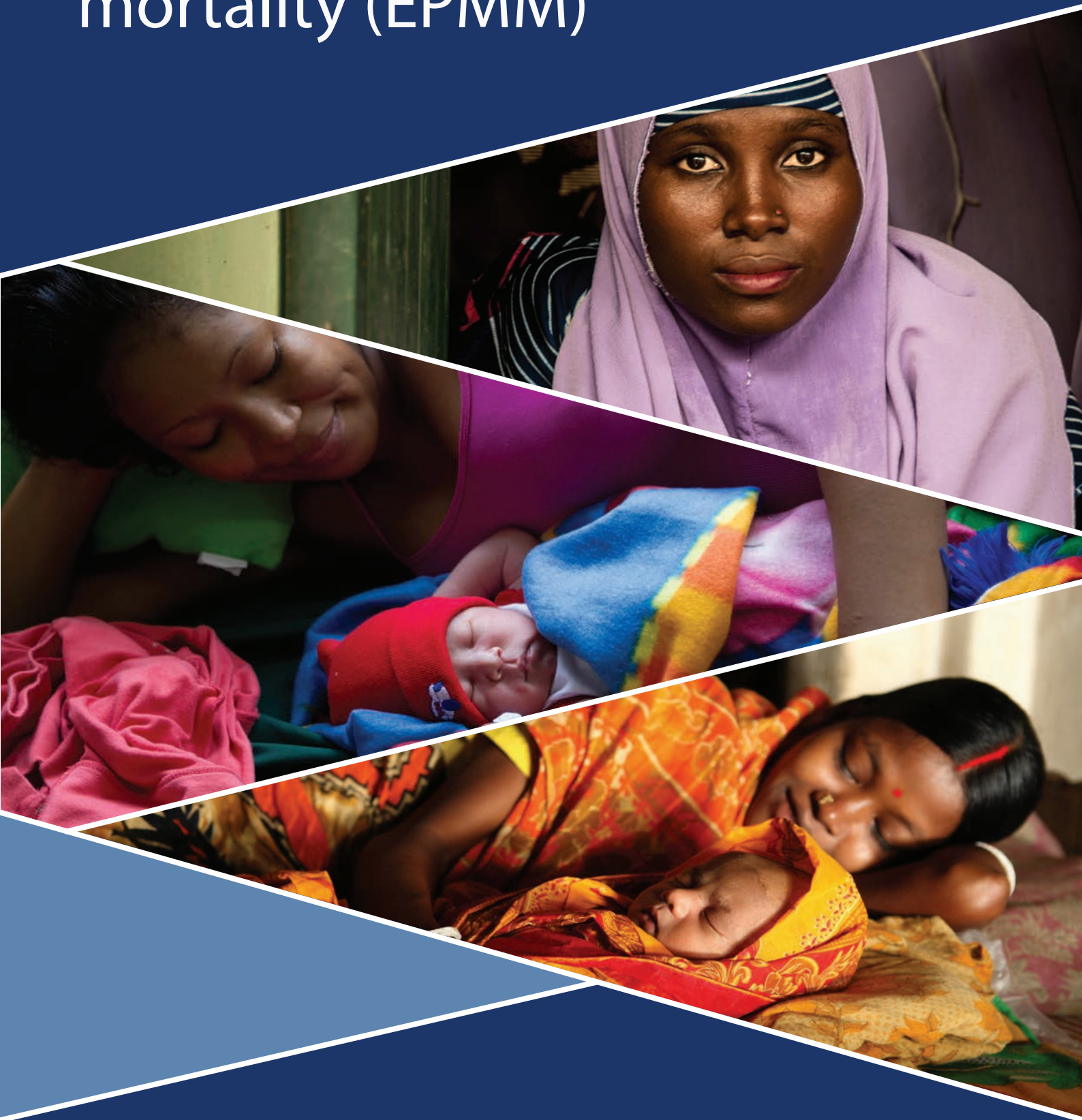


Strategies toward ending preventable maternal mortality (EPMM)



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World Health Organization



UNDP-UNFPA-UNICEF-WHO-WORLD BANK



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Abbreviations

AAAQ	availability, accessibility, acceptability and quality of services
AMDD	Averting Maternal Death and Disability program
ARR	annual rate of reduction
CEDAW	Committee on the Elimination of Discrimination against Woman
ENAP	Every Newborn Action Plan
EPMM	eliminating ending preventable maternal mortality
GFF	Global Financing Facility
HIV	human immunodeficiency virus
HRC	United Nations Human Rights Council
HRP	Human Resource Planning
IHI	Institute for Healthcare Improvement
MCHIP	Maternal and Child Health Integrated Program
MDG	Millennium Development Goal
MDSR	maternal death surveillance and response
MHTF	Maternal Health Task Force
MMR	maternal mortality ratio
OHCHR	Office of the High Commissioner for Human Rights
PMNCH	Partnership for Maternal, Newborn and Child Health
RHR	Reproductive Health and Research
SRMNAH	sexual, reproductive, maternal, newborn, child, and adolescent health
UHC	universal health coverage
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	US Agency for International Development
WASH	water, sanitation and hygiene
WHO	World Health Organization

Introduction

As the 2015 target date for the Millennium Development Goals (MDGs) nears, ending preventable maternal mortality (EPMM) remains an unfinished agenda and one of the world's most critical challenges despite significant progress over the past decade. Although maternal deaths worldwide have decreased by 45% since 1990, 800 women still die each day from largely preventable causes before, during, and after the time of giving birth. Ninety-nine per cent of preventable maternal deaths occur in low- and middle-income countries (1). Within countries, the risk of death is disproportionately high among the most vulnerable segments of society. Maternal health, wellbeing and survival must remain a central goal and an investment priority in the post-2015 framework for sustainable development to ensure that progress continues and accelerates, with a focus on reducing inequities and discrimination. Attention to maternal mortality and morbidity must be accompanied by improvements along the continuum of care for women and children, including commitments to sexual and reproductive health and newborn and child survival.

The time is now to mobilize global, regional, national and community-level commitment for EPMM. Analysis suggests that "a grand convergence" is within our reach, when through concerted efforts we can eliminate wide disparities in current maternal mortality and reduce the highest levels of maternal deaths worldwide (both within and between countries) to the rates now observed in the best-performing middle-income countries (2). To do so would be a great achievement for global equity and reflect a shared commitment to a human rights framework for health.

High-functioning maternal health programmes require awareness of a changing epidemiological landscape in which the primary causes of maternal death shift as maternal mortality ratios (MMRs) decline, described as "obstetric transition"(3). Strategies to reduce maternal mortality must take into account changing patterns of fertility and causes of death. The ability to count every maternal and newborn death is essential for understanding immediate and underlying causes of these deaths and developing evidence-informed, context-specific programme interventions to avert future deaths.

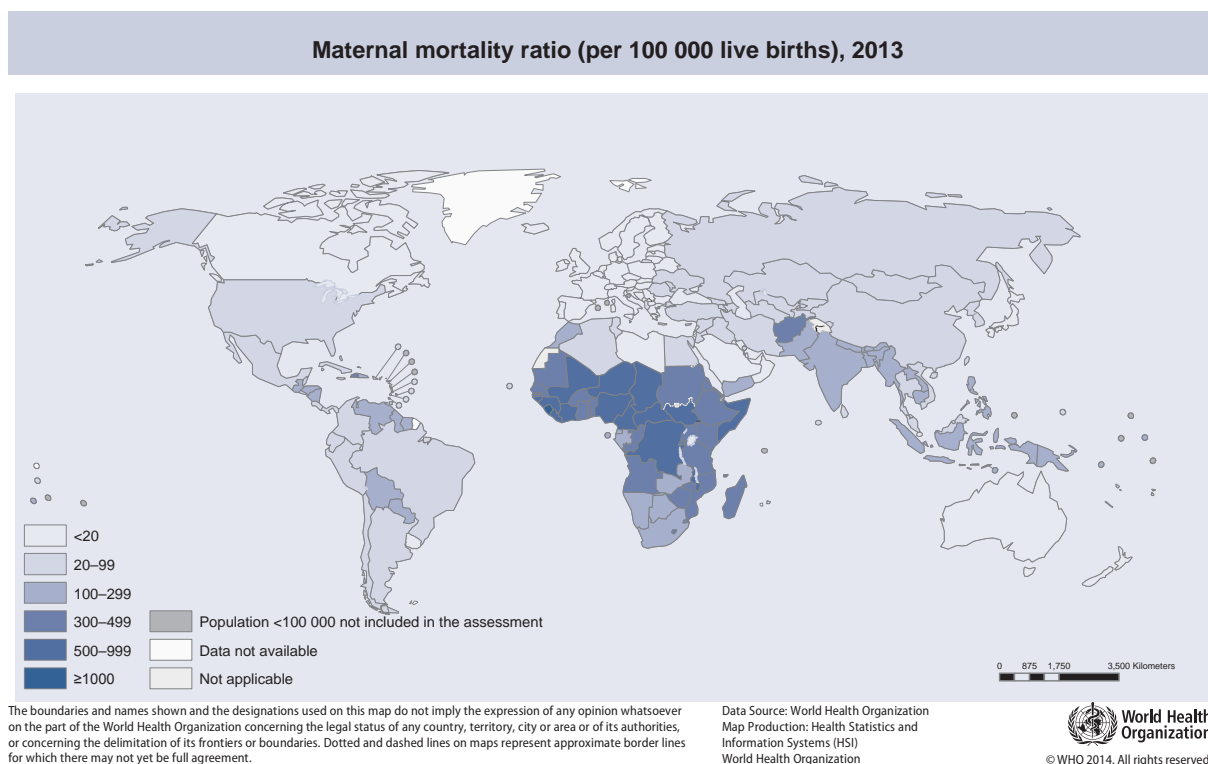
The EPMM targets and strategies are grounded in a human rights approach to maternal and newborn health, and focus on eliminating significant inequities that lead to disparities in access, quality and outcomes of care within and between countries. Concrete political commitments and financial investments by country governments and development partners are necessary to meet the targets and carry out the strategies for EPMM.

Background

Lessons learned: successes and challenges

MDG 5a calls for a 75% decrease in MMR from 1990 to 2015. By 2013, a 45% reduction was achieved (from 380 deaths/100 000 live births in 1990 to 210 deaths/100 000 live births), showing significant progress but still falling far short of the global goal.

FIGURE 1: Maternal mortality ratio (MMR, per 100 000 live births stratified by MMR level) (4)



To achieve the MDG target, each country was required to maintain an average annual rate of reduction (ARR) in MMR of 5.5%. Instead, the average ARR among countries between 1990 and 2013 was only 2.6%. However, countries showed that with commitment and effort, they could accelerate the pace of progress: the average ARR increased to 4.1% during 2000–2010 from just 1.1% during 1990–2000. Moreover, 19 countries sustained an average ARR of over 5.5% for every year from 1990 to 2013; the highest average ARR ranged from 8.1% to 13.2% (4).

