupation with short-term fixes and disparate speed-trainings
- Diversion of health personnel to special donor projects, private/NGO facilities and HIV/AIDS programs
- Inadequate training
- Shortages of staff, particularly nursing and midwifery
- Maldistribution of staff: to tertiary rather than primary levels and to urban rather than underserved rural areas
- In very poor countries, lack of key specialists such as ob/gyns and anesthesiologists
- Lack of legal recognition of professions (especially midwifery)
- Inadequate attention to skill mix
- Lack of innovation such as delegation, in part because of lobbying power by professional groups
- Change in civil service and salaries stymied by lack of mechanisms for cross-Ministry communication and IFI policies
- Frequent transfers from post to post, making effective local policies and programs difficult to sustain.

#### Micro/Clinic-level issues

- Lack of motivation resulting in poor quality of care
- Unclear career development paths and low salaries; absence of appropriate incentives
- High absentee rates
- Insufficient training, lack of understanding of key procedures and protocols
- Large impact of HIV/AIDS on the health of the staff
- Insufficient attention to gender issues (both of patients and between staff)
- Insufficient staffing resulting in worker overload and lack of 24 hour coverage
- Poor supervision
- Inadequate linkage to and integration with the community resulting in lack of demand for health services
- An unspecified and poorly functioning referral system

## 6.2 Toward a global workforce strategy

Fortunately, the issue of human resources for health is now being taken up at a global level and progress toward a Global Health Workforce Strategy is underway. WHO is actively engaging with issues such as skills shortages, incentives, motivation, workforce imbalances and migration. As part of an effort to generate an evidence base, WHO added a module on health occupations to the World Health Survey and, in 2003, launched a new journal, *Human Resources for Health*, to further debate these issues (WHO 2003). A new multi-agency initiative called the 'Joint Learning Initiative' (JLI)<sup>24</sup> is looking at new strategies for addressing human resource issues, moving beyond the standard solution of simply training more and more physicians and other health workers.

The JLI is conducting a global situation analysis to look at the stock and flow of workers and a three-fold approach structures the work of this partnership: a) a *demand* approach which

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<sup>24</sup> The JLI is supported by Sida/Sweden the Gates Foundation and the Rockefeller Foundation with in-kind funding from Dfid/UK, GTZ/German, WHO and the World Bank.

focuses on strengthening the workforce with attention paid to their work environment, compensation, non-financial incentives, and engagement of private sector including both for-profit and non-profit; a *supply* approach which prepares the workforce through education and training with emphasis on technical as well as leadership and managerial skills; and a *market* approach that addresses the macroeconomy, civil service, labor markets and migrations (Chen 2004). Innovations and knowledge management as well as a focus on priority diseases and on Africa round out the agenda for this global rethink of human resources for health (Chen 2004).

#### **Box 6: Four messages from the JLI**

- Human resources are in crisis, yet absolutely critical for achieving the MDGs in the world's poorest countries.
- An effective workforce should be urgently mobilized to implement priority national programs, triggering the longer-term building of sustainable human resource capacity.
- Country-based strategies must involve sectors beyond health and engage stakeholders beyond government.
- An action alliance should be started immediately to harness the power of human resources for the MDGs.

Source: (Chen 2004)

In its work, the JLI is highlighting the critical importance of human resources for achieving MDGs both as constraint and lever, particularly in the poorest countries of Sub-Saharan Africa. The JLI has classified countries into 'human resource clusters' and highlighted those in the 'poorer deficit countries' (countries with low worker density, skill level, costs and health status) as the obvious priority for global (and country-level) efforts to reach the MDGs. Most of the countries in this category are in sub-Saharan Africa.

#### *6.2.1 Community level health workers for primary health care*

A renewed focus on primary health care as the cornerstone or foundation for health systems (WHO 2003) and a call for using vertical programs to strengthen health systems will continue to redefine the roles of community health workers, midwives and nurses. Some have proposed that programs for the prevention of "MTCT of HIV could strengthen ante-natal and post-natal care programs and district referral facilities to manage the complications of pregnancy and childbirth. Community-based HIV prevention education could be integrated into a broader program of healthy behavior change. The capacity of EPI in logistics, program management, and monitoring & evaluation could be shared more widely among district health staff" (Toole, Snell et al.). Integration of IMCI and EPI along with closer linkage to safe motherhood initiatives are proposed as a way to strengthen the clinical skills of district health staff. The Task Force, and indeed the wider public health community, must ask key strategy questions which focus on the impact that all these changes will have for on human resources for health at the community level. Are programs sending mixed messages? How do the recommendations on care-seeking and health workers (the village health worker, the skilled attendant and the family) reinforce or contradict one another? Can one community health worker conceivably do all that is expected of him/her and is s/he adequately compensated and incentivized.

The issue of integration of community health workers (and midwives) with traditional health care workers will be an important part of any human resource plan. Particularly in the area of delivery care, the apparent preference of women for traditional birth attendants is thought to be a persistent barrier to reducing maternal mortality. In fact, however, there are many examples demonstrating that when effective service programs are put in place, women will use them in preference to reliance on TBAs. The official government policies toward traditional health workers can be inclusive or antagonistic, clear or left vague and undetermined. TBA training has proven ineffective in changing delivery practices, but there are some aspects of TBA care that are of value to the pregnant woman and her family—largely those in the area of psychosocial support

At the same time, there is an emerging recognition that neonatal deaths represent a large proportion of child deaths (36%) and one-half of infant deaths. IMCI, as it is implemented in most settings, does not address neonatal mortality meaning that prevention of neonatal mortality often falls through the cracks-- both in terms of policies and clinical guidelines as well as health workers specifically assigned to monitor neonatal health and intervene in cases of ill-health. The clear synergy in the way maternal deaths and neonatal deaths can be prevented lies in identifying a health worker who can manage complications of the newborn and manage simple maternal complications while referring appropriately in the case of serious complications: ideally, the skilled birth attendant. WHO's policy on "Global Action for Skilled Attendants for Pregnant Women" notes that the health sector should increase access to a skilled attendant throughout the pregnancy and particularly during birth and the early postpartum period, which are the times when most maternal and newborn complications arise" (WHO 2002). There is no doubt that a skilled attendant could improve both maternal and neonatal outcomes.

However, skilled attendants do not exist at the community level in most of the poorest and under-resourced settings. Where they do exist, these women (and they are almost always women) are often inadequately trained. Second, these skilled attendants, in some settings, become the key health worker of choice for multiple donor projects—co-opted for outreach projects, family planning services and increasingly for reproductive health programs. They seem to be either completely underutilized or wholly overworked—both symptoms of poor human resource planning. Any efforts to integrate skilled attendants' duties to include neonatal health and other functions must be carefully constructed within a broader human resource plan and situation analysis. An ambitious program in Indonesia (USAID/John Snow International Mothercare Project) attempted to upgrade village midwives' skills and capacities to include a fully integrated reproductive health package (including antenatal care, anemia control, delivery care, postpartum visits, life saving skills and neonatal resuscitation). However, progress toward reducing *maternal mortality* was uncertain given inadequate pre-service training, low acceptance of the midwives by the community (despite efforts in the program to work with the TBAs) and a poorly functioning referral system (Ronsmans, Achadi et al. 2001; Koblinsky 2003).

Where skilled attendants simply do not exist, an interim solution for neonatal mortality is needed. Table 9 shows the human resource needs for major interventions in maternal health, reproductive health and newborn and child health in terms of sophistication needed and the role that community level providers can play. In the short- to medium-term, there is a benefit in harnessing the full potential of the existing providers most of whom are community-based. The SEARCH project in India has been pioneering the use of community health workers to substantially reduce neonatal and child mortality<sup>25</sup>. Table 9 summarizes a very complex reality—

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<sup>25</sup> In one such project, neonatal mortality rate was reduced by 62%; in this, CHWs did prenatal counseling, clean delivery, resuscitation, low-birth weight care, treatment of sepsis and promotion of breast-feeding Bang, A., R. Bang,

but it captures the key point that most reproductive health and newborn and child health interventions require a relatively low sophistication of skills and can be carried out by community health workers. In low-income countries with inadequate *distribution* of health professionals in rural areas, community health workers may be viewed as a potential resource for neonatal, child and reproductive health interventions (as well as some maternal health-related interventions such as nutrition).

In terms of maternal health, though, CHWs may have an important role in preventive and referral activities (including stabilizing patients for referral), but they are not effective in the actual clinical interventions for treating obstetric emergencies that cause death. Thus, it must be stressed that a strategy for neonatal health that relies upon community health workers is not one that can readily be adapted to reduce maternal mortality.

