



SAVING MOTHERS' LIVES: TRANSFORMING STRATEGY INTO ACTION

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with Dr Viktor Hediger,
Dr Ashley Manzoor and
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Report of the Maternal
Health Working Group 2012

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Foreword



Professor Sir Sabaratnam Arulkumaran



Professor the Lord Darzi of Denham

At the turn of the millennium, world leaders met to discuss priorities for making the world a better place to live in. Eight Millennium Development Goals (MDGs) were proposed. MDG 5 deals with maternal mortality – deaths of women during pregnancy or within 42 days of the end of that pregnancy. It specifies that by 2015, the level of maternal mortality should fall to just 25% of the 1990 level. Though it is doubtful that this goal will now be reached, the progress towards it has been substantial and very encouraging: in 1990, the global figure for maternal mortality was 543,000; by 2010, the figure had fallen to 287,000. This is a really remarkable achievement, particularly in low and middle-income countries, where more than 90% of maternal mortality occurs.

How did these countries save so many lives? Why were some more successful than others and what lessons can we learn from their experience? This report seeks to answer those questions – by reviewing the literature and also by analysing interviews that were conducted with a range of actors in the story of MDG 5, including clinicians, policy-makers, donors, academics and private and non-governmental organisations. The report also takes into account the information gathered in the course of visits to several countries, as discussed below.

What emerged was a clear set of priority health interventions across three areas: family planning, safe abortion and appropriate maternity care. They are low-cost interventions and it is clear to us that, properly implemented, they save a great many lives every year. It is also clear to us, however, that the solution is not purely medical: the key is to create a maternal health ecosystem, where those interventions are not just available, but also *high-quality, desirable, affordable* and *accessible* to those in need.

Creating such an ecosystem depends on political will and a committed government. It also depends on close collaboration between government, professionals, donors, NGOs and the private sector. And finally, it depends on greater international learning. That is precisely the point of the Global Health Policy Summit on 1 August 2012, where this paper will be published. Of course, the Summit and this paper should hardly be viewed as ends in themselves: our hope is that they will herald the creation of a network of health leaders committed to taking action and redoubling their efforts to achieve MDG 5.

A handwritten signature in black ink, appearing to read 'S. Arulkumaran', with a long horizontal line extending from the end.

Professor Sir Sabaratnam Arulkumaran
*Chair, Maternal Health Working Group
and President Elect, International Federation
of Gynecology and Obstetrics*

A handwritten signature in black ink, appearing to read 'A. V. Darzi', with a stylized flourish at the end.

Professor the Lord Darzi of Denham
*Paul Hamlyn Chair of Surgery and Director
of the Institute of Global Health Innovation*