MDG 5b calls for universal access to reproductive health for all women by 2015, as measured by antenatal care coverage, contraceptive prevalence, unmet family planning need and adolescent birth rates. As of 2014, although gains were made in each category, insufficient and greatly uneven progress was measured by each of these indicators (5). Far more work is needed to ensure that all women receive basic preventive and primary reproductive health care services, including preconception and interconception care, comprehensive sexuality education, family planning and contraception, as well as adequate skilled care during pregnancy, childbirth and

the postpartum period. Further attention is needed to develop valid metrics and improve data quality to measure access to reproductive health for women and girls.

The MDGs mobilized resources as well as political will in countries, and made global commitments to improve sexual and reproductive health, and maternal and child survival to an unprecedented degree. They demonstrated that shared global goals, targets and strategies could galvanize the concerted effort needed to achieve measurable progress. Low- and middle-income countries that have made rapid progress toward achieving MDG 5 used unique strategies tailored to local needs and contexts. They all used multisector approaches and catalytic strategies to translate evidence into strong programming based on clearly articulated guiding principles (6). The progress made has brought the “grand convergence” of health outcomes into view, making it possible to envision a world in which low-, middle- and high-income countries have comparable rates of maternal mortality (2).

At the same time, there are significant lessons to be learned. The MDG framework has been criticized for giving rise to a fragmented approach to health planning that has not encouraged intersectoral collaboration or programme integration to improve coordination, innovation and efficiency. Furthermore, the MDGs paid insufficient attention to development principles, such as human rights, equity, poverty reduction, empowerment of women and girls and gender equality. The focus on national averages may have resulted in prioritization of conditions and populations that were most easy to address rather than elimination of health disparities among vulnerable subgroups (7).

Way forward

The changing trends in population demographics and the global disease burden will impact maternal risk and influence the strategies that countries implement to end preventable maternal deaths.

The “obstetric transition” concept was adapted from classic models of epidemiologic transitions experienced as countries progress along a trajectory towards development. Applied to maternal and newborn health care, countries pass through a series of stages that reflect health system status and the shift in primary causes of death as reductions in the rate of maternal mortality are achieved. In theory, as development progresses, bringing declines in fertility and overall maternal mortality, the causes of death shift from direct causes and communicable diseases to a greater proportion of deaths from indirect causes and chronic diseases (3). In practice, this shift is observable in recent estimates of global maternal causes of death (8). Different primary causes of death require different strategies and interventions. The stages described in the obstetric transition model can provide guidance on the most urgent health priorities and focal areas for improvement at various levels of MMR. Improved understanding of the causes of death in each context through maternal death surveillance and response (MDSR), confidential enquires, and other methods for counting every death will provide more information to plan targeted interventions.

An important corollary to this model is the need for dynamic planning that both accounts for immediate priorities and projects future needs as countries move toward EPMM. Countries with very high MMR would need to focus strategies on family planning, tackling direct causes

of maternal mortality, and improving basic social and health system infrastructure and minimum quality of care. Countries with lower MMR face a different set of primary risks and health system challenges; their strategies must shift to address noncommunicable diseases and other indirect causes, social determinants of poor health, humanization of care, and the over-use of interventions. Countries in the middle MMR ranges face simultaneous challenges of infectious and noncommunicable conditions that have an impact on maternal health and survival. While equity is an important concern at all levels, as average mortality rates fall, special attention must be laid on eliminating disparities among vulnerable subgroups.

Therefore, EPMM must have a framework that is specific to offer real guidance for strategic planning by policy makers and programme planners, yet flexible to be meaningfully interpreted and adapted for maximal effectiveness in the various country contexts in which it must be implemented. An intensive consultative process has informed the development of EPMM targets and strategies to fulfill this objective (see Annex 1).

Box 1: Population dynamics

Changing demographics will have significant implications for programme planning and service delivery in the decades to come. The population influx into cities and increased number of people living in urban slums may well change how people demand and access health services. Increase in people around the world moving to cities resulted in 55 million new slum dwellers globally since 2000. These are shifting needs that pose a challenge for country planners and health systems. According to UN Habitat statistics, sub-Saharan Africa has a slum population of 199.5 million, South Asia 190.7 million, East Asia 189.6 million, Latin America and the Caribbean 110.7 million, Southeast Asia 88.9 million, West Asia 35 million and North Africa 11.8 million (9).

Factors such as rapid urbanization, political unrest in conflict areas, changes in fertility rates, or growing numbers of institutional births change the panorama of maternal risk and call for reappraisal of a country's maternal health strategy and programme priorities. Privatization and decentralization of health care delivery systems are responses to changing population dynamics whose effects must be studied (10). Countries need tools to identify current programme priorities based on the most frequent direct causes and determinants of maternal death in their context. Immediate, medium term and long range planning are needed to project health system infrastructure, commodities and maternity care workforce that can meet these evolving needs, along with a rational framework for their allocation. A single maternal health strategy will not be adequate for every country, or within each country over time and for all subpopulations.

Targets for maternal mortality reduction post-2015

Maternal health stakeholders strongly support the continued need for a specific target for maternal mortality reduction in the post-2015 development framework, with the ultimate goal of ending all preventable maternal deaths. To achieve this goal, progress needs to be accelerated as well as concerted national/global efforts and global targets are needed to reduce disparities in maternal mortality between countries. Within countries, national targets and plans must also address disparities among subgroups to help achieve both national and global equity, and a “grand convergence” in maternal survival.

Global targets to increase equity in global MMR reduction

By 2030, *all* countries should reduce MMR by at least two thirds of their 2010 baseline level. The average **global target** is an MMR of less than 70/100 000 live births by 2030. The **supplementary national target** is that no country should have an MMR greater than 140/100 000 live births (a number twice the global target) by 2030.

Achieving the above post-2015 global target will require an average global ARR in MMR of 5.5%, similar to the current MDG 5a target. To achieve the global target all countries must contribute to the global average by reducing their own MMR from the estimated 2010 levels (based on forthcoming maternal mortality estimates 1990–2015 developed by the Maternal Mortality Estimation Inter-Agency Group (MMEIG)).

Intensified action is called for in countries with the highest MMRs who will need to reduce their MMR at an ARR that is steeper than 5.5%. However, the secondary target is an important mechanism for reducing extremes of between-country inequity in global maternal survival. Countries with the lowest MMRs find it difficult to achieve a two third reduction from the baseline. It is recognized that when the absolute number of maternal deaths is very small, differences become statistically meaningless, hampering comparisons. However, even in these countries, there are likely to be subpopulations with high risk of maternal death, and thus achieving within-country equity in maternal survival would be an important goal.

These targets while ambitious are feasible given the evidence of progress achieved over the past 20 years. They will focus attention on maternal mortality reduction and maternal and newborn health as critical components of the post-2015 development agenda. The process for setting these targets and the choice of indicators are articulated elsewhere (11,12).

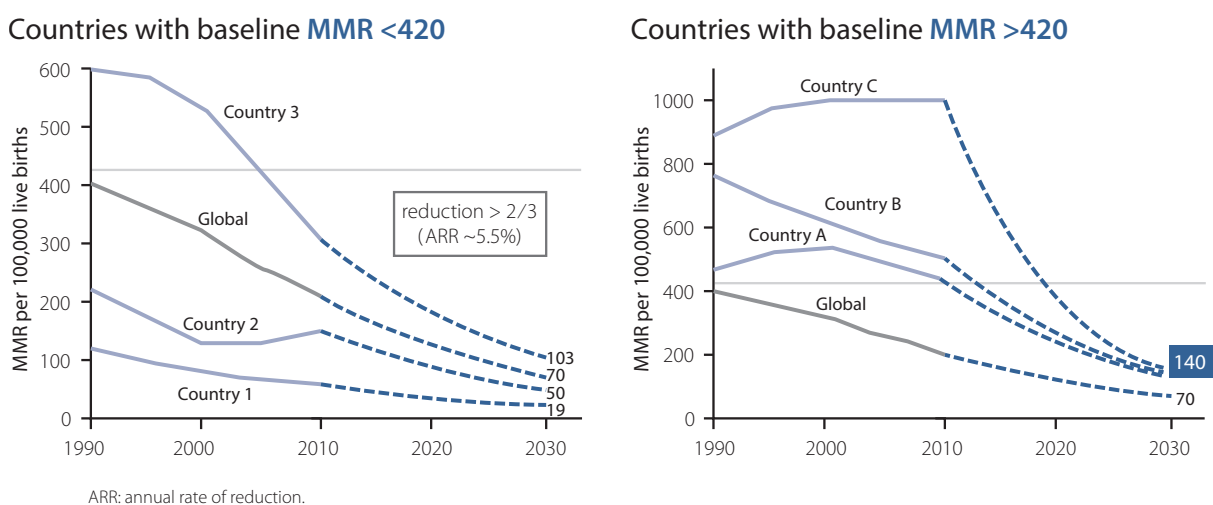
Country targets to increase equity in global MMR reduction

To prioritize equity at the country level, expanded and improved equity measures should be developed to accurately track efforts to eliminate disparities in MMR between subpopulations within all countries.

Country targets: The MMR target of less than 70 by 2030 applies at the global level but not necessarily for individual countries. The following sets of national targets are recommended (Figure 2).

- **For countries with MMR less than 420 in 2010** (the majority of countries worldwide): reduce the MMR by at least two thirds from the 2010 baseline by 2030.
- **For all countries with baseline MMR greater than 420 in 2010:** the rate of decline should be steeper so that in 2030, no country has an MMR greater than 140.
- **For all countries with low baseline MMR in 2010:** achieve equity in MMR for vulnerable populations at the subnational level.

FIGURE 2: MMR reduction at country level



Target-setting is accompanied by **the need for improved measurement approaches and data quality to allow more accurate tracking of country progress as well as causes of death.** To contextualize the targets and allow collaborative strategic planning and best practice sharing at the regional level, it may be appropriate, in some regions, to define more ambitious targets.

Establishment of an interim milestone to track progress toward the ultimate MMR target

To help countries monitor progress toward individual national targets for 2030 and evaluate the effectiveness of their chosen mortality reduction strategies, a major interim milestone is proposed for 2020. This will be set based on the final 2015 MMR estimates, which will determine the 2010 baseline MMR for the post-2015 targets at both the global and national levels.

Strategic framework for policy and programme planning to achieve MMR targets

Laying the foundation for the strategic framework

The contribution of maternal, newborn and child health for sustainable development

EPMM is a pillar of sustainable development, considering the critical role of women in families, economies, societies, and in the development of future generations and communities. Investing in maternal and child health will secure substantial social and economic returns. A recent analysis suggests that increasing health expenditure by just US\$ 5 per person per year through 2035 in the 74 countries that account for the bulk of maternal and child mortality could yield up to nine times that value in social and economic benefits (13).