**Table 9: Human resource needs for maternal, reproductive and child health interventions**

	<b>Maternal health &amp; Nutrition</b>	<b>Reproductive health</b>	<b>Newborn &amp; child health</b>
<b>Interventions</b>	Skilled birth attendants EmOC	FP-RTI	Essential newborn care
<b>Sophistication of skills</b>	High	Low	Low
<b>Role for community level workers</b>	Selective	Substantial	Substantial

Source: Adapted from (Paul 2003)

### 6.2.2 “Upskilling” (Delegation)

In many settings, delegation to (or upskilling of) ‘lower level’ health professionals may be the best – perhaps the only -- way to ensure access to EmOC. A brief illustration of the problem is sketched in a background paper by Mavalankar and Maheshwari prepared for the Task Force (Mavalankar and Maheshwari 2003). In India, a typical district with 2 million people has between two and four ob/gyns and one to two anesthetists. An average rural district will see approximately 9,000 delivery complications, 3,000 of which would require cesarean sections. Leaving aside the issue of distance, two ob/gyns could not reasonably be expected to perform these 3,000 cesarean sections per year.

For comprehensive EmOC the specialized skills necessary include performing cesarean sections, blood transfusions and administering anesthesia. ‘Delegation’ is often used to circumvent the acute shortages of specialists, physicians, nurses and midwives. Evidence has shown that non-physician teams can be trained to undertake functions at the first referral level (including emergency operations) (Kowalewski and Jahn 2001). Para-professionals have been trained to perform cesarean sections in Mozambique and Burkina Faso, provide anesthesia in a few African countries, and sterilization in India and Bangladesh. Other examples include Tanzania, Nepal and Ethiopia where midwives provide all Basic EmOC functions and India, where sterilization and included abortion is routinely done by General Practitioners (Mavalankar and Maheshwari 2003). Based on the experience in India, *basic* EmOC can be performed by lower level staff like ANM, nurses and medical officers. Delegation of specialist functions to

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et al. (1999). "Effect of home-based neonatal care and management of sepsis on neonatal mortality: field trial in rural India." *The Lancet* **354**: 1955-1961.

GPs and ANMs and delegation of basic EmOC to auxiliary nurse midwives are potential solutions to redress imbalances in the EmOC workforce.

Important questions about whether these workers' scopes of profession and practice match the services and procedures they might perform and whether legal barriers and professional turf issues obstruct more equitable access to care must be weighed against quality of care considerations. Yet, if countries are serious about meeting the MDGs, then these issues must be addressed as a matter of urgency and they must be addressed from a stance that gives adequate weight to women's entitlement to access life-saving care (Freedman 2002).

In some countries, even the profession of midwifery is not legally recognized. In others, general practitioners may be legally able to perform post-abortion care but have never been trained and, in still others, a person may have the competency but not be legally allowed to practice or may be posted in settings where such procedures are not performed. In India, the non-availability of anesthetists and ob/gyns specialists was seen as a major bottleneck to progress on maternal mortality, but beyond recognition of the problem, no progress was made because of "a lack of technical officers who could work on these issues and remove the perceived legal and other obstructions to training basic doctors to give anesthesia and provide cesarean sections" (Mavalankar and Maheshwari 2003). And yet, some countries have persisted and have been able to implement innovative approaches to delegation to ensure access to marginal groups.

Many countries have had to rely upon novel approaches to meet the vast need for skilled birth attendants. Indonesia has created a new cadre of health worker, the village midwife, and trained and deployed tens of thousands of women to rural areas; Pakistan introduced the widespread use of Lady Health Workers and Lady Health Visitors. These approaches have certainly provided new models for a field in need of innovation, but they are also a source of much confusion—How does the definition of a skilled attendant relate to these new cadres of workers? How does an ANM differ in terms of training, scope of profession, skill level, etc. from and LHW, an Indonesian village midwife? Is this a defensible use of resources in situations where such workers cannot be supported, supervised or supplied? As part of the work of this Task Force we hope to clarify this literature and shed light on the success of these endeavors to date.

Mavalankar and Maheshwari cite the Indian experience of creating a new cadre of Auxiliary Nurse-Midwives (ANM) many decades ago. After years of efforts in training and deploying these workers in large numbers, the ANMs were found to attend only 12-13% of the deliveries due to the following obstacles: ANMs were siphoned off for work on family planning and immunization, the reigning policy priority for Safe Motherhood was antenatal risk screening (now proven ineffective), ANMs lived outside the village of posting and worked about 2-4 hours per day in the village with no coverage for leave and holidays which could total as much as 40 percent of the year. This experience, and others, should be a cautionary lesson for countries that are developing similar approaches.<sup>26</sup>

It should be recognized that these trainings and deployments of vast numbers of 'new workers' are large-scale experiments and as such should be properly monitored and evaluated so as to assess impact.

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<sup>26</sup> In Bangladesh, for example, the government has recently decided to train its family welfare visitors (the front-line workers for family planning) as nurse-midwives.

### 6.2.3 Long-term planning to create a cadre of skilled midwives

Most of the countries that have reduced maternal mortality have done so with the help of a trained cadre of midwives. In the long term, countries should be aiming toward a professional cadre of midwives or nurse midwives whose status is legally recognized and training is competency-based. In Uganda, it has recently been determined that the basic cadre necessary for the delivery of a minimum package of health services is a comprehensively trained nurse—trained in *both nursing and midwifery* (Ssengooba and Oliveira-Cruz 2003).

A long-term perspective necessitates consideration of the country's basic and secondary educational systems. In order to increase emergency obstetric care by 2015, countries will need to have in place *trained* doctors, nurses and midwives. Working backwards, this requires that an adequate number of 8 to 11 year old girls and boys are enrolled in school with opportunities to proceed to full secondary education and further education. In particular, because nursing and midwifery are primarily seen in most countries as a female profession, girls finishing primary and secondary education is a priority—both to fill demand for nurses and midwives but also to address the gender imbalance in specialist positions such as ob/gyns and general practitioners.

Ministries of Education (MoE) and Finance (MoF) must be part of human resource planning. It has been noted that MoE priorities may be at odds with Ministry of Health—in Uganda, health training institutes are under the purview of the MoE and a bias toward generating general practitioners does not match the desperate need for nurse-midwives (Ssengooba and Oliveira-Cruz 2003).

In addition to training midwives, the training of general practitioners in life-saving skills and basic surgical/obstetrical skills is a solution relied upon by many developing countries. Prioritizing these modules in in-service training for General Practitioners may be a key maternal mortality strategy in countries that have not yet adopted this policy.

### 6.2.4 Management Capacity as an aspect of human resources

Management capacity is an issue at both national and district levels—capacity in terms of actual numbers and priority put on the management function, but also in terms of technical capabilities and program focus. Broadly stated, in health policies, attention to management skills and training has been lacking—particularly at the district and sub-district level. In Uganda, 85% of health sub-district personnel have no management training (Ssengooba and Oliveira-Cruz 2003) Typically, a narrow view of management issues is confined to the management of drug supplies and *health services*—which are critical but are only a segment of a functioning health system. Logistics, health information systems, human resources, emergency transport, financing (including revolving funds) disease surveillance, laboratories are aspects of the system which require particular management and administrative skills not necessarily related to clinical expertise. At the district level, GPs and nurses spend large proportions of their time on administrative tasks and management for which they are ill-equipped—with tremendous opportunity costs to the system in terms of time that could be spent seeing patients. From a national perspective, carefully crafted, technically sound policies and protocols are often crafted but never *operationalized*—a sign of inadequate management.

Part of the lack of technical expertise in top management is a dearth of public health perspective (PAHO/WHO 2003). Also problematic is a lack of integration across vertical disease-oriented priorities. The coexistence of parallel systems for family planning and MCH

activities has been fairly well documented. Now HIV/AIDS programs and their related staff further split delivery streams and human resources into vertical systems. In some countries, even primary health care and IMCI are *vertical* programs (Toole, Snell et al. 2003).

#### **Box 7: Lack of top management capacity: A major bottleneck for Safe Motherhood**

A qualitative study undertaken for the World Bank assessed the technical unit for maternal health in Government of India (called MH division) and found that it was composed of only 4 officers - One Deputy Director General (DDG) MH, and three assistant commissioners. One post of Assistant commissioner has been long vacant leaving 3 technical officers in the MH division, a headcount that has not changed over the years. This division is charged with overseeing all of the technical and administrative aspects of all the maternal health activities for the whole of India with its 1 billion people, 27 million births in more than 30 states and union territories (Mavalankar 2003) -- a country with a maternal mortality burden which contributes more than any other country to the total number of maternal deaths each year 136,000 (WHO, UNICEF et al. 2003) Outside the maternal health division, the Planning Commission allocates resources for planned development under the five-year development plans and yet there is only one technical officer for all of health a Health Advisor (Mavalankar 2003) .

Despite major injections of resources into health programs in India (2.6 billion dollars over last 30 years), the World Bank does not have any technical officer for maternal health—and the same is true for other agencies. Only UNICEF is an exception - it had one technical officer for women's health and one consultant for midwifery in Delhi. Thus the technical capacity at the major donors is also limited in the field of maternal health.

Furthermore, basic elements of the health system such as technical protocols and guidelines are not available in many states and the Ministry of Health cannot provide an accurate count of maternal health facilities, let alone ensure that they are functional and provide high quality services.

Most state level officers are also not able to provide the required technical inputs in MH due to their limited numbers and diverse responsibilities as compared to the large population of their states. For example only few states have reported development of technical protocols or guidelines for MH programs

The paper provided several recommendations for improving top management capacity including the following a) The officers should have background in public health, ob/gyn, midwifery and related fields so that they can work on various technical issues; b) these officers should be supported by adequate administrative staff and should not have major administrative functions so that they can focus on technical functions c) they should have much more financial and technical power so that they can plan, implement and monitor maternal health program without approval from non-technical staff; c) in addition they should have powers to commission studies, reviews and evaluations to measure progress made and hire technical consultants for specific tasks.

Other ways of improving technical capacity will be to have technical advisory committee at national and state level for MH. This committee should be composed of national and international experts on MH. The committee should review the progress of MH programs and give advice on future course of actions. Organizations of professionals such as Federation of Obgyn Societies (FOGSI), Indian Medical Association, Nursing and midwifery associations and academics should also be asked to give inputs in the technical processes.

Finally, lack of top management capacity in critical areas like Safe Motherhood is coming to the fore as a major bottleneck for progress on maternal mortality. Although maternal health should be integrated into a broader push for primary health care, the *strategies* associated with maternal mortality, in particular, do warrant very specialized technical knowledge and abilities—something that is lacking in countries where maternal mortality is a very serious problem (see Box 7 for details).

### 6.2.5 Gender issues in human resources for health

A discussion of maternal mortality and the health workers responsible for saving women's lives would not be complete without a mention of the role that gender plays in mediating the provision of health care. Aside from the issue of women patients' preference for a female provider, the gender dimension of human resources for health in developing countries has been, to date, under appreciated and under researched (Brown 2003). Nursing and midwifery personnel comprise more than 50% of the labor force in many countries (O'Brien-Pallas and et al 1997) and it is fair to say that the majority of these labor force participants are traditionally female. While health systems grapple with the issue of incentives for health workers, particularly in the interest of posting staff in rural settings, the question of whether a different incentive structure might be needed for women has not been addressed (Standing and Baume 2003). Furthermore, proposals to create new, large, mostly female health cadres, who will be expected to work on contract and with uncertain career paths raises serious questions about the rights and livelihoods of these women.

Women's security is thought to be a very serious concern for health personnel—both in their living and working conditions (Mumtaz, Salway et al. 2003). Based upon growing evidence on the issue of violence in the health workplace has been the subject of recent attention by a Task Force consisting of the International Labour Organization (ILO), WHO and the International Council of Nurses. Health is one of the sectors most commonly associated with violence in the workplace and gender is seen as an exacerbating factor as women are disproportionately concentrated in lower status, high-risk positions such as nursing (ILO 2003). Though the issue is not well documented in the literature, physical security may be an obstacle to providing 24-hour coverage at remote rural health facilities. And gender may be an issue in pay structure and career advancement as well (Mumtaz, Salway et al. 2003). We must consider whether midwifery and nursing are adequately compensated and whether gender discrimination is built into pay scales and opportunities for career advancement.

### 6.2.6 Global policies and strategies

While country-level commitment and follow-through to strengthening human resources is critical, even poor countries with strong human resource policies have porous boundaries—allowing exit by skilled personnel to “greener pastures” and entrance for privatizing forces which threaten to further dismantle the public systems. Clearly global leadership, technical assistance and coordinated development assistance are needed to create a new vision for health workers in the poorest regions of the world.

Central to the work of the JLI is the notion of a global action alliance to foster and support cooperative international efforts to prioritize human resource issues in the poorest countries (JLI). Such an alliance would highlight the global factors affecting countries—including labor migration, technology and financing. In addition, a strong role for technical support for country plans is envisioned, linking ministries of finance, education and civil service. In very concrete terms, the JLI's preliminary proposal is that 10 % of the current \$2-3 billion currently spent by donors on human resources (through fellowships, short trainings and salary support) be directed toward the poorest countries to strengthen their human resource policies and institutions. This idea is very much in line with the spirit of the MDGs and the call for a new Millennium Development Compact which links rich and poor countries in a new development paradigm.

Donors and governments alike must look outside the health sector, to determine how civil service policies, including the effect of IMF conditionalities on such policies, affect the health work force (e.g. the required civil service reforms and their impact on health workers' salaries)? And the IMF and World Bank must encourage countries to use the framework of PRSPs and MTEFs to promote the nitty-gritty cross-sector work of human resource planning. The High Level Forum (HLF) of development partners for health MDGs which held its second meeting in Geneva has seconded the call for a focus on human resources and recently recommended formation of a working group on human resource issues in order to assess overall development assistance spending, conduct in-depth case studies and establish a link with the Global Commission on International Migration to look at the impact of migration on health.

Without international and national attention and commitment to the human resource issues—in general—and the specific issues surrounding complications in pregnancy and childbirth, many countries will fall short of the health MDGs. Furthermore, we must be certain that women's health issues are integrated into blueprints for the future of the human resource dimensions of health systems—and we must ensure that we delineate where human resource issues surrounding maternal mortality are similar to those faced by the rest of the health workforce and where they differ. And gender dimensions should not be swept under the rug. Nurses and midwives comprise the vast majority of health providers in developing countries and so often these professionals are women. Leadership and management in all areas, including public health and maternal health, must be strengthened.

Keeping issues of maternal health 'on the table' will require constant vigilance. Donors have financed numerous Safe Motherhood projects, yet have been criticized for short project time frames and poor evaluation schemes. We must ask searching questions about past and future donor performance: How effective have donors been in integrating human resource concerns into their efforts, and to what extent has Safe Motherhood itself been a vertical program? How could donors better address 'EmOC in the context of overall human resources for health development, particularly in the context of PRSPs and SWAPs? Is long-term planning and investment in quality education for nurses and midwives balanced against short-term deployment of semi-skilled workers? How does the deployment of new cadres of skilled birth attendants fit into the general human resources strategy—and what is the long-term plan for these worker's livelihoods?

**Some initial recommendations are as follows:**

- Overall review of effective and realistic job descriptions for various categories of health personnel aimed at providing the broadest coverage for essential services, with a particular focus on the special needs in regard to maternal health
- Review of financial rewards for health care workers of all categories, so that remuneration for work in this field provides sufficient income to cover a worker and his/her family's basic needs.
- The need for continuity within facilities and communities, avoiding frequent, disruptive transfers.
- Promotion of midwifery (and nurse-midwifery) as a recognized and valued career, well-compensated and seen as an investment, not a drain on national resources

- Review and focus on effective training, supervision and accreditation programs
- Review of referral systems and the development of approaches so that referral systems actually function
- As part of broader human resource strategies negotiated simultaneously with health sector plans, including Ministries of Health, Ministries of Finance, Planning commissions and Ministries of Education
- Donor support for long-term planning for human resources

## 7. Targets and indicators: adapting the MDGs

The purpose of targets and indicators is, of course, to monitor and measure progress toward meeting the goals. But they are important for other reasons as well: in the public health field, what we count is often what we do. Indicators should not only reflect movement toward the goal, they should encourage implementation of priority, evidence-based interventions. Equally important is the need to ensure that inappropriate indicators – or the inappropriate use of acceptable indicators – do not distort program or policy priorities. Finally, in the MDG initiative, indicators are the basis for accountability.

Task Force 4 proposes several modifications to the targets and indicators for the child health and maternal health goals, as countries adapt the MDGs to their own specific settings, working to incorporate them into poverty reduction strategies, and as the international community moves toward the major review of progress in achieving the MDGs scheduled for 2005.

### 7.1 What lies behind the averages?: monitoring equity

In our background paper, we articulated the ethical and practical rationale for integrating an equity focus into the MDGs. If the MDGs are to be equity-sensitive, the targets and indicators should incorporate this focus in their construction. Several countries have already included equity considerations in their own interpretations of the MDGs.