Focusing on implementation effectiveness as the foundation for a paradigm shift

A paradigm shift for the next maternal health agenda rests on a strong foundation of implementation effectiveness, which marries a well-considered strategic policy framework with a ground-up focus on implementation performance that accounts for contextual factors, health system dynamics and social determinants of health.

Effective care for women and girls, as well as mothers and newborn must draw upon intersectoral collaboration and cooperation at every stage, given the vital linkages between MMR and a country's water, sanitation and hygiene (WASH) systems, transportation and communication infrastructure, and educational, legal and finance systems. It must be responsive to local conditions, strengths and barriers, and address implementation needs and challenges from the ground up. Programme planning must be people-centric, i.e. driven by people's aspirations, experiences, choice and perceptions of quality (14). Care services must be based on respect for women's and girls' agency, autonomy, and choice.

Effective programme planning must be wellness-focused and population-based, providing supportive primary and preventive care to the majority of women who are essentially healthy so that they can experience planned, uncomplicated pregnancies and births, while ensuring that high risk pregnancies and complications are recognized early, and interventions when indicated are undertaken in an appropriate and timely manner. Care must therefore emphasize the framework of availability, accessibility, acceptability and quality of services (AAAQ), as well as other human rights standards, such as participation, information and accountability, which are ensured through cultivation of a robust enabling environment.

Effective service delivery integrates the delivery of key interventions across the sexual, reproductive, maternal, newborn, child and adolescent health (SRMNCAH) spectrum whenever possible, to lower costs while increasing efficiencies and reducing duplication of services (15). At the same

time it will meet the health and social needs of women and communities, and support the goal of people-centric health care. Reproductive and maternal health policy makers and planners must prioritize adequate resources and effective health care financing, while ensuring that service delivery is cost-efficient.

To be effective for every woman, mother and newborn, SRMNCAH care must adopt a rights-based approach to planning and implementation, situating health care within a broader framework of equity, transparency and accountability, including mechanisms for participation, monitoring and redress. Furthermore, improved metrics, measurement systems and data quality are needed to ensure that all maternal and newborn deaths and stillbirths are counted, and that other important processes, structures and outcome indicators of AAAQ are tracked.

Guiding principles, cross-cutting actions and strategic objectives for policy and programme planning

The following strategic framework reflects the contributions and support of a wide stakeholder base, under which key interventions and measures of success must be developed.

Box 2: Ultimate goal of EPMM

Guiding principles for EPMM

- Empower women, girls and communities.
- Protect and support the mother–baby dyad.
- Ensure country ownership, leadership and supportive legal, regulatory and financial frameworks.
- Apply a human rights framework to ensure that high-quality reproductive, maternal and newborn health care is available, accessible and acceptable to all who need it.

Cross-cutting actions for EPMM

- Improve metrics, measurement systems and data quality to ensure that all maternal and newborn deaths are counted.
- Allocate adequate resources and effective health care financing.

Five strategic objectives for EPMM

- Address inequities in access to and quality of sexual, reproductive, maternal and newborn health care.
- Ensure universal health coverage for comprehensive sexual, reproductive, maternal and newborn health care.
- Address all causes of maternal mortality, reproductive and maternal morbidities, and related disabilities.
- Strengthen health systems to respond to the needs and priorities of women and girls.
- Ensure accountability to improve quality of care and equity.

Guiding principles for EPMM

Empower women, girls, families and communities

Prioritizing the survival and health of women and girls requires recognition of their high value within society through attention to gender equality and empowerment. This includes strategies to ensure equal access to resources, education (including comprehensive sexuality education), and information, and focused efforts to eliminate gender-based violence and discrimination, including disrespect and abuse of women using health care services. Gender-based violence is widespread around the world and affects the reproductive health of women and girls throughout their lives. Its adverse consequences include unwanted pregnancies, pregnancy complications including low birth weight and miscarriage, injury and maternal death, and sexually transmitted infections, such as human immunodeficiency virus infection (HIV) (16).

Strategies for empowering women in the context of their reproductive and maternal health care must ensure that they not only have the power of decision making but also the availability of options that allows them to exercise their choices. Achieving substantive equality calls for governments to address structural, historical and social determinants of health and gender discrimination, including economic inequality and workplace discrimination, and to ensure equal outcomes for women and girls (17,18). Evidence shows that when girls exercise their rights to delay marriage and childbearing and choose to advance in school, maternal mortality goes down for each additional year of study they complete (19,20). These and other interventions that develop women's capacity to care for and choose for themselves contribute to empowerment, which includes autonomy over their own reproductive lives and health care decisions, access to health care services and options, and the ability to influence the quality of services through participatory mechanisms and social accountability. Supporting women's ability and entitlement to make active decisions also positively influences the health of their children and families.

People are empowered to participate in and influence how the health system works when they are included as true partners in accountability mechanisms, and when participatory processes are instituted for identifying factors that affect women and girls seeking care. Numerous studies have also shown that engaging men and boys as supporters and change-agents can improve the health of families and entire communities (21). In addition to education, information and traditional or social media campaigns, these critical dimensions of a framework for empowerment, can help change social norms in families and communities.

Integrate maternal and newborn care, protect and support the mother–baby relationship

The health outcomes for mothers and their newborn and children are inextricably linked; maternal deaths and morbidities impact newborn and child survival, growth and development (22). Therefore, an integral part of the framework is to protect and support the mother–baby relationship and to encourage the integration of strategies and service delivery for both, including linkage of vital registration data collected for mothers and their newborn and prevention of mother-to-child transmission of HIV. In effect, any policy or programme that focuses on either

maternal or newborn health should include consideration of the other. This is the principle of “survival convergence” (23).

It is important to recognize the special significance of the mother–baby relationship. Newborn health outcomes are enhanced when necessary care is provided without separation of the baby from its mother. Such integration of care is also more acceptable to women and families, and efficient for the health system. Maternal and newborn health services should be delivered together whenever this can be done without compromising quality of care for either.

Prioritize country ownership, leadership and supportive legal, regulatory and financial mechanisms

The strategic framework for maternal and newborn health prioritizes country ownership, leadership, and supportive legal, regulatory and financial frameworks to ensure that strategies for EPMM transcend policy and translate into action within countries. A key focus of this principle is good governance and effective stewardship of the full array of political tools, social capital and financial resources available to support and enable a high-performing health system. Transparent, publicly available information on maternal health budgets and policies is needed to promote accountability and deter corruption.

Country ownership applies to leaders and policy makers, and also extends to civil society through community input and participation. Community engagement and mobilization are enhanced through social accountability mechanisms that encourage women and communities to participate in the system and play their part to ensure that maternal and newborn health care is AAAQ, and is organized to respond to their health needs as well as their values and preferences (24).

Strong leadership encourages an enabling environment to facilitates policies and financial commitments by country leaders, and also development partners and funders. Strong leadership is also critical to champion global and country MMR targets, enable all countries to make continuous progress through the stages of the obstetric transition, and develop and maintain health care systems that can reliably and equitably deliver the necessary care to end preventable maternal deaths.

Supportive legal mechanisms include laws and policies that uphold human rights in the context of maternal health care, laws that guarantee access to comprehensive maternal health care and provide for universal health coverage (UHC), mechanisms for legal redress for those harmed, abused or abandoned in the course of seeking care, as well as supportive employment laws and frameworks for legal licensure of the maternity care workforce within the jurisdictions where they are needed (25–28). Supportive legal mechanisms also extend beyond the arena of health care service organization and delivery to include laws that address gender discrimination and empower women and girls, for example, by prohibiting early marriage.

Supportive regulatory mechanisms enable effective human resources management of the necessary workforce, such as regulation of midwives, nurses and doctors, and guide task sharing with the goal of increasing timely access to quality care including interventions for prevention and management of complications. The collection of vital statistics and improved data on causes of maternal and newborn deaths and stillbirths through MDSR can also be supported through facilitative regulatory mechanisms.

Supportive financial mechanisms aimed at achieving UHC include conditional cash transfers, voucher programmes, various forms of insurance and performance-based incentives. Supportive financial mechanisms can also refer to donor harmonization and efforts by donors to ensure that funding does not impose structural barriers to the achievement of important outcomes not readily measured within short funding cycles or along vertical technical and programme lines.

Apply a human rights framework to ensure that high-quality sexual, reproductive, maternal and newborn health care is available, accessible and acceptable to all who need it

The Office of the High Commissioner for Human Rights (OHCHR) supports the various human rights monitoring mechanisms within the UN system. These treaty-monitoring bodies have consistently viewed maternal mortality as a human rights issue. The Committee on the Elimination of Discrimination against Woman (CEDAW), the Human Rights Committee and the Committee on the Rights of the Child have each explicitly interpreted the right to life to include an obligation to prevent and address maternal mortality (29–31). CEDAW has affirmed that an important indicator of states' realization of women's rights is whether they ensure equality of health results for women – including lowering of maternal mortality rate (32). Treaty monitoring bodies have also highlighted the prevention of maternal mortality and the provision of maternal health services within state obligations to fulfill the right to health (33,34). The Committee on Economic, Social and Cultural Rights has explicitly indicated that states' obligations to ensure maternal health care for women – which includes pre-natal and post-natal care – is a core obligation under the right to health (35). Treaty monitoring bodies have also linked elevated rates of maternal mortality to lack of comprehensive reproductive health services (36), restrictive abortion laws (37), unsafe or illegal abortion (38,39), adolescent childbearing (40), child and forced marriage (41) and inadequate access to contraceptives (42).

The United Nations Human Rights Council (HRC) has also recognized high rates of maternal mortality and morbidity as unacceptable and a violation of human rights. Its resolution emphasizes that maternal mortality is not solely a health and development issue, but also a manifestation of various forms of discrimination against women (26). International human rights standards require governments to take steps to “improve child and maternal health, sexual and reproductive health services, including access to family planning, pre- and post-natal care, emergency obstetric services and access to information, as well as to resources necessary to act on that information”. Where resources are limited, states are expected to prioritize certain key interventions, including those that will help guarantee maternal health and in particular emergency obstetric care (43).

However, a human rights approach to maternal and newborn health extends beyond the provision of services to embrace a broader application of rights-based principles aimed at protecting and supporting the health of populations. The OHCHR in its guidance for addressing maternal mortality and morbidity using a rights-based approach includes empowerment, participation, non-discrimination, transparency, sustainability, accountability and international assistance as fundamental principles. Furthermore, this OHCHR guidance specifically highlights enhancing the status of women, ensuring sexual and reproductive health rights including addressing unsafe abortion, strengthening health systems and improving monitoring and evaluation as necessary elements of a rights-based strategic framework for reducing maternal mortality and morbidity (44).

As it becomes possible to envision an end to preventable maternal and newborn deaths, the scope of strategic planning must move beyond focusing solely on prevention of worst outcomes for 'women at highest risk' towards supporting and encouraging optimal outcomes for 'all women'. Thus, the topmost priorities of a health agenda for a sustainable future must include educating and empowering women and girls, gender equality, poverty reduction, universal coverage and access, and equity within the overall context of a rights-based approach to health and health care. This re-orientation towards optimal health for all requires a fundamental paradigm shift.