Vietnam is most often cited as the country that has actively adapted the MDGs to a local context. In part, this is a reflection of the country's already impressive progress in reducing poverty over the last decade or so. The MDGs were transformed into the Vietnam Development Goals (VDGs) in an effort to explicitly link these goals to the national government's five-year plans. The government took a strong stance on equity, noting that certain ethnic groups are particularly disadvantaged. Accordingly, Vietnam modified the maternal health target to be 'reduce the maternal mortality rate to 80 per 100,000 live births by 2005 and 70 by 2010 with particular attention to disadvantaged areas' and the child mortality targets to include 'reduce the infant mortality rate.... at a more rapid rate in disadvantaged regions' (Swinkels and Turk 2002).

New goals were added including the following:

- Goal 8: Reducing vulnerability
- Goal 9: Improving governance for poverty reduction
- Goal 10: Reducing ethnic inequality
- Goal 11: Ensuring pro-poor infrastructure development

In Lesotho, most data is being disaggregated by rural/urban, by district and in some cases by socio-economic group.<sup>27</sup> Thailand is looking at the MDGs as a way to delve beneath aggregate statistics and identify population groups or geographic areas which lag behind. Argentina is emphasizing disparities between provinces and considering tracking provincial level MDGs and a number of other countries including Lao PDR, the Philippines, Tunisia and Cameroon are grappling with issues of within-country inequalities.

It is not solely at the country level that development goals have been framed in equity-sensitive terms. The articulation of the global goal for maternal mortality, which emerged from

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<sup>27</sup> For more on disaggregation and the MDGs see <http://hdr.undp.org/mdg/default.cfm>

the International Conference on Population and Development, included a strong emphasis on within-country disparities:

Countries should strive to effect significant reductions in maternal morbidity and mortality by the year 2015: a reduction in maternal mortality by one half of the 1990 levels by the year 2000 and a further one half by 2015. Disparities in maternal mortality within and between countries, socio-economic and ethnic groups should be narrowed [ICPD, paragraph 8.21].

It is important to note that in many cases, the availability and quality of data are the limiting factors in monitoring health outcomes and equity, particularly in the case of maternal mortality.

The Task Force recommends that targets and indicators be framed in equity sensitive terms wherever possible, giving particular attention to disadvantaged population groups as well as geographically constrained areas. We propose framing the *targets* broadly as is done in the following example to give emphasis to the prioritization of the most disadvantaged while leaving space for the specifics of the equity-sensitive target to reflect national realities:

*Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio, ensuring the same rate of progress or faster amongst the poor and other marginalized groups.*

Indicators should be adapted to local context, where possible identifying the specific disparities that policies and programs will aim to narrow. For example, a country might specify, in its indicators, that progress in maternal mortality for indigenous groups and groups in particular provinces, in addition to the poor, should be explicitly monitored.

A section on disaggregation would not be complete without emphasis on the importance of disaggregating data by gender. As indicated by the growing proportion of women with HIV/AIDS, differentials in health status are not static and across all the MDGs, it is vital that we measure and monitor progress by gender (Millennium Project Task Force 3 on Education and Gender Equality 2004).

## 7.2 Health systems

A central argument of this report is that to meet the MDGs, there must be a new and different focus on health systems (see Section 5). Although health has a strong presence in the MDGs, the goals are disease- or health status based – improve maternal health, reduce child mortality, reduce HIV/AIDS, malaria and TB – and all of the indicators track and reflect discrete interventions or outcomes. None reflect progress in strengthening health systems *per se*. This is a potentially serious problem with the MDGs. As we discuss in earlier sections of the paper, short-term disease specific interventions are not necessarily the building blocks for long-term development of the health system – in some cases, the short-term interventions may even detract from progress toward the long-term goal. It is therefore essential that the MDG indicators reflect some key aspect(s) of health system strengthening.

We address this issue for maternal mortality reduction specifically in the next sub-section in which we recommend adding an EmOC indicator to the two indicators currently in place for

Goal 5 (MMR and skilled attendants).<sup>28</sup> A cross-Task Force working group will address the issue of health systems indicators more generally in the coming year. In doing so, we will be able to draw on several initiatives already under way.

Current efforts to specify the measurement of health systems performance include several of the following key dimensions: 1) the level and distribution of responsiveness of the system across the eight domains of autonomy, confidentiality, communication, prompt attention, quality of basic amenities, access to social support and choice of health provider; 2) level of financial risk protection (against catastrophic health payments); 3) health system *coverage* as measured by health care needs and effective interventions (not simply volume of services delivered); 4) quality of care (WHO 2003). The New Partnership for African Development (NEPAD) includes the following two health systems targets: a) “ensure that 80 per cent of the population has access to quality health care by 2015”; and “ensure that all countries spend at least 15 per cent of public expenditure on health by 2010” (NEPAD 2003).

In many countries over the last several decades, health systems have borne the brunt of macroeconomic policies set outside the health sector and of well-intentioned disease-specific initiatives designed to yield a quick impact on health status. Far too often, the threat to health system functioning posed by such policies goes unnoticed until the damage is done. In other cases, the damage can be (and is) reasonably anticipated, but it remains invisible or suppressed in the policymaking process. Although some civil society groups are able to sound the alarm about the likelihood of detrimental impact, the information and data to conduct a serious assessment are often missing or inaccessible.

This is a serious issue of accountability that must be addressed. In the coming year, the Task Force will examine the potential for a “health system impact statement” modeled on similar tools, such as environmental impact statements, used in other sectors.

### 7.3 Sexual and reproductive health and rights

#### a) The target

As elaborated in Section 4, sexual and reproductive health and rights (SRHR) are an essential prerequisite for human, social and economic development and must be adequately included in the MDG targets and indicators. Elements of SRHR relate to virtually all of the different MDGs, and these will be addressed by the Millennium Project in the coming year. For the health sector aspects of SRHR, we recommend that an additional target be added to the maternal health goal. We draw on the language agreed to by the international community at the ICPD and ICPD+5, and add an equity-sensitive dimension:

**Target:** Universal access to reproductive health services by 2015 through the primary health care system, ensuring the same rate of progress or faster amongst the poor and other marginalized groups.

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<sup>28</sup> One possibility is to use an EmOC indicator as a “tracer” or sentinel marker for a functioning health system more generally. Knippenberg, R., A. Soucat, et al. (2003). Marginal budgeting for bottlenecks: a tool for performance based planning of health and nutrition services for achieving the millennium development goals, World Bank, UNICEF, WHO.

Task Force 3 on gender equality, has also endorsed ‘universal access to reproductive health services by 2015 through the primary health care system’ as a critical aspect of women’s capability (Millennium Project Task Force 3 on Education and Gender Equality 2004). Access to reproductive health services is seen by Task Force 3 as an essential component of the capabilities domain of gender equality and essential to human well-being and sexual and reproductive health and rights.

b) The indicator(s)

How best to measure access to reproductive health services is a subject of considerable debate. In the reproductive health field, there is a long history of dissatisfaction with indicators that have distorted programs by focusing only on contraceptive coverage and fertility rates. Coercion and discrimination in population programs that center around contraceptive delivery is not just an historical artifact. It continues to be a very live issue in many parts of the world today (Murthy 2003; Miranda and Yamin 2004). Transition from a demographic to a reproductive health paradigm, including its rights dimensions, requires that any indicator for measuring progress in access to contraceptive services, in particular, include indicators that focus on users of those health services, their needs as they (and not the state or any other actor) understand and express them, and on the ability of the health system to meet those needs.

As in other areas, choice of indicators is complicated by data availability (or lack thereof) and methodological problems. There is no perfect single indicator available for sexual and reproductive health and rights. The best solution may be to use several indicators together with the clear understanding that they must be used *as a set* and not as independent measures of progress. In this report we raise several possible indicators for discussion over the next year, as SRHR receives increased attention in the Millennium Project.

WHO and a United Nations Interagency Working Group has developed a set of 17 indicators for global and national-level monitoring, which track various aspects of SRH including contraceptive coverage and maternal mortality indicators, as well as, anemia, positive syphilis serology in pregnant women, infertility and HIV. For the Millennium Project, in which indicators should be kept to a minimum number, we recommend formulating an indicator (or a set of indicators) that best captures the concept of “unmet need for contraception”, i.e. the number of women who wish to space or limit childbearing but do not have access to effective means to do so. It may be that, given current limitations in available data, this concept is captured by using together (1) the contraceptive prevalence rate (CPR), and either (2) the proportion of unintended pregnancies or (3) the proportion of expressed spacing desires being satisfied or proportion of expressed limiting desires being satisfied.

It is critical that, whichever measure of “unmet need” the Task Force ultimately recommends, it be accompanied by indicators concerning HIV prevalence (including disaggregated by gender), HIV prevention (through use of condoms) and HIV knowledge – some of which are now included in MDG Target 7 on HIV/AIDS.