Cross-cutting actions for EPMM

Improve metrics, measurement systems and data quality

A key aim of improving measurement systems is to ensure that all maternal and newborn deaths are counted. Only an estimated one third of countries have the capacity to count or register maternal deaths (45). Less than two fifths of all countries have a complete civil registration system with accurate attribution of the cause of death, which is necessary for the accurate measurement of maternal mortality (4). In 2011, only two of the 49 UN least developed countries had over 50% coverage of death registration (46).

Today, estimation is necessary to infer MMRs in many countries where little or no data are available; unfortunately, these countries are the very ones where mortality and severe morbidity are often highest due to weak health infrastructure. Because countries around the world do not use standardized instruments and indicators to track maternal mortality, estimation must presently be used to make international comparisons and measure progress towards global targets. Estimates that are adjusted using models that allow comparability and make up for missing data yield different point estimates than countries' own data sources, which causes confusion and consternation.

A cross-cutting priority for the post-2015 strategy is to move towards counting every maternal and perinatal death through the establishment of effective national registration and vital statistics systems in every country, as articulated within the recommendations of the Commission for Information and Accountability (28). This will require implementation of a revised standard international death certificate that clearly identifies deaths in women of reproductive age and their relationship to pregnancy, and standard birth and perinatal death certificates (stillbirths and newborn deaths up to 28 days of age). Ideally, these registries should link the data of mothers and their newborns. Standard definitions (with standardized numerators and denominators) for coding and reporting maternal deaths and indirect obstetric deaths must be used both within and across countries for an accurate understanding of the causes of death and to allow valid comparisons; thus all countries should adopt definitions that are consistent with the current International Classification of Diseases manual. The World Health Organization (WHO) has clarified the application of these definitions to deaths during pregnancy, childbirth and the puerperium (47). MDSR and similar perinatal death surveillance, including confidential inquiries and collection of quality of care data on near misses and severe morbidities are also important mechanisms for ensuring that every death is counted.

There are other equally important uses for improved metrics and measurement systems, including for the purpose of accountability to track equity and to ensure programme effectiveness. Indicators for equity that need to be developed should not overburden data collection systems, specifically at facility level. Agreement on programme coverage indicators is needed to measure quality and effectiveness of care (48); these data could be used also for accountability, e.g. through auditing and feedback. In addition to standardized data sources, indicators and intervals for data collection to allow for better global comparisons, and the local use of data for ensuring quality of care and health system accountability in clinical programmes are important

components of programme effectiveness. New technologies for data collection (e.g. mapping, mobile phones) with shown effectiveness could also speed up data collection to allow effective, real-time use.

Prioritize adequate resources and effective health care financing

The imperative to prioritize adequate and sustainable resources for maternal and newborn health refers both to development partners and donors in the global community, and to political leaders and financial decision makers in countries. It encompasses adequate budgetary allocation through specific, transparent budget lines for maternal and newborn health. It includes health care financing for UHC as well as innovative financing mechanisms and incentives to ensure equity, increase coverage and improve quality. Intersectoral collaboration beyond the health sector is a critical success factor for EPMM. Close partnership with the financial sector is a vital component of intersectoral collaboration, and must include both public and private national health care players, ministries of finance, and private as well as bilateral global development partners and donors.

A multistakeholder financing group led by The World Bank has issued a concept note for a Global Financing Facility (GFF) for SRMNCAH from 2015 to 2030. Elaborating on analyses published in two recent reports (13,49), the GFF lays out a framework for achieving the aforementioned “grand convergence” between low- and high-income countries for these health outcomes by 2030. The framework projects domestic contributions and estimates the gap financing needed by donors to achieve high coverage for SRMNCAH by 2030 in the 75 countries in which 98% of maternal and newborn deaths occur (50). According to this framework, low- and middle-income countries should allocate at least 3% of their gross domestic product to general government health expenditures of which at least 25% (and up to 50%) should be allocated to SRMNCAH. Global funders should make up the funding gap, which is estimated to range from US\$ 5.24 per person in 2015 to US\$ 1.23 per person in 2030 (51).

Budget transparency, assured through budget monitoring, analysis and advocacy, is an important way for civil society beneficiaries to verify that policy commitments made are in fact fulfilled. A human rights approach to monitoring maternal health budgets ensures that policy decisions, including allocation of financial resources, are carried out on the basis of transparency, accountability, non-discrimination and participation (52). The Commission on Information and Accountability for Women’s and Children’s Health recommends that countries track and report at least two indicators:

- (i) total health expenditure by financing source, per capita; and
- (ii) total reproductive, maternal, newborn and child health expenditure by financing source, per capita (28).

Effective health care financing includes exploration of financial incentives and other economic measures for improving AAAQ to women, families and communities. While some financial incentives have been shown to increase the utilization of maternal and newborn health services and offer promise in their ability to improve quality and equity, some have had unintended adverse effects and more studies are needed to ascertain the full impact of financial incentives on maternal health outcomes (53).

Box 3: Rationale and scope of strategic objectives for EPMM

Progress toward EPMM necessitates a comprehensive approach along the continuum of care for each pregnancy and throughout each woman's reproductive years. The approach should address not only the causes of maternal death, but also the social and economic determinants of health and survival.

It calls for a system-level shift from maternal and newborn care that is primarily focused on identification and treatment of pathology for the minority, to skilled and wellness-focused care for all. This includes preventive and supportive care to: strengthen women's own capabilities in the context of respectful relationships, be responsive to their needs, focus on promotion of normal reproductive processes, provide first-line management of complications and accessible emergency treatment when needed. This approach requires effective interdisciplinary teamwork and integration across facility and community settings. Findings of a new Lancet special series suggest that midwifery is central to this approach (54).

The comprehensive maternal health strategic framework presented here for inclusion in the post-2015 sustainable development agenda applies across the full continuum of health care that is relevant to the goal of ending preventable maternal and newborn mortality, and maximizing the potential of every woman and newborn to enjoy the highest achievable level of health. This includes sexual, reproductive, maternal and newborn health care, and comprises adolescent health, family planning and attention to the infectious and chronic noncommunicable diseases that contribute directly and indirectly to maternal mortality.

Furthermore, the human rights approach that is a fundamental guiding principle of this strategic framework extends beyond solely the organization and provision of clinical services to include focused attention to broader human rights issues that contribute to the social determinants of health, such as the status of women and gender equality, poverty reduction, universal coverage and access, as well as non-discrimination and equity.

This strategic framework is intended to provide meaningful and useful guidance to inform programme planning for EPMM and optimal maternal and newborn health. Given the reality of finite resources and limited capacities, not every desired intervention can be undertaken immediately, and some interventions will be more effective than others. Thus, decision makers have to make rational choices about priorities and phasing, bearing in mind the human rights principle of progressive realization – the obligation to do everything that is immediately possible given the constraints of limited resources. The principle of progressive realization also outlines obligations that are immediate regardless of resources, for example, the immediate obligation to take action to eliminate discrimination.

The key interventions for EPMM are known; thus the post-2015 maternal health strategy is not a list of prescribed technical interventions. Countries must now go beyond doing the right things to do things right. Alongside effective clinical interventions, it is important to pay attention to the non-clinical aspects of respectful maternity care. The development of health systems that can deliver the correct interventions both effectively and equitably, with reliable high quality under conditions that are dynamic is a priority. Moreover, a firm grounding in implementation effectiveness is important, since programme priorities are

subject to change as countries move through stages in their transition to lower levels of maternal mortality.

The strategic framework for EPMM is intentionally non-prescriptive. It offers broad strategic objectives rather than a detailed list of clinical interventions; interventions and measures of success must be tailored to the country and selected based upon local context including epidemiology, geography, health systems capacity and available resources. Each strategic objective includes illustrative examples of global best practices that need to be adapted, adopted and monitored to ensure that they are effective in context. Thus, the strategy emphasizes the importance of short term, medium term and long range programme planning to achieve and maintain high-performing systems that can deliver improved outcomes.

Elaboration of the five strategic objectives to guide programme planning towards EPMM

1. Address inequities in access to and quality of sexual, reproductive, maternal and newborn health care

All countries should increase efforts to reach vulnerable populations with high-quality primary and emergency SRMNCAH services. Disparities in access to and quality of health care exist wherever there is a factor (such as wealth, geography, gender, ethnicity, class, caste, race, religion) that places some people at a social disadvantage relative to others and puts them at risk for stigma, discrimination and unequal treatment. In the context of reproductive, maternal and newborn health it includes disrespect and abuse of women who seek maternity care in facilities or from skilled providers. Vulnerable populations include: the urban and rural poor; adolescents; commercial sex workers; people who are marginalized; the socially excluded; lesbian, gay, bisexual, and transgender population; those living with disabilities or HIV; immigrants; refugees; those in conflict/post-conflict areas; as well groups who experience disparities regularly. These disparities must first be recognized and analysed at a basic level to determine how health system operations, planning and programming for maternal health, and service distribution result in inequitable health outcomes so they can be addressed and eliminated.

Governments and technical experts should improve the availability and effective use of data on inequities and their effect on reproductive and maternal health. Valid equity indicators must be developed. Disaggregated data on them should be routinely collected and used to understand the determinants of inequities and to design, implement and monitor interventions to eliminate them.

Programme planners should promote equitable coverage and equal access to sexual, reproductive, maternal and newborn health care services through better efforts to understand the unique challenges and needs of subpopulations within societies to achieve substantive equality. This includes identifying and addressing barriers to access – financial, legal, gender, age, cultural, geographic or based on fear of disrespectful care – and understanding the factors, including values and preferences, that make care acceptable to all who need it and encourage sustained demand at scale. It also means ensuring that an adequate workforce is available to provide the full range of SRMNCAH care to all subpopulations. This may include workforce analysis and long range planning, subsidies to representatives of vulnerable populations for health professional education, human resources incentives to encourage placement and retention in underserved communities, and task sharing to extend the reach of essential services.

Health care quality reflects the degree to which care systems, services and supplies increase the likelihood of a positive health outcome (55). Recognizing that inequity in maternal health includes systematically uneven quality and not just access, efforts must also ensure that the care that is offered to all populations is of comparably high quality. To this end, governments should plan, implement and evaluate contextualized policies, programmes and strategies that take into account inequities and ensure that representatives from disadvantaged groups have a voice in these processes. This must be part of the effort to understand how to make a global best practice yield effective, high-quality results in the context in which it is to be implemented and for all populations.

2. Ensure universal health coverage for comprehensive sexual, reproductive, maternal and newborn health care

UHC is defined as “all people receiving quality health services that meet their needs without being exposed to financial hardship in paying for the services”. This definition encompasses two equally important dimensions of coverage: reaching all people in the population with essential health care services, and protecting them from financial hardship due to the cost of health care services (56). Particular emphasis must be placed on ensuring access without discrimination, especially for the poor, vulnerable and marginalized segments of the population (57).

UHC comprises access without discrimination to essential safe, affordable, effective, quality medicines as well as to essential health services (57). Governments should determine the set of essential SRMNCAH covered services and commodities, using evidence of cost-effectiveness to identify the priority package. Strategic planning must include resource mobilization and effective service delivery to guarantee that the worst-off in the population are reached with the essential service package, based on an understanding of population demographics and planning for the appropriate number of human resources.

A priority for expanding coverage to more people is to identify and remove barriers to utilization, and to promote the AAAQ. Countries should develop national strategies to improve care coverage during labour and childbirth, and expand high-quality, evidence-based service coverage to include preconception and interconception care, family planning, antenatal care and postpartum care. Standards are needed for the indications and safe use of medical and surgical interventions, including caesarean section. Development of functioning referral systems is crucial. To achieve these goals, governments and development partners should explore innovative financing mechanisms to drive improvements in both coverage and quality. Specific provisions to protect families accessing emergency obstetric care and emergency newborn care from financial catastrophe are especially important.

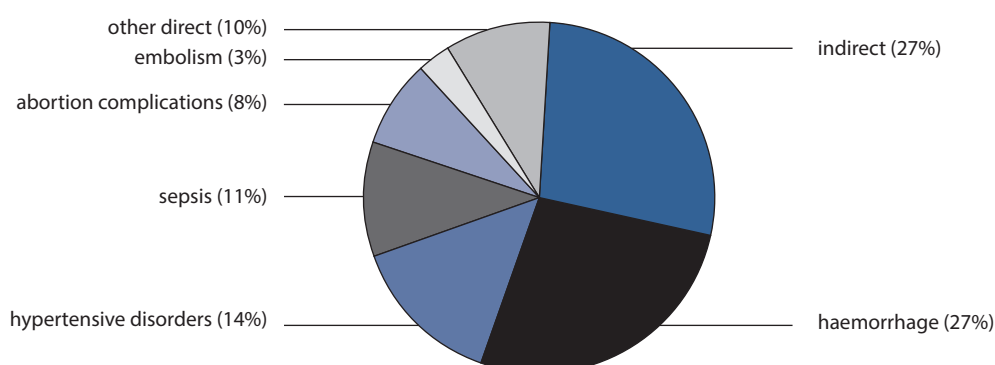
Applying a human rights approach to UHC suggests a pathway to progressive universalism. Reports from WHO and a Lancet Commission have described a pathway to UHC that could be achieved within one generation. Governments are called upon to first institute publicly funded insurance making essential services available to all without out-of-pocket expenditures, and later to expand services through progressive mandatory prepayment and pooling of funds with exemptions for the poor, bolstered by a variety of financing mechanisms, to cover a larger benefits package (49,56). Transparency and participatory mechanisms to include civil society in both

the decision making process and the monitoring and evaluation of UHC programmes are necessary to maximize ownership and promote accountability.

3. Address all causes of maternal mortality, reproductive and maternal morbidities and related disabilities

The post-2015 global maternal health strategy cannot prescribe a list of interventions that will maximize progress towards EPMM in every country. Each country must first understand the most important causes of maternal deaths in its population. Programme planning must then involve prioritization based on analysis of context-specific determinants of risk and health systems capacity. The stages of a progressive obstetric transition described by Souza and coworkers provide a framework and suggest programme priorities that may take precedence at each stage (3). This framework cannot be applied indiscriminately but provides a foundation for country-specific analysis and adaptation based on local findings. Thus, a clear planning priority is that countries should improve the quality of certification, registration, notification and review of causes of maternal death.

FIGURE 3: Global estimates for causes of maternal mortality 2003–2009



While the distribution of major causes of maternal death differs between countries and for sub-populations within countries, these are well known (8).

At the same time, recent reports support the notion of a transition from deaths attributable to direct causes where MMR is very high towards a greater proportion of deaths due to indirect causes as MMR decreases, necessitating an accompanying shift in country strategies for maternal mortality reduction (8,58). Maternal causes of death that carry stigma, including abortion and HIV infection, are likely to be underreported or misclassified. Nevertheless, recent analyses suggest that the number of deaths following unsafe abortion has increased significantly in sub-Saharan Africa, even as the global number of maternal deaths attributable to complications of abortion has fallen due to major decreases in developed countries since 1990. Although HIV-related deaths in pregnancy accounted for 2.6% of global maternal deaths in 2013, they were associated with nearly 4% of all maternal deaths in sub-Saharan Africa (4).

Unmet need for family planning also contributes substantially to maternal mortality. A recent analysis using maternal mortality estimates from the WHO and data on contraceptive prevalence from the 2010 UN World Contraceptive Use database suggested that maternal mortality would have been almost two times higher in 172 countries without contraceptive use at current levels,

and projected that an additional 104 000 deaths per year could be averted by fulfilling unmet need for family planning (a 29% annual reduction globally) (59).

Structural and social barriers that contribute to maternal death include delays in seeking, accessing and receiving appropriate treatment, as well as health system deficiencies that compromise the availability, accessibility or quality of care.

It is estimated that for every maternal death, 20–30 more women experience acute or chronic pregnancy-related morbidities, such as obstetric fistula or depression, which impair their functioning and quality of life, sometimes permanently (60). The true scope of the problem is unknown due to lack of accurate systems for measurement. A WHO-led Maternal Morbidity Working Group has agreed on a consensus definition for maternal morbidity (“any health condition attributed to or complicating pregnancy, childbirth or following pregnancy that has a negative impact on the woman’s well-being or functioning”) and is working on the development of a measurement tool (61). Countries must develop plans for tracking and treating maternal morbidities, and should use standard definitions and metrics whenever possible.

Having identified the most important causes of maternal death, as well as the prevalence of key diseases and malnutrition along with maternal morbidity, the unmet need for family planning, the capacity and reach of the health system, and the human and financial resources available, each country should plan a context-specific strategy for implementing effective interventions to address them.

Intersectoral coordination is a critical element of country planning to address all causes of maternal mortality at each stage of the obstetric transition. Where MMR is very high, improvement in basic infrastructure including WASH systems, roads and health care facilities, workforce planning and education for girls are key areas for intersectoral linkages with maternal health programme planning. As countries reduce MMR, there is a need to strengthen the recognition and management of indirect causes of maternal death, and coordinate with other relevant sectors and health providers to address care for noncommunicable diseases, develop innovative education, screening and management approaches for these conditions, as well as appropriate clinical guidelines and protocols. Quality and appropriateness of care remain important issues, however with a particular focus on avoiding over-medicalization and harms related to overuse of interventions (3).

Each strategy should include a systematic approach to implementing evidence-based standards, guidelines and protocols, and to monitoring and evaluating their outcomes. Countries and development partners must agree to collect data on indicators that allow implementers to evaluate the quality and effectiveness of their care processes. To date, few maternal and neonatal health programmes in high burden countries have adopted a large-scale process improvement initiative. However, various systematic process improvement methods have shown positive increases in use of effective interventions (62).

Although effective interventions exist for the major causes of maternal death, in many contexts the best available, low-cost, high-impact interventions are not implemented well enough or widely enough. Governments and development partners should make effective interventions that address the most prevalent causes of death in the population available at scale by building on existing successful reproductive and maternal health services, taking into account cost- and programme-effectiveness.

Box 4: Evidence-based resources for planning key interventions

Trustworthy and regularly updated sources for identifying evidence-based, high-impact clinical interventions, and best available guidance on topics that are critical for effective health system strengthening are discussed here.

To be effective in the specific context where it is to be implemented, each country's plan must be customized to fit its own population health needs, health system capacity and available resources. Moreover, it is likely that the priority interventions for each country will change over time as the variables in the planning equation shift and as best available evidence on effective clinical interventions evolves.

Therefore, country planners must analyse their context-specific needs, research the best currently available evidence on effective interventions to meet those needs, and apply a rational framework for prioritizing essential services and scaling up. Each country's framework will need to be revisited at regular intervals to track progress, reassess the underlying assumptions and adjust the plan as needed.

High-impact evidence-based clinical interventions

Partnership for Maternal, Newborn and Child Health (PMNCH) Essential interventions, commodities and guidelines for reproductive, maternal, newborn and child health	http://www.who.int/pmnch/knowledge/publications/201112_essential_interventions/en/
PMNCH publications	http://www.who.int/pmnch/knowledge/publications/en/ http://www.who.int/pmnch/knowledge/search/en/ http://www.who.int/pmnch/knowledge/tools/en/ http://www.who.int/pmnch/knowledge/databases/en/
WHO Guidelines on maternal, reproductive and women's health	http://www.who.int/publications/guidelines/reproductive_health/en/
WHO Guidelines on preconception care	http://www.who.int/maternal_child_adolescent/documents/concensus_preconception_care/en/
WHO Reproductive Health Library	http://apps.who.int/rhl/en/
WHO Human Resource Planning (HRP)/Reproductive Health and Research (RHR) Clinical and health systems guidance on all aspects of reproductive health)	www.who.int/hrp/en/
WHO, United Nations Population Fund (UNFPA), United Nations Children's Fund (UNICEF), Averting Maternal Death and Disability (AMDD) program Monitoring emergency obstetric care: A handbook	http://www.who.int/reproductivehealth/publications/monitoring/9789241547734/en/
Maternal Health Task Force: PLOS collection on maternal health	http://www.ploscollections.org/static/maternalhealth

Geneva Foundation for Medical Education and Research Obstetrics, gynecology and reproductive medicine: Guidelines, reviews, position statements, recommendations, standards	http://www.gfmer.ch/Guidelines/Obstetrics_gynecology_guidelines.php
Nutrition	
WHO e-Library of Evidence for Nutrition Actions	http://www.who.int/elena/en/ http://www.who.int/nutrition/publications/en/ http://www.who.int/nutrition/topics/en/ http://www.who.int/nutrition/gina/en/ http://www.who.int/nutrition/nlis/en/
Water, sanitation and hygiene (WASH)	
WHO Water, sanitation, hygiene	http://www.who.int/water_sanitation_health/publications/en/ http://www.who.int/water_sanitation_health/hygiene/en/ http://www.who.int/water_sanitation_health/hygiene/settings/ehs_hc/en/
OHCHR On the right track: good practices in realizing the rights to water and sanitation	http://www.ohchr.org/EN/Issues/WaterAndSanitation/SRWater/Pages/GoodPractices.aspx
Commodities	
UN Commission on Life-Saving Commodities for Women and Children Commissioners' Report	http://www.unfpa.org/public/home/publications/pid/12042
Maternity care workforce	
WHO Optimizing health worker roles to improve access to key maternal and newborn health interventions through task shifting	http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/978924504843/en/
WHO Increasing access to health workers in remote and rural areas through improved retention	http://www.who.int/hrh/retention/guidelines/en/
UNFPA State of the World's Midwifery Report 2014	http://unfpa.org/public/home/publications/pid/17601
Global Health Workforce Alliance Knowledge Centre (multiple publications)	http://www.who.int/workforcealliance/knowledge/en/
Facility readiness and basic infrastructure	
WHO Service availability and readiness assessment	http://www.who.int/healthinfo/systems/sara_introduction/en/ http://www.who.int/healthinfo/systems/sara_reference_manual/en/ http://www.who.int/healthinfo/systems/sara_implementation_guide/en/