#### 7.4 Maternal mortality

At present, the maternal health goal for the MDGs is backed by one target – reduce by three-quarters between 1990 and 2015, the maternal mortality ratio – and by two indicators: (1) Maternal Mortality Ratio (MMR) and (2) proportion of births attended by skilled health personnel.

MMR is extremely difficult to measure accurately, as the wide range of uncertainty in Table 7 in Section 4 of this report clearly conveys. The obstacles to measurement of MMR and the various methodologies used to arrive at the estimates published by WHO are carefully explained in the WHO publication of the official data and are widely documented in the literature (WHO, UNICEF et al. 2003). WHO therefore clearly states that, while MMRs help convey the scale of the problem, they cannot be used to track trends in maternal mortality reduction.

The second indicator, proportion of births attended by skilled health personnel -- i.e., "skilled attendants" -- is also subject to multiple measurement problems, as described in previous sections (e.g., variations in definition, in job description, training, and competency). Moreover, as detailed at some length in the Task Force Background paper (Freedman, Wirth et al. 2003), the proportion of skilled attendants does not vary consistently with MMRs: particularly in high-mortality countries, there is a huge variation in use of skilled attendants and so very little statistical correlation between the two indicators. Hence, skilled attendants cannot be assumed to be a proxy for maternal mortality reduction. Nevertheless, it is important to note that this is the only indicator in all of the MDGs that explicitly relates to human resources. Skilled attendants will be a critical component of any maternal mortality reduction strategy, and it is therefore important that it be included in the MDG indicators.

Equally, important, the skilled attendant indicator should not be used by itself as a measure to track maternal mortality reduction. If the core strategy for reducing maternal mortality relates to the strengthening of the health system, then an indicator that tracks an intervention that can (and often is) deployed *outside of the health system* can lead to distortions in policy and program.

The Task Force therefore recommends that the MDGs add an indicator that explicitly tracks access to EmOC. In 1997, UNICEF, WHO and UNFPA issued a set of process indicators designed to assess availability and utilization of EmOC (UNICEF, WHO et al. 1997). Over the last five years, this set of indicators is has been used in dozens of countries. The Task Force has commissioned a paper evaluating this experience. We expect that the commissioned paper will make recommendations for possible modifications to the process indicators and suggestions of how they can best be used in the context of the MDG initiative.

A final note: The ability to make evidence-based statements about levels of maternal mortality and its causes -- including through such techniques as maternal death audits -- has been identified as a key factor that was used to mobilize political will to address maternal mortality in many of the countries that have successfully engineered dramatic declines (Koblinsky 2003; Pathmanathan and Liljestrand 2003). The invisibility -- the phantom quality -- of the death of women in pregnancy and childbirth is, in fact, one more dimension of the social devaluation of women (Graham and Hussein 2004). A strong, policy-relevant set of indicators for maternal mortality reduction is not just a sop to statisticians; it is a potentially powerful way to frame political demands for the fulfillment of women's right to the conditions necessary to survive pregnancy and childbirth (Yamin and Maine 1999).

## 7.5 Child health, neonatal mortality and nutrition

The current set of child health indicators includes the under-five mortality rate, the infant mortality rate and the proportion of one-year-old children immunized against measles. As with the maternal mortality target, the Task Force recommends integrating an equity dimension into the target so as to place a value on "*ensuring the same rate of progress or faster amongst the poor and other marginalized groups.*" In light of the increasing recognition that neonatal

mortality<sup>29</sup> represents a significant proportion of child mortality—globally, an estimated 36 percent-- it is recommended that an indicator for the neonatal mortality rate (NNMR) be added as a fourth indicator to the Child Mortality MDG. Though NNM is a significant proportion of child mortality, the causes of neonatal death are different from the causes of death for older children and therefore programs and policies at all levels must be adjusted to reflect the different strategies necessary to reduce NNM.

In addition, this paper and the Task Force Background paper stress the underlying role of malnutrition in a large proportion of child mortality. Thus, it is important to note that the MDGs currently include an indicator on the prevalence of underweight children (under five years of age), which falls under MDG 1 on “Eradicating extreme poverty and hunger.” Though ‘underweight’ children may be an appropriate indicator of poverty and hunger, this measure is as much a reflection of health and the health system as it is a reflection of other important goals. Child malnutrition is in part a result of low birth weight, maternal malnutrition, improper feeding practices, frequent illness in infancy and early childhood, micronutrient deficiencies (including breastfeeding)—all problems which are within the purview of the health system (Sethuraman, Shekar et al. 2003). Thus, the indicator on ‘prevalence of underweight children’ should also be echoed in the *child health* MDGs in country-level *implementation* of the MDGs.

#### 7.6 Vital registration

As a final point, the Task Force notes that goals, targets and indicators are important for inspiring action and measuring progress. However, the targets and indicators ought not to become the sole end—rather they should be viewed as part of the means to reducing poverty and promoting human rights and sustainable livelihoods. Furthermore, the Task Force reiterates the fact that measurement of progress toward the MDGs is only as accurate as the data allows. In the case of maternal mortality and skilled birth attendance, in particular, data is grossly inadequate, with many countries having *no* reliable data on this category of deaths. While modelling and population-based surveys can augment our understanding of general levels and trends, they are not a substitute for strong, country-owned vital registration systems. Information is a theme echoed in other Task Forces of the Millennium Project, and this Task Force seconds the call for *information*, starting with a simple accounting of who is born and who dies, as a critical crosscutting necessity for reaching the MDGs. Vital registration will be addressed by the new Health Metrics Network based at WHO.

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<sup>29</sup> Neonatal mortality is defined as the death of an infant in the first 28 days of life

## 8. Power-mapping

### 8.1 Mechanisms – global architecture

#### *8.1.1 Introduction*

In previous sections we have pointed to changes in the health sector - health systems, policies and priorities that we believe are essential to meeting the MDGs. But health systems are constrained by the wider political systems of which they are a part. Those political systems include not only the other key ministries at the national level such as Finance, Planning and Education. The political system also includes IFIs such as the IMF, World Bank and regional development banks, whose policies and approaches have varying degrees of influence in different countries, depending, in part, on the level of indebtedness and aid dependency. Apart from these particular international actors, the global system as a whole has increasing influence on health sectors. This has been most obvious in the area of access to essential medicines with the enormous influence of the WTO, the TRIPS agreement and intellectual property laws, and the pharmaceutical industry. But as we show below, GATS is positioned to bring huge changes to all other aspects of health systems in the future.

Yet not all power lies in the hands of states or donors. To varying degrees civil society groups have been able to influence policy processes and outcomes. Representative bodies – local governing bodies, legislatures, elected officials – can be influential forces (for good and for bad) as well. We need to understand how power and resources are divvied up and flow between all of these players. We also need to understand the key processes by which they interact and by which critical policies necessary for the implementation of recommendations from previous sections are set. In this section, we take a few small steps in that direction and flag important additional areas for work in the coming year.

#### *8.1.2 Where and how are the MDGs being implemented?*

At the heart of the Millennium Project's purpose is the question of how this international consensus is best translated into action and integrated into national policies, planning and budgets. Staying wholly within the confines of the Millennium Project the obvious place to look is the relationship between the international MDGs and country-level Millennium Development Goal Reports. Countries are encouraged to produce Millennium Development Goal Reports (MDGRs)—and as of January 2004, about 40 countries have published such documents.

Where are the MDGs translated into policies and budgets? The ratification of the Millennium Declaration occurred just after another, related change in development strategies—a stated prioritization of a poverty focus in the major International Financial Institutions—the International Monetary Fund and the World Bank. For the IFIs, the UN and increasingly bilateral donors, the Poverty Reduction Strategy Papers (PRSPs) are the planning and financing mechanism through which the MDGs are, in theory, translated into policy and practice (World Bank).

If the overall goal of the Millennium Project is to recommend ways to *operationalize* the MDGs, the fact that the PRSP process is emerging as the key mechanism through which poverty-oriented policies and budgets are 'screened' requires that we assess the progress to date and make recommendations for improving this translation of the goals into policies and

programs in the future—both short-term and long-term. Thus, for all sectors, including health, it is critical that we have a firm understanding of the PRSP process, a sense of the ways in which countries have adapted the MDGs and translated them into action through the PRSP.