WHO Global Health Observatory Health infrastructure	http://www.who.int/gho/health_technologies/medical_devices/health_care_infrastructure/en/
WHO Public health and infrastructure	http://www.who.int/trade/distance_learning/gpgh/gpgh6/en/
WHO Operations manual for delivery of HIV prevention, care and treatment at primary health centres in high-prevalence, resource-constrained settings	http://www.who.int/hiv/pub/imai/operations_manual/en/
Scaling up effective interventions	
WHO, Global Health Workforce Alliance Scaling up, saving lives (report)	http://www.who.int/workforcealliance/knowledge/resources/scalingup/en/
WHO-ExpandNet Beginning with the end in mind: planning pilot projects and other programmatic research for successful scaling up	http://www.who.int/reproductivehealth/publications/strategic_approach/9789241502320/en/
K4Health Guide to fostering change to scale up effective health services	https://www.k4health.org/toolkits/fostering-change
Institute for Health care Improvement (IHI) The breakthrough series: IHI's collaborative model for achieving breakthrough improvement	http://www.ihl.org/resources/Pages/IHIWhitePapers/TheBreakthroughSeriesIHICollaborativeModelforAchievingBreakthroughImprovement.aspx
WHO, UNAIDS, UNICEF Towards universal access: scaling up priority HIV/AIDS interventions in the health sector. Progress report 2010	http://www.who.int/hiv/pub/2010progressreport/report/en/
WHO Strategic approach to strengthening sexual and reproductive health	http://www.who.int/reproductivehealth/publications/strategic_approach/RHR_07.7/en/
WHO, ExpandNet Practical guidance for scaling up health service innovations	http://www.who.int/reproductivehealth/publications/strategic_approach/9789241598521/en/
WHO, ExpandNet Scaling up health service delivery: from pilot innovations to policies and programmes	http://www.who.int/reproductivehealth/publications/strategic_approach/9789241563512/en/
WHO, ExpandNet Nine steps for developing a scaling-up strategy	http://www.who.int/reproductivehealth/publications/strategic_approach/9789241500319/en/
Health system strengthening	
PMNCH Success factors for women's and children's health: multisector pathways to progress	http://www.who.int/pmnch/successfactors/en/
WHO Health systems topics: about health systems HSS publications	http://www.who.int/healthsystems/topics/en/ http://www.who.int/healthsystems/publications/en/

Alliance for Health Policy and Systems Research Publications	http://www.who.int/alliance-hpsr/resources/en/
Alliance for Health Policy and Systems Research A compilation of institutions producing synthesis documents	http://www.who.int/alliance-hpsr/resources/synthesis/alliancehpsr_hpsrsynthesis.pdf?ua=1
Alliance for Health Policy and Systems Research Implementation research platform	http://www.who.int/alliance-hpsr/projects/implementationresearch/en/

4. Strengthen health systems to respond to the needs and priorities of women and girls

For health systems to respond to the priorities and the needs of women and girls, they must be seen as social institutions in addition to delivery systems for clinical care interventions, with the capacity to either marginalize people or enable them to exercise their rights. This complexity reflects the conceptualization of health systems as being made up of both “hardware and software” (63). The “hardware” of a health system represents the basic health system building blocks that include service delivery, health workforce, information, medical products and technologies, health care financing, and finally, leadership and governance or stewardship (64). The “software” describes the human relationships, desires and values, roles and norms, power structure and meanings, both explicit and implicit, that actors and users assign to the health system. Health system strengthening must include both the hardware (such as ensuring the availability of essential health infrastructure, amenities and commodities), and the software (including attention to organizational development and management, improving transparency and countering corruption, ensuring mechanisms for participation and community engagement and prioritizing respectful care norms and values).

Systems thinking can help countries understand the constraints and areas of weakness within the health system, and to apply this understanding to design and evaluate interventions that improve health and health equity. Engaging all stakeholders is critical because in a complex adaptive system, “every intervention, from the simplest to the most complex, has an effect on the overall system, and the overall system has an effect on every intervention” (65). Priorities in the area of service delivery include, expanding health promotion and preventative services, and improving integration of all forms of care for women, newborns and adolescents. Of particular importance is the integration of prevention, screening, and treatment for infectious and noncommunicable diseases (e.g. HIV, malaria, cardiovascular disease, depression) into routine SRMNCAH care. Ensuring basic service availability and readiness at the facility level entails regular assessment and verification that essential health infrastructure and amenities are in place and functioning to the level of need. Basic amenities include an adequate number of beds and skilled providers for the population to be served, as well as reliable power and WASH, rooms or dividers that ensure privacy, communication and computer equipment with good connectivity and access to emergency transportation (66). While much attention has been focused on increasing facility-based care, for a high-performing health system it is equally important to focus on community-based primary care and effective referral systems, ensuring seamless coordination across time, settings and disciplines, and between facilities. In the area of medical products and

technologies, governments must ensure the availability of essential commodities and appropriate technologies, based on considerations of equity and cost-effectiveness.

In the area of health information, countries must develop a functioning and user-friendly health information system to assist in data collection, as well as communication and coordination between levels of care, and between providers and patients. The health information component is one of the most critical components of the health system because when it is strengthened, the “software” component of the health system is activated which contributes to improvement. For example, there is evidence that putting information from confidential inquiries into action at local levels by engaging local opinion leaders and strengthening the capacity of health professionals is associated with reduced MMR in health facilities (67).

To strengthen the health care workforce, governments must provide appropriate regulatory support, pre-service and in-service training, and sufficient resources to deploy health care providers (midwives, doctors, and other skilled maternity care providers, including specialists) in adequate numbers to meet population needs. The health care workforce must be prepared to not only provide the essential sexual, reproductive, maternal and newborn care but also to recognize and manage any co-existing medical conditions, e.g. noncommunicable diseases (such as diabetes and heart disease). Country-level workforce management is necessary to ensure optimal recruitment, distribution and retention of health workers, enact supportive supervision, and explore task shifting as needed to improve access to high-quality care. Evidence suggests that 87% of essential maternal and newborn health care services can be provided by midwives, subject to them being educated and regulated to international standards and working in well-equipped enabling environments (68). Furthermore, it is projected that universal coverage of essential maternal, newborn and family planning interventions that fall within the scope of midwifery practice could avert 83% of all maternal and neonatal deaths and stillbirths (69). Professional associations, both at the national and global level, play an important role in establishing norms for the regulation of health care workers and setting professional standards with regard to their education and core competencies.

In the areas of leadership and governance, increased cooperation with other sectors (such as finance, education, energy, water and sanitation, nutrition, social services, mobile telecommunications technology and private health care services) is needed to promote good reproductive and maternal health outcomes, and to realize the potential impact of health care financing mechanisms to strengthen the system. Transparent and accountable governance entails informed and constructive involvement of all relevant stakeholders in policy and programme development.

5. Ensure accountability to improve quality of care and equity

Planning for accountability in the post-2015 maternal health strategy emphasizes two equally important dimensions:

- (i) the improved ability to track and measure progress towards EPMM and routinely report on it; and
- (ii) social accountability, which refers to the range of actions that citizens and civil society actors take to hold government and health system leaders to account (70) for their commitments in the area of maternal and newborn health care delivery. These two dimensions of

accountability complement and enhance one another and help ensure that health systems are directly accountable to the women and communities for whom they exist.

To track progress and ensure accountability for maternal health outcomes, governments must improve data availability and quality, with specific attention to strengthening civil registration systems that can provide reliable information on cause of death. Countries should build and strengthen national and subnational data collection through routine periodic data collection, increased measurement capacity, and informative monitoring and reporting. National data registries should collect data on the causes and conditions of every maternal death through confidential enquiries or MDSR, and cases of severe maternal morbidity through a near-miss reporting approach, to facilitate moving from estimating maternal mortality to counting deaths. Facility-level accountability also contributes significantly to improved maternal and newborn health outcomes, through the establishment of quality standards and performance measures that are evaluated at the point of service through ongoing quality assurance and continuous quality improvement activities.

For effective social accountability, it is necessary to create participatory mechanisms at every level of the health system, across public and private sectors. Health systems together with civil society representatives should define and communicate clear roles, responsibilities and standards for civil society participation in accountability mechanisms, supported by transparent and equitable legal frameworks to ensure not only citizens' rights to participation but also their right to remedy where appropriate. This helps ensure that services are responsive to community needs and demands, and that accountability mechanisms are transparent and inclusive.

Conclusion

The ultimate goal of the post-2015 maternal health strategy is to end all preventable maternal mortality. The strategy to achieve this goal is grounded in a holistic, human rights-based approach to sexual, reproductive, maternal and newborn health and rests on the foundation of implementation effectiveness, which is context-specific, systems-oriented and people-centric.

It prioritizes equity, both in the selection of targets and the strategic framework to achieve them. Its guiding principles are: empowering women and girls as well as communities; integrating maternal and newborn care; protecting and supporting the mother–baby relationship; prioritizing country ownership, leadership and supportive legal, regulatory and financial frameworks and an intersectoral approach to improvement; and applying a human rights framework to ensure that high-quality sexual, reproductive, maternal and newborn health care is available, accessible and acceptable to all who need it. Cross-cutting actions to reach the goal include improving metrics, measurement systems and data quality, and prioritizing adequate resources and effective healthcare financing.

There are five broad strategic objectives laid out as a framework for countries to develop and implement interventions for EPMM:

- (i) to address inequities in access to and quality of sexual reproductive, maternal and newborn health care services;
- (ii) to ensure UHC for comprehensive sexual, reproductive, maternal and newborn health care;
- (iii) to address all causes of maternal mortality, reproductive and maternal morbidities and related disabilities;
- (iv) to strengthen health systems to respond to the needs and priorities of women and girls; and
- (v) to ensure accountability to improve quality of care and equity.

The Safe Motherhood Action Agenda (1997) called for ten priority actions for the next decade. A review of these priority actions revealed the majority being woven through the maternal health strategy we propose for the post-2015 development agenda. Measurable progress has been made as a result of the global commitment to maternal and newborn survival embodied in the MDGs; at the same time, the number of deaths, the inequity in MMR both between and within countries, and the fact that 800 women continue to die each day from preventable causes, often going uncounted (so that their lives simply don't count) is unacceptable and remains a global outrage that must be amended. It's everyone's responsibility to make sure that maternal and newborn survival and health figure prominently in the sustainable development agenda, considering the critical role of women and the babies they bear in the development of future generations and communities. In 2030, let's be able to stand and say that EPMM occurred on our watch and as a result of our collective commitment and actions.