### *8.1.3 Poverty Reduction Strategies: A brief overview*

The 1999 introduction of the Poverty Reduction Strategies (PRS) and their codification in Poverty Reduction Strategy Papers (PRSPs) represented a commitment to integrating poverty into the main lending practices of the World Bank and the IMF. This change was heralded by some as a new approach to lending with a poverty orientation. For others, the PRSPs represent ‘new wine in old bottles’ and promise far more than they deliver.<sup>30</sup>

The PRSP, in its ideal formulation, is meant to be a country-driven plan for poverty reduction, generated through broad-based civil society participation. According to the World Bank, PRSPs are based on a long-term perspective focusing on results-oriented outcomes that benefit the poor based upon a comprehensive analysis of the multiple dimensions of poverty. Prioritization of interventions is meant to make implementation feasible in fiscal and institutional terms and an emphasis on partnership links international donors to the country-level process. (World Bank) As of mid 2003, approximately 70 countries were implementing a version of a PRSP, each of which extends over three years, with implementation progress reports due each year. At the three-year mark, PRSPs are expected to be fully revised.

A joint review of the PRSP approach by the staffs of the World Bank and the IMF highlighted several positive trends from PRSP experiences since 1999 including a growing sense of ownership amongst most governments of their poverty reduction strategy, a more open dialogue within governments and at least some parts of civil society, a more prominent place for poverty reduction in policy debates and an acceptance by the donor community of the principles of the PRSP approach (IMF and World Bank 2002).

However, the response from NGOs and a wide range of critics, including some from within the World Bank and IMF themselves (IMF and World Bank 2002), is far less encouraging. One of the overarching criticisms of the PRSP is that participation—the widely proclaimed centerpiece of national ownership of the PRSPs-- is poorly implemented (Nyamugasira and Rowden 2002; Rahman 2003; Sanchez and Cash 2003; Oxfam UK 2004) Though country strategies are supposed to be based upon consultation with a wide array of stakeholders, many are being left out. Particularly problematic is that parliaments in many instances are not consulted as part of government (Craig and Porter 2002). In the case of NGOs, consultation is often equated with ‘participation’ and while the input of a few NGOs is garnered in the PRS process, the reality is that certain NGOs hold privileged and lucrative relationships with governments and cannot be seen as true representatives of civil society. There has been a general failure to directly involve poor people (Sanchez and Cash 2003). Furthermore, in many countries it is argued that the strategies simply reflect the input of the Ministry of Finance, or simply the World Bank’s usual prescriptions repackaged to look like participation-based policies. (Chavez Malaluan and Guttal 2003; Uganda Debt Network 2003).

In addition to the ‘participation’ question, structural and macroeconomic policies appear, in many places, still to be driven by conditions attached to World Bank and IMF lending

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<sup>30</sup> The PRSPs evolved as a means of distribution for HIPC debt relief. Though the PRSP concept was developed in this context, it is increasingly becoming the basis for lending through the IMF’s Poverty Reduction and Growth Facility (PRGF) and the World Bank’s Poverty Reduction Support Credit (PRSC).

instruments (Nyamugasira and Rowden 2002; Uganda Debt Network 2003). It is noted that loans do not integrate a mechanism for avoiding the previous negative social impact of abandoning trade barriers and subsidy cuts (Nyamugasira and Rowden 2002). Furthermore, PRSPs are criticized for understating and obscuring the structures of global market power (Craig and Porter 2002). Outside of the framework of the PRSP process, loans representing millions of dollars are processed and trade agreements with direct impact on health and the health system are launched without any linkage to the PRSP process (Nyamugasira and Rowden 2002; Ladd 2003; Oxfam UK 2004).

The PRSPs could and should develop a much more nuanced and policy-relevant analysis of disparities in health and health care. In general, the PRSPs tend to analyze inequities in terms of interregional disparities—an important aspect of policy, but one which overlooks gender and other disparities between social groups (Marcus and Wilkinson; Oxfam UK 2004; WHO 2004). Perhaps the most disconcerting issue with many PRSPs is the fact that even when poverty analysis is done, and done well, the strategies and policies that should be implemented are not mentioned or are underspecified (WHO 2004). Case studies have also shown that the links between PRSP indicators and the MDGs are often either vague or incomplete. A review by UNDP and UNFPA found that at present, there is a need for convergence and stronger links between the monitoring and reporting processes of MDGs, PRSPs and other comprehensive national development frameworks. The report further states that there is a lack of clarity on the real value added of the MDGRs (United Nations 2003).

Despite the many critiques of the PRSPs, a recent Oxfam UK review of the PRSP process found that in many countries, key civil society partners felt that the PRSP represented the most open policy dialogue to date in their countries (Oxfam UK 2004). In addition, there is anticipation amongst NGO groups, that the PRSP process may well release additional funds for the underfunded health sector in many countries (Rahman 2003). As such, the PRSP may represent a move in the right direction, though careful monitoring and more aggressive input from civil society groups, is necessary to ensure that the theory matches the practice.

#### *8.1.4 Poverty and Social Impact Analysis (PSIA)*

A more recent innovation which has emerged as a potential part of IMF and World Bank policies is the country-owned Poverty and Social Impact Analysis (PSIA). This tool was developed, in part, to counter the criticism that many structural reforms and macroeconomic policies approved by the World Bank and IMF lay outside the PRSP process and were not subject to a poverty impact analysis. The PSIA uses quantitative and qualitative methods for assessing the positive and negative impacts of policy change on the well-being of different groups in society, with a focus on the poor and vulnerable (IMF and World Bank 2002; Robb 2002; World Bank 2003). With a strong equity focus, the PSIA disaggregates impacts along “economic, ethnic, gender, generation, spatial and livelihood lines.” Examples of the way in which PSIAs can identify poverty-focused action include the following:

- The effect of civil service reforms (either increasing or decreasing salaries) on services for the poor
- The ex ante impact on the poor of a price increase for petroleum, electricity and value added tax (VAT)
- The impact of cotton sector reform on different groups in the sector
- The effect of coffee liberalization on coffee producing households in Uganda including the differential impact on women and men (Robb 2002)

The PSIA was piloted in 6 countries by the World Bank and five countries by DFID. Although the PSIA did result in ex ante analysis and concrete policy changes in some cases, overall NGO assessments of the PSIA have not been positive. A briefing paper by eight global NGOs including Oxfam, Christian Aid and EURODAD found that the PSIA tended to focus simply on the mitigation and sequencing of macroeconomic reforms rather than a true debate of policy alternatives. The NGOs called for accelerated pace and genuine mainstreaming of the PSIA for all major World Bank reforms and every IMF macroeconomic framework (Joint NGO Briefing Paper 2003). Thus, while the process and scale of implementation of the PSIA is flawed, the tool itself seems to have captured the imagination of groups which have long argued for ex ante evaluation of structural and macroeconomic reforms.

Of key interest to this Task Force and Task Force 5, will be the extent to which PSIA integrate health and health system concerns. A point of entry for the Task Force may be to press for a full understanding of the potential negative (and positive) impacts of macroeconomic reforms on both health and the health sector in PSIA. Integrating an ex ante health system impact assessment into the PSIA would be a good starting point.

#### *8.1.5 MTEF- Medium Term Expenditure Frameworks (and SWAPs)*

The ability of national governments to develop a realistic poverty reduction strategy depends upon a calculation of available resources, including new funds. In the past, developing country management of public expenditures had been oriented to the short-term, irregularly disbursed, unresponsive to changing health needs and dissociated from new donor funds, including those released through the HIPC initiative. Budget *limitations* drove annual budgeting and public policy, including health policy, rather than policy priorities, specifically poverty reduction, driving budgeting. In some settings budgets and policies were hardly linked at all resulting in the 'perennial policy-budget disconnect' (Taliario 2003).

Over the course of the 1990s, a new approach called the Medium Term Expenditure Framework (MTEF) was developed to align policy priorities and budgets. The MTEF is a "multi-year public expenditure planning exercise" which allows Ministries of Finance and others to step back from year-to-year crises and make incremental changes in budgets using new donor and domestic resources to realign policy priorities (DFID 2002). The MTEF is a process which operates through a 'top-down' estimate of the resource envelope, a 'bottom-up' estimate of costs of running different sector programs—including health—and an iterative dialogue which realigns policies and budgets according to the availability of public financing, relative importance of different sectors to poverty reduction, and other national priorities (World Bank; Conway, Foster et al. 2002; DFID 2002).

In theory, the MTEF is the instrument through which public expenditures are shifted toward the objective of poverty reduction. Thus, the PRSP and the MTEF should be strongly linked. Early evidence from case studies in Africa does suggest that they have acted synergistically to reinforce and strengthen one another (Holmes and Evans 2003).

Between the policy oriented PRSP and resource oriented MTEF, a space is carved out for realistic, quantifiable policies and budgets for poverty reduction for the next 3 to 5 years. This national level process triggers the release of additional funds through the World Bank and

the IMF, sets the stage for donor involvement in SWAp<sup>31</sup>. Of note is the fact that a SWAp based upon an MTEF increases its credibility and mitigates against fungibility (DFID 2002).

In reality, the experience with MTEFs varies considerably, with some countries like South Africa quite far along in fully institutionalizing the MTEF and others such as Burkina Faso, Ghana and Cameroon at early and faltering pilot stages (Holmes and Evans 2003). Case studies confirm that the MTEF is effective where there is clarity on the objectives and priorities of government policy, realistic forecasting of the resources available for allocation and planning, and analysis directly linked to the allocation of resources (Conway, Foster et al. 2002).

Despite some favourable initial experiences with the MTEFs, there are still improvements to be made. Greater specificity is required to address the needs of the poorest quintile of the population as well as gender and geographic inequalities and MTEFs should clarify which expenditures will be protected in the case of revenue shortfalls (Taliercio 2003). Links between the MTEF and PRSP must be strengthened, specifically, MTEFs should incorporate the results of PRSP monitoring and evaluation and PSIA. Also, as the Uganda experience shows, the MTEF and IMF conditionalities have limited the ability of a PRSP to expand the health budget through HIPC (Uganda Debt Network 2003).

It is important that donors and national governments work toward feasible MTEFs as part of the effort toward meeting MDG Goal 8 on partnership and *as a result*, meeting the other MDGs. The MTEF and PRSP process should result in a) greater overall resources allocated to the health sector and b) within the health sector, greater prioritization of and spending on diseases and health problems of the poor—including, for example, Emergency obstetric care to reduce maternal mortality—and on marginalized areas and marginalized population groups.

#### *8.1.6 PRSPs and Health, Health Systems and Equity?*

A first issue for Task Force 4 is the question of whether new funds made available through HIPC are being prioritized for the health system. Initial reviews by WHO and some NGO groups of health issues in the PRSPs find that they tend to have a narrow approach to health, targeting specific diseases rather than essential packages or broader health issues (Verheul and Rowson 2001; WHO 2004) and there is no accompanying analysis of the health effects.

Of particular concern to this Task Force, is the lack of attention in most PRSPs to the need for emergency care and service delivery in general (Equinet, International People's Health Council et al. 2003; Rahman 2003; WHO 2004). Only 11 of 44 PRSPs address reproductive health in detail (See Box 8 on Nicaragua) (UNFPA 2002). Box 9 represents another success story in terms of the *attention* given to maternal mortality in the Bangladeshi Interim-PRSP but with no measures and policies articulated, the likelihood of success in implementation is unclear. Furthermore, there is little analysis of the impact of user fees on the poor (Equinet,

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<sup>31</sup> SWApS (Sector-wide approaches) are a recent innovation with many variations but essentially SWApS harmonize donor contributions to a particular sector, such as health or education, by supporting nationally defined policies rather than donor-specific projects. Government ownership is the central theme and SWApS may also involve working with NGOs, the private sector and civil society. Cassels, A. (1997). A guide to Sector-Wide Approaches for health and development: concepts, issues and working arrangements,. Geneva, World Health Organisation, DANIDA, Department for International Development, European Commission.

International People's Health Council et al. 2003; WHO 2004); an exception is Laos where the IMF actually urged reducing user fees (Marcus and Wilkinson 2002). Though they vary in terms of the breadth and depth of the health issues mentioned, in general it appears that an overarching view of the health system as a key arbiter of social equity is missing although equity analysis should be central to PRSPs. Some mention broad groups such as female-headed households, ethnic minorities, etc. but in general they don't distinguish between vulnerability, social exclusion and poverty.

PRSPs fail to make the link to health as a human right and do not make clear links to the MDGs (UNFPA 2002; WHO 2004). The disconnect between the PRSPs and the MDGs has not gone unnoticed by key players in the international global health community. A recent draft of eight principles for PRSPs accelerating progress toward the MDGs provide a solid starting point for moving forward (see Box 10).

#### **Box 8: Nicaraguan PRSP and attention to Maternal and Reproductive Health**

“The effectiveness of this effort will also depend on a better integration of reproductive healthcare services into the primary health clinics, health posts and programs. Primary health care will be combined with family planning methods, basic and emergency obstetric care, improved nutritional services for expectant mothers, more and better prenatal care, more institutional births, and better treatment for common childhood illnesses.

128 (Nicaraguan PRSP)

#### **Box 9: Bangladesh I-PRSP and Maternal Mortality**

The level of maternal mortality is recognized by the I-PRSP as an expression of hidden social discrimination against women. The Bangladesh Maternal Mortality Survey 2001 indicates a level of maternal mortality at 320 deaths per 100,000 live births using verbal autopsy identification method, which is not internationally comparable. The direct sisterhood method for comparability indicates that it was as high as 400 in Bangladesh. The I-PRSP suggested radical efforts to reduce the maternal mortality rate to the target level within the 2015 time frame as per the MDGs, which would require the implementation of the sector-wide approach to health care with special focus on improvement of reproductive health, especially for the poor and the most groups. A notable reduction in maternal mortality would also require a comprehensive intervention package involving improvement in maternal nutrition and antenatal care, expansion of institutional delivery, increased supply of skilled birth attendants, dissemination of health education, development of local capability for providing emergency obstetric care, and sustaining further reduction in the fertility rate. The I-PRSP has a goalpost in reducing maternal mortality, but in reality there are no effective measures for achieving the goal! (Adapted slightly from Rahman 2003)

## Box 10: Eight principles for developing country led and owned Poverty Reduction Strategies focused on accelerating progress towards Health & Nutrition MDGs

Draft developed by UNICEF for breakout group on Resources for Health & PRSPs at the first meeting of the High level Forum for Health MDGs: Geneva 8-9 January 2004

- 1. Multisectoral:** combine high impact health and nutrition interventions with action in different development sectors such as education, water and sanitation, rural infrastructure or gender rights, so as to address the inequality-poverty-ill-health nexus comprehensively.
- 2. Synergistic:** Avoid competition between diseases or interventions by focusing on synergistic packages delivered through key modes of service delivery: family and community care, outreach services, and clinical care.
- 3. Evidence Based:** Analyze operational and policy bottlenecks for each service delivery mode at country and sub-national level; identify options for corrective action and the expected resulting improvements of coverage -especially of the poorest groups-. Estimate the additional costs and impacts on MDG's (and thus the allocative efficiency) of each strategy and policy options and select priority options.
- 4. Ambitious:** Identify the funding gap to achieve the MDG's by 2015 and advocate vigorously to fill the gap. Make realistic projections of best case scenarios for mobilization of additional internal and external funds; translate these best scenarios in medium and long term expenditure frameworks (MTEF's) and into budgetary allocations to strategic policy interventions, linked with explicit estimations of expected outcomes (in terms of economic development as well as health and nutrition status).
- 5. Balanced.** Ensure a proper, country specific, balance between targeting and extension of coverage through household-community care, outreach and facility-based health care networks; Especially in crisis countries, balance and link immediate crisis intervention with smooth transition to development investments.
- 6. Outcome driven:** Improve the availability and use of input, output and outcome data relevant to the MDG's in the context of the health metrics network. Improve implementation management practices including the regular monitoring of implementation of the strategic and policy actions and annual Health Outcome Reviews as inputs into the PRSP monitoring annual report.
- 7. System enhancing:** Recognize that the achievement of the health related MDG's provides an opportunity to strengthen critical components of the health systems at community, district and central level (such as financing, the workforce, information), to secure more satisfactory and sustainable performance in the long term.
- 8. Accountable:** Strengthen mechanisms for ensuring accountability of governments to citizens, service providers to clients, and providers to governments.

In the context of the emerging child survival partnership, UNICEF -in collaboration with WHO, World Bank, USAID, CIDA and other partners- is supporting the implementation of these principles by 10 African countries and several States in India. We will monitor and document this process, improvements in performance of the health systems and the progress towards the Health MDG's and report back to the next High Level Forum meeting on the lessons learned.

### 8.1.7 Trading Outside the New Poverty Paradigm

Concurrent with the new development paradigm for poverty reduction has been the evolution of a new international trading system led by the World Trade Organization (WTO). While the new development paradigm does, at least in theory, have poverty reduction as a central theme, it is fair to say that the liberalization of global trade is not driven by a concern for the poor. As several civil society critiques point out— trade agreements are operating outside of the PRSP framework and yet likely to have significant impact upon both poverty and public health (Nyamugasira and Rowden 2002; Ladd 2003).