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The document reflects thirty-one public comments and forty-five comments from 42 WHO Member States.

Annex 1. Goal-setting for EPMM: process and timeline

In January 2013, projections for ending preventable maternal death were made by The United Nations Children's Fund (UNICEF), the WHO and the US Agency for International Development (USAID) and shared with partners. They were discussed at a consultation in April 2013 on Accelerating Reduction in Maternal Mortality convened by the WHO that included technical experts, stakeholders from country programmes, professional associations, multilateral agencies, maternal health advocates and donors. The discussions were highlighted in a commentary in August 2013 (71) and a strategy paper was drafted for a meeting of the African Union in August 2013 (72). Building on the April 2013 discussions, an EPMM Working Group has since been working together with various members and hosting in-country and regional dialogues, webinars, a blog series, and other means to seek inputs and ideas from around the world to move this agenda forward.

In April 2014, representatives from 34 countries (many of whom were challenged with high rates of maternal mortality), came together in Bangkok, Thailand with global partners for a consensus meeting on targets and strategies for EPMM. The meeting was convened by WHO, the United Nations Population Fund (UNFPA), the USAID, the Maternal Health Task Force (MHTF), and the Maternal and Child Health Integrated Program (MCHIP), with support from agencies and donors and inputs from the EPMM Working Group. A strong consensus was forged in support of targets and a broad strategic framework for moving towards ending all preventable maternal deaths (73).

Following the Bangkok consensus meeting, these targets and the broad strategic framework for their achievement were circulated widely among country stakeholders and global development partners, and were brought forward by Member States at the World Health Assembly in May 2014, where participating delegates petitioned for their inclusion in the resolution on the Every Newborn Action Plan (ENAP), which were subsequently included as an annex to the ENAP.

The EPMM Working Group core planning team convened a writing group, and key informant interviews were conducted to solicit inputs to inform a draft paper, elaborating on the strategic framework developed by consensus in Bangkok in April 2014. The draft EPMM targets and strategies were presented at the PMNCH Partners' Forum in Johannesburg, South Africa on 2 July 2014 and simultaneously posted online on the WHO website (http://www.who.int/reproductivehealth/topics/maternal_perinatal/epmm/en/) for comments from the public and sent to the official WHO Member States for country consultation. Through a systematic process, all 31 reviews received during the public comment period along with the feedback received from 42 WHO Member States (African Region (7), Region of the Americas (8), Eastern Mediterranean Region (5), European Region (13), South-East Asia Region (1), Western Pacific Region (7)), were evaluated and decisions on how to address each comment were made by consensus.

Annex 2. Accelerating reduction of maternal mortality strategies and targets beyond 2015: 8–9 April 2013, Geneva, Switzerland

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1. Maternal mortality fact sheet No. 348. Geneva: World Health Organization; 2014 (http://apps.who.int/iris/bitstream/10665/112318/1/WHO_RHR_14.06_eng.pdf?ua=1, accessed 5 February 2015).
2. Jamison DT, Summers LH, Alleyne G, Arrow KJ, Berkley S, Binagwaho A, et al. Global health 2035: a world converging within a generation. *Lancet* 2013;382:1898–955. ([http://dx.doi.org/10.1016/S0140-6736\(13\)62105-4](http://dx.doi.org/10.1016/S0140-6736(13)62105-4), accessed 14 January 2014).
3. Souza JP, Tunçalp Ö, Vogel JP, Bohren M, Widmer M, Oladapo OT, et al. Obstetric transition: the pathway towards ending preventable maternal deaths. *BJOG: An International Journal of Obstetrics & Gynaecology* 2014;121(Suppl. 1):1–4.
4. Trends in maternal mortality 1990–2013. Geneva: World Health Organization; 2014 (http://apps.who.int/iris/bitstream/10665/112682/2/9789241507226_eng.pdf?ua=1, accessed 5 February 2015).
5. The Millennium Development Goals Report 2014. New York: United Nations; 2014 (<http://www.un.org/millenniumgoals/2014%20MDG%20report/MDG%202014%20English%20web.pdf>, accessed 5 February 2015).
6. Success factors for women's and children's health: Policy and programme highlights from 10 fast-track countries. Geneva: World Health Organization; 2014 (http://www.who.int/pmnch/knowledge/publications/success_factors_highlights.pdf, accessed 5 February 2015).
7. Health in the post-2015 agenda: Report of the global thematic consultation on health. *The World We Want; 2013* (www.worldwewant2015.org/file/337378/download/366802, accessed 5 February 2015).
8. Say L, Chou D, Gemmill A, Tunçalp Ö, Moller AB, Daniels JD, et al. Global causes of maternal death: a WHO systematic analysis. *Lancet Glob Health* 2014;2:e323–e333 ([http://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(14\)70227-X/fulltext](http://www.thelancet.com/journals/langlo/article/PIIS2214-109X(14)70227-X/fulltext), accessed 5 February 2015).
9. Housing & slum upgrading. In: UN-Habitat for a better urban future [website]. Kenya: UN-Habitat (<http://unhabitat.org/urban-themes-2/housing-slum-upgrading/> accessed 5 February 2015).
10. Pomeroy A, Koblinksy M, Alva S. Private delivery care in developing countries: trends and determinants. DHS Working Paper No. 76. Maryland: United States Agency for International Development; 2010 (<http://dhsprogramme.com/pubs/pdf/wp76/wp76.pdf>, accessed 5 February 2015).
11. Targets and strategies for ending preventable maternal mortality; consensus statement. Geneva: World Health Organization; 2014 (http://apps.who.int/iris/bitstream/10665/130776/1/WHO_RHR_14.21_eng.pdf?ua=1&ua=1, accessed 5 February 2015).
12. Targets for ending preventable preventable maternal mortality. In preparation.
13. Stenberg K, Axelson H, Sheehan P, Anderson I, Gülmezoglu AM, Temmerman M, et al. Advancing social and economic development by investing in women's and children's health: A new global investment framework. *Lancet* 2014;383(9925):1333–1354.
14. People-centred health care: A policy framework. Manila: World Health Organization, Western Pacific Region; 2007.
15. Essential interventions, commodities and guidelines for reproductive, maternal, newborn and child health. Geneva: The Partnership for Maternal, Newborn & Child Health; 2011 (http://www.who.int/pmnch/topics/part_publications/essential_interventions_18_01_2012.pdf, accessed 5 February 2015).
16. Combating gender-based violence: A key to achieving the MDGs. New York: United Nations Population Fund; 2005 (http://www.unfpa.org/webdav/site/global/shared/documents/publications/2005/combating_gbv_en.pdf, accessed 5 February 2015).
17. Substantive equality and reproductive rights: a briefing paper on aligning development goals with human rights obligations. New York: Center for Reproductive Rights; 2014 (http://reproductiverights.org/sites/crr.civicaactions.net/files/documents/Equality_Guide__5.28.14_Web.pdf, accessed 5 February 2015).
18. International Conference on Population and Development Programme of Action. New York: United States Population; 1994 Fund <http://www.unfpa.org/sites/default/files/pub-pdf/ICPD%20PoA%20English.pdf>, accessed 5 February 2015).
19. Tunçalp Ö, Souza JP, Hindin MJ, Santos CA, Oliveira TH, Vogel JP, et al. on behalf of the WHO Multicountry Survey on Maternal and Newborn Health Research Network. Education and severe maternal outcomes in developing countries: a multicountry cross-sectional survey. *BJOG: An International Journal of Obstetrics & Gynaecology* 2014;121(Suppl. 1):57–65.
20. Motherhood in childhood: facing the challenge of adolescent pregnancy. New York: United Nations Population Fund; 2013 (<http://www.unfpa.org/sites/default/files/pub-pdf/EN-SWOP2013-final.pdf>, accessed 5 February 2015).
21. Engaging men and boys: a brief summary of UNFPA experience and lessons learned. New York: United Nations Population Fund; 2013 (http://www.unfpa.org/sites/default/files/resource-pdf/UNFPA%20Engaging%20men%20and%20boys_web-2.pdf, accessed 5 February 2015).
22. The state of the world's children 2009: maternal and newborn health. New York: United Nations Children's Fund; 2008 (<http://www.unicef.org/sowc09/docs/SOWC09-FullReport-EN.pdf>, accessed 5 February 2015).

23. Starrs AM. Survival convergence: bringing maternal and newborn health together for 2015 and beyond. *Lancet* 2014;384(9939):211–213.
24. Promoting accountability for safe motherhood: The White Ribbon Alliance's social watch approach. Health Policy Initiative. Washington DC: US Agency for International Development; 2010 (http://www.healthpolicyinitiative.com/Publications/Documents/1282_1_Social_Watch_WRA_HPI_FINAL_acc.pdf, accessed 5 February 2015).
25. Agreed conclusions on the elimination and prevention of all forms of violence against women and girls. Commission on the Status of Women CSW agreed resolution E/2013/27. New York: United Nations Entity for Gender Equality and the Empowerment of Women; 2013 ([http://www.un.org/womenwatch/daw/csw/csw57/CSW57_Agreed_Conclusions_\(CSW_report_excerpt\).pdf](http://www.un.org/womenwatch/daw/csw/csw57/CSW57_Agreed_Conclusions_(CSW_report_excerpt).pdf), accessed 5 February 2015).
26. Preventable maternal mortality and morbidity and human rights. Report of the Human Rights Council on its eleventh session. HRC resolution 11/8. Geneva: United Nations Human Rights Council; 2009 (www.who.int/pmnch/events/2010/A_HRC_RES_11_8.pdf, accessed 5 February 2015).
27. Technical guidance on the application of a human rights based approach to the implementation of policies and programmes to reduce preventable maternal morbidity and mortality. Report of the Human Rights Council on its twentieth session. Geneva: United Nations Human Rights Council; 2012 (http://www2.ohchr.org/english/issues/women/docs/A.HRC.21.22_en.pdf, accessed 5 February 2015).
28. Keeping promises, measuring results. Commission on Information and Accountability for Women's and Children's Health. Geneva: World Health Organization; 2011 (http://www.who.int/topics/millennium_development_goals/accountability_commission/Commission_Report_advance_copy.pdf, accessed 5 February 2015).
29. Committee on the Elimination of Discrimination against Women. Concluding comments: Belize, para. 56, A/54/38/Rev.1; 1999.
30. Human Rights Committee. Concluding observations: Mali, para. 14, UN Doc. CCPR/CO/77/MLI; 2003.
31. Committee on the Rights of the Child. Concluding observations: Democratic Republic of Congo, UN Doc. CRC/C/COD/CO/2, paras. 33–34; 2009.
32. Committee on the Elimination of Discrimination against Women. General recommendation No. 24: Article 12 of the Convention (Women and Health), para. 27; 1999. <http://www.refworld.org/publisher,CEDAW,GENERAL,,453882a73,0.html>
33. Convention on the Elimination of All Forms of Discrimination against Women, adopted Dec. 18, 1979, art. 12, paras. 1–2, GA Res. 34/180, UN GAOR, 34th Session, Suppl No. 46, at 193, UN Doc. A/34/46, UNTS 13 (entered into force Sept 13, 1981).
34. Committee on the Elimination of Discrimination against Women. General comment No. 24: Article 12 of the Convention (women and health), (20th Session, 1999), in *Compilation of General Comments and General Recommendations Adopted by Human Rights Treaty Bodies*, at 365, para. 31(c), UN Doc. HRI/GEN/1/Rev.9 (Vol. 11); 2008.
35. Committee on Economic, Social and Cultural Rights. General comment No. 14, paras. 14 and 21.
36. Committee on the Elimination of Discrimination against Women. Concluding observations: Malawi, para. 31, UN Doc. CEDAW/C/MWI/CO; 2006; Mexico, para. 32, UN Doc. CEDAW/C/MEX/CO/6 (2006); Morocco, paras. 30–31, UN Doc. CEDAW/C/MAR/CO/4; 2008.
37. Human Rights Committee. Concluding observations: Panama, para. 9, UN Doc. CCPR/C/PAN/CO/3; 2008; Chile, para. 8, UN Doc. CCPR/C/CHL/CO/5; 2007; Madagascar, para. 14, UN Doc. CCPR/C/MDG/CO/3; 2007.
38. Committee on the Elimination of Discrimination against Women. Concluding observations: Paraguay, paras. 30–31, UN Doc. CEDAW/C/PRY/CO/6; 2011; Eritrea, para. 22, UN Doc. CEDAW/C/ERI/CO/3; 2006.
39. Committee on the Rights of the Child. Concluding observations: Haiti, para. 46, UN Doc. CRC/C/15/Add.202; 2003; Guatemala, para. 40, UN Doc. CRC/C/15/Add.154; 2001.
40. Committee on the Elimination of Discrimination against Women. Concluding observations: Mozambique, para. 36, UN Doc. CEDAW/C/MOZ/CO/2; 2007.
41. Committee against Torture (CAT Committee). Concluding observations: Yemen, para. 31, UN Doc. CAT/C/YEM/CO/2/Rev. 1; 2010.
42. Committee on the Elimination of Discrimination against Women. Concluding observations: Indonesia, paras. 36–37, UN Doc. CEDAW/C/IDN/CO/5; 2007; Ghana, paras. 31–32, UN Doc. CEDAW/C/GHA/CO/5; 2006.
43. Committee on Economic, Social and Cultural Rights. General comment 14. The right to the highest attainable standard of health (Twenty-second session, 2000), UN Doc. E/C.12/2000/4; 2000 (<http://www1.umn.edu/humanrts/gencomm/escgencom14.htm>, accessed 5 February 2015).
44. Technical guidance on the application of a human rights-based approach to the implementation of policies and programmes to reduce preventable maternal morbidity and mortality. Report of the Office of the United Nations High Commissioner for Human Rights to the UN General Assembly; A/HRC/21/22; 2012 (http://www2.ohchr.org/english/issues/women/docs/A.HRC.21.22_en.pdf, accessed 5 February 2015).

45. Graham WJ, Ahmed S, Stanton C, Abou-Zahr CL, Campbell OMR. Measuring maternal mortality: an overview of opportunities and options for developing countries. *BMC Medicine* 2008;6:12 (<http://www.biomedcentral.com/content/pdf/1741-7015-6-12.pdf>, accessed 5 February 2015).
46. Country health information systems: a review of the current situation and trends. Geneva: World Health Organization; 2011 (http://www.who.int/healthmetrics/news/chis_report.pdf, accessed 5 February 2015).
47. The WHO application of ICD-10 to deaths during pregnancy, childbirth and puerperium: ICD MM. Geneva: World Health Organization; 2012 (http://apps.who.int/iris/bitstream/10665/70929/1/9789241548458_eng.pdf?ua=1, accessed 14 January 2014).
48. Requejo JH, Newby H, Bryce J. Measuring coverage in maternal, newborn and child health: challenges and opportunities in the selection of coverage indicators for global monitoring. *PLoS Med* 2013;10(5): e1001416 (<http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001416>, accessed 5 February 2015).
49. Jamison DT, Summers LH, Alleyne G, Arrow KJ, Berkley S, Binagwaho A, et al. Global health 2035: a world converging within a generation. *Lancet* 2013;382:1898–1955.
50. The PMNCH 2014 accountability report. Tracking financial commitments to the global strategy for women's and children's health. Geneva: Partnership for Maternal, Newborn, and Child Health; 2014 (www.who.int/pmnch/knowledge/publications/pmnch_report14.pdf, accessed 5 February 2015).
51. A global financing facility in support of every woman every child: concept note. Executive summary. Washington DC: World Bank; 2014 (<http://www.worldbank.org/content/dam/Worldbank/document/HDN/Health/GFFExecutiveSummaryFINAL.pdf>, accessed 5 February 2015).
52. Human rights in budget monitoring, analysis and advocacy: training guide. Geneva: Office of the High Commissioner for Human Rights; 2010 (<http://internationalbudget.org/wp-content/uploads/Human-Rights-in-Budget-Monitoring-Analysis-and-Advocacy-Training-Guide.pdf>, accessed 5 February 2015).
53. Morgan L, Stanton ME, Higgs ES, Balster RL, Bellows BW, Brandes N, et al. Financial incentives and maternal health: where do we go from here? *J Health Popul Nutr* 2013; 31(4 Suppl 2): S8–S22.
54. Renfrew MJ, McFadden A, Bastos MH, Campbell J, Channon AA, Cheung NF, et al. Midwifery and quality care: findings from a new evidence-informed framework for maternal and newborn care. *Lancet* 2014;384(9948):1129–1145.
55. Institute of Medicine. Medicare: A Strategy for Quality Assurance. Vol.1. Washington, DC: National Academy Press; 1990.
56. Making fair choices on the path to universal health coverage: Final report of the WHO Consultative Group on Equity and Universal Health Coverage. Geneva: World Health Organization; 2014 (http://apps.who.int/iris/bitstream/10665/112671/1/9789241507158_eng.pdf?ua=1, accessed 5 February 2015).
57. Health in the post-2015 development agenda. Sixty-seventh World Health Assembly WHA67.14. Geneva: World Health Organization; 2014 (http://apps.who.int/gb/ebwha/pdf_files/WHA67/A67_R14-en.pdf, accessed 5 February 2015).
58. Kassebaum NJ, Bertozzi-Villa A, Coggeshall MS, Shackelford KA, Steiner C, Heuton KR, et al. Global, regional, and national levels and causes of maternal mortality during 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet* 2014; [http://dx.doi.org/10.1016/S0140-6736\(14\)60696-6](http://dx.doi.org/10.1016/S0140-6736(14)60696-6). Epub 2014 May 2.
59. Ahmed S, Li Q, Liu L, Tsui AO. Maternal deaths averted by contraceptive use: an analysis of 172 countries. *Lancet* 2012;380(9837):111–25. doi: 10.1016/S0140-6736(12)60478-4. Epub 2012 Jul 10.
60. Reichenheim M, Zylberstajn F, Moraes C, Lobato G. Severe acute obstetric morbidity (near-miss): a review of the relative use of its diagnostic indicators. *Arch Gynecol Obstet* 2009;280:337–343.
61. Firoz T, Chou D, von Dadelszen P, Agrawal P, Vanderkruik R, Tunçalp O, et al. (2013). Measuring maternal health: focus on maternal morbidity. *Bull World Health Organ* 2013;91:794–796. doi: <http://dx.doi.org/10.2471/BLT.13.117564>.
62. USAID Maternal health strategy 2014–2020: Toward ending preventable maternal mortality. Washington DC: United States Agency for International Development (<http://www.mchip.net/sites/default/files/mchipfiles/USAID%20MH%20Strategy%20Apr.22.14.pdf>, accessed 5 February 2015).
63. Sheikh K, Gilson L, Agyepong IA, Hanson K, Ssengooba F, Bennett S. Building the field of health policy and systems research: Framing the questions. *PLoS Med* 2011;8(8): e1001073. doi:10.1371/journal.pmed.1001073.
64. Everybody business: strengthening health systems to improve health outcomes. WHO's framework for action. Geneva: World Health Organization; 2007 (http://www.who.int/healthsystems/strategy/everybodys_business.pdf, accessed 5 February 2015).
65. De Savigny D, Adam T, editors. Systems thinking for health systems strengthening. Geneva: World Health Organization; 2009 (http://whqlibdoc.who.int/publications/2009/9789241563895_eng.pdf, accessed 5 February 2015).
66. Service availability and readiness assessment (SARA): An annual monitoring system for service delivery. Reference manual, Version 2.1. World Health Organization; 2013. (http://apps.who.int/iris/bitstream/10665/104075/1/WHO_HIS_HSI_RME_2013_1_eng.pdf, accessed 5 February 2015).

67. Dumont A, Fournier P, Abrahamowicz M, Traoré M, Haddad S, Fraser WD; QUARITE research group. Quality of care, risk management, and technology in obstetrics to reduce hospital-based maternal mortality in Senegal and Mali (QUARITE): a cluster-randomised trial. *Lancet* 2013;382(9887):146–157.
68. The state of the world's midwifery 2014. A universal pathway: a woman's right to health. New York: United Nations Population Fund; 2014 (http://unfpa.org/webdav/site/global/shared/documents/publications/2014/EN_SoWMy2014_complete.pdf, accessed 5 February 2015).
69. Homer CS, Friberg IK, Dias MA, ten Hoop-Bender P, Sandall J, Speciale AM, et al. The projected effect of scaling up midwifery. *Lancet* 2014;384(9948):1146–1157.
70. Fostering social accountability: From principle to practice. Guidance Note: August, 2010. Oslo: United Nations Development Programme; 2010 (<http://www.undp.org/content/dam/undp/library/Democratic%20Governance/OGC/dg-ogc-Fostering%20Social%20Accountability-Guidance%20Note.pdf>, accessed 5 February 2015).
71. Bustreo F, Say L, Koblinsky M, Pullum T, Temmerman M, Pablos-Méndez A. Ending preventable maternal deaths: the time is now. *Lancet Glob Health* 2013;1(4): e176–e177. DOI: 10.1016/S2214–109X(13)70059–7.
72. Koblinsky M, Say L. Ending preventable maternal mortality – a proposal for the post-2015 goal. Geneva: World Health Organization and Washington DC: United States Agency for International Development (http://www.mhtf.org/wp-content/uploads/sites/17/2014/01/Ending_preventable_maternal-mortality_WHOandUSAID.pdf, accessed 5 February 2015).
73. Targets and strategies for ending preventable maternal mortality; consensus statement. Geneva: World Health Organization; 2014 (http://apps.who.int/iris/bitstream/10665/130776/1/WHO_RHR_14.21_eng.pdf?ua=1&ua=1, accessed 5 February 2015).

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