A contentious issue with direct relevance to the Task Force is The General Agreement on Trade in Services (GATS), which sets out rules governing international trade in services including health care, education, energy, water and sanitation. In a GATS negotiation, a government declares which of its services it is committing to open to competition under the GATS framework. While it is possible to protect certain services, critics note that a poor country with little bargaining power has poor odds of protecting certain services, which has serious implications both for national sovereignty and for the ability of the state to take necessary actions to fulfill their obligations under international human rights treaties as well as domestic law. (Sexton 2001; Equinet, International People's Health Council et al. 2003). GATS rules allow overruling of national laws and policies which are seen as ‘unnecessary barriers to trade.’ So, for example, India’s actions to limit marketing of baby formula in order to promote breastfeeding and Thailand’s efforts to ban tobacco imports are examples of public health policies which might be threatened under GATS. Already hamstrung by domestic constraints, GATS may further hamper the “ability of governments to provide public health care services in the face of bold externally funded moves toward privatization” (Pollock and Price 2000; Nyamugasira and Rowden 2002).

Of particular concern is the potential influx of foreign health service suppliers and health insurance groups, which would destabilize already fragile health systems.<sup>32</sup> If we believe that health systems have a critical role to play in ensuring coverage for rich and poor and preventing catastrophic health shocks which drive families into poverty, then there are potentially grave consequences to an international trading system which does not see public health as a special good (Hilary 2001; Nyamugasira and Rowden 2002). Health insurance systems and suppliers can be privatized under GATS—and thus far this is the most commonly privatized element of the system (see Table 10). While there is the potential for expanded and less expensive coverage with competition, empirical evidence suggests that private insurers tend to undermine the ability of governments to design equitable insurance schemes with large risk pools to spread costs between rich and poor (Lipson 2001). A final concern related to GATS is its potential contribution to brain drain of key human resources for health. The free flow of health professionals from developing countries to developed countries would further exacerbate the current paucity of skilled health professionals in many countries.

In sum, though free trade may open markets for poor, isolated countries, trade policies must, in *practice*, be set such that *public health* and *health systems* are not traded away (Loewenson, Munot et al. 2000). Again, ex ante evaluation is recommended<sup>33</sup>: “A wide range of

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<sup>32</sup> In addition, given the links between water and health, the privatization of water services would have direct impact on public health as fees for usage are unaffordable for the poor.

<sup>33</sup> Ex ante evaluation is not a novel concept. In the environmental health field the concept of the ‘precautionary principle’ places the burden of proof for risk assessment on the producer of new

developing country governments, unions and NGOs contend that a thorough assessment, independent of the WTO and associated bodies such as the World Bank or IMF, of the health, social, environmental and cultural impacts of existing service liberalization (and indeed of all the WTO agreements) must be conducted, with special reference to the poorest and to women, before negotiations continue on GATS” (Sexton 2001). MDG 8, Target 12 specifically addresses the issue of a fair global trading system, stating, “Develop further an open, rule-based, predictable, non-discriminatory trading and financial system.”

**Table 10: Examples of health services liberalized in GATS (as of May 2003)**

Service	Number of Countries Committed
Hospital services	42
Other human health (laboratory, epidemiological, etc.)	15
Medical and dental services	52
Midwives, nurses, paramedics	28
Insurance services	78

Source: (Equinet, International People's Health Council et al. 2003)

### *8.1.8 Global Fund and Public-Private Partnerships*

The Global Fund for HIV/AIDS, TB and Malaria (GFATM) deserves mention in the ‘global architecture’ section of the paper because it is one of the newest and largest of an emerging army of public-private partnerships (PPPs) being launched--largely to combat specific diseases or spur research on products for diseases in developing countries. The Global Fund’s central purpose is ‘mobilize, manage and disburse additional resources’ for three major diseases of poverty and it brings an important global focus and common framework—not to mention desperately needed new resources-- to these efforts (Brugha and Walt 2001). However, the critical question for this Task Force is whether the Global Fund can prioritize these key diseases *while* strengthening health systems. Rwanda’s HIV/AIDS Treatment and Care Plan places a priority on the “[s]trengthening of Rwanda’s general health services infrastructure, beyond HIV/AIDS” stating that “[i]nvestments in human resource and infrastructure capacity will be structured to benefit not only those directly affected by the disease, but the broad health care system” In addition, the Global Fund and other PPPs increasingly represent a new form of global governance—and negotiating this new set of policies and resources in the age of PRSPs and MTEFs will require a carefully balanced equilibrium between national governments, civil society and global entities from the World Bank to the WTO to the Global Fund.

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technology or instigator of a policy change (including the WTO), demanding that environmental or public health impact or risk assessments be undertaken before the introduction of technology or policy change.

## 9. Conclusion and Recommendations

The Task Force on Child health and Maternal health puts forward the following initial propositions by way of conclusion and preliminary recommendations (outlined in more detail in the introduction to this document):

### 1. A conceptual shift to a focus on health systems is critical to reaching the MDGs for health.

*Progress will require:*

- d) Empirical (rather than theoretical) evidence on the way health systems function for poor and vulnerable groups.
- e) Recognition that even within poor countries, the poorest, marginalized population groups have dramatically higher rates of child malnutrition, child mortality, maternal mortality (as well as mortality from AIDS and TB).
- f) Policies that move health systems toward inclusiveness and equity, rather than toward segmentation between those who can pay and those who cannot
- g) A focus on the capacity and operation of an integrated District Health System, i.e. primary care (including community and household-based care and facility-based care) up to the first referral level.
- h) Specific attention to operational policies that address issues systemically.
- i) Ensuring that disease-specific initiatives strengthen rather than undermine health systems.

### 2. Human resources for health are in crisis. Solutions must be conceptualized globally as well as locally.

*Progress will require:*

- a) International institutions -- including trade, immigration and labor policy bodies and regulatory regimes – to be part of the solution.
- b) Prioritization on building a strong cadre of nurses and midwives with good preservice training and clear career paths.
- c) Rich country cooperation in reversal of brain drain from poor countries.
- d) Priority attention to a review of job descriptions and upskilling to ensure policies designed to provide the widest possible coverage (including in rural areas) by personnel who can provide services safely and effectively.

### 3. Sexual and reproductive health and rights (SRHR) are essential to meeting all the MDGs, including MDGs 4 and 5 on child health and maternal health.

*Progress will require:*

- a) MDG strategies include the internationally agreed target of universal access to reproductive health services through the primary care system, together with appropriate indicators reflecting progress toward reducing unmet need for contraception.

- b) Initiatives addressing the HIV/AIDS pandemic, including the Global Fund and WHO's new 3x5 strategy, be explicitly linked to SRHR programs, particularly those providing contraceptive and STI services, and sexuality information and education.
- c) Adolescents receive special attention with services sensitive to their increased vulnerabilities and designed to meet their particular needs.

**4. Maternal Mortality strategies must focus on building a functioning health system that provides access to emergency obstetric care and that supports, supervises and supplies the skilled attendants (health professionals with midwifery skills).**

*Progress will require:*

- a) Strategies to ensure skilled attendants for all deliveries must be premised on integration of the skilled attendant into a strengthened health system.
- b) Appropriate allocation of responsibility to different categories of health workers, within a supportive supervision system.
- c) Monitoring of the health systems dimension: availability and utilization of EmOC should be added as an indicator for the maternal health MDG

**5. Strategies to address neonatal mortality are critical for reducing child mortality. Such strategies can and should be linked to strategies to address maternal mortality, but do not substitute for them.**

*Progress will require:*

- a) For averting both neonatal and maternal mortality, a goal of having a skilled attendant at every birth and access (through referral mechanisms) to a health system that can treat both newborn and obstetric emergencies.
- b) A staged strategy recognizing that a substantial proportion of newborn deaths averted by actions that can safely and effectively be performed by community-based health workers.

**6. Poverty reduction processes and funding mechanisms -- including PRSPs, MTEFs, SWAps, and the Global Fund -- must support and promote the above recommendations.**

*Progress will require:*

- a) PRSPs address disparities in health and health care.
- b) Operational policies be specified.
- c) The potential introduction of a health system impact statement

**7. Developments in the system of global governance – especially the World Trade Organization and the TRIPS and GATS agreements – must support and promote the above recommendations and do not undermine them.**

**8. The equitable participation of communities, of civil society organizations, and of individuals in the operation of health systems and the process of health policymaking will be critical to their success and to the fulfillment of basic human rights.**

- 9. Ministries of Finance and Planning, as well as international and bilateral donors, must recognize and address health as an important aspect of human and social development as well as a crucial factor in economic growth.**

*Progress will require:*

- a) MDGs 4 and 5 on child health and maternal health be seen as essential elements of poverty reduction strategies.
- b) Political will and vastly increased resources be committed and international and national levels
- c) Donors and ministries work to align poverty-focused planning mechanisms (PRSPs, etc) with the priorities set forth in this report.

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