Figure 1

There are maternal-health success stories from around the world

■ Family planning
■ Safe abortion
■ Maternity care

MMR=Maternal Mortality Ratio

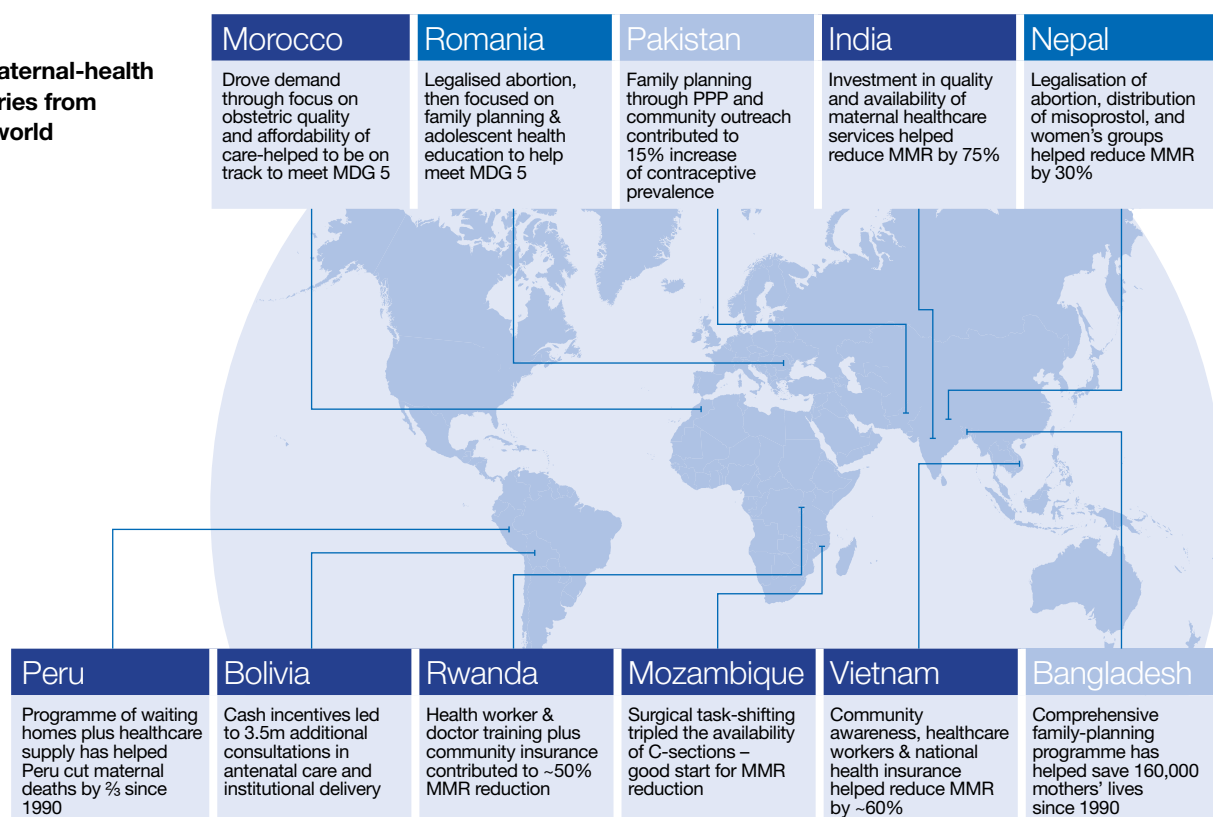


Figure 2

Change begins with understanding 5 principles that can further improve maternal health

1	2	3	4	5
Entrench maternal health as a national priority by strengthening existing coalitions.	Focus on selecting and implementing a few, targeted initiatives.	Strengthen ownership at the grass-roots level.	Continually innovate to maximize available resources.	Reinforce accountability by consistently measuring what matters.
Leverage groups of individuals who are passionate about maternal health and unite them around a shared vision of success.	Several innovative solutions to reduce maternal mortality have been successfully implemented around the world. Select and focus on the ones that will work for your local context.	Inspire your people to continue to make a difference in maternal health and ensure they have the skills and power to drive the solution locally.	Focus on using current assets creatively and efficiently, while also leveraging the power of the private sector and other contributors.	Regularly track leading indicators for maternal health and establish seamless & sustainable monitoring to ensure accountability throughout the system.

Figure 3

What can you do tomorrow to save more women's lives?

✓	Commit to making maternal health a personal priority
✓	Ensure there is a compelling case for change in place that inspires everyone – from village mother to Prime Minister – to join you in saving mothers' lives
✓	Identify any existing alliances for improving maternal health and handpick a few influential leaders who will drive change starting tomorrow
✓	Use others' success as inspiration - create a shortlist of 2-3 innovations that could dramatically improve maternal health in your country
✓	Define and commit to follow up personally on the most relevant process & outcome indicators* for your top 2-3 initiatives (e.g. availability of contraceptives, facility-based deliveries, maternal mortality ratio)
✓	Prevent resource constraints from stalling progress – start change with what you have

*Good indicators are those suggested by the UN for MDG 5 (see <http://mdgs.un.org/unsd/mdg/Host.aspx?Content=indicators/officialist.htm>)

How many more lives could you save?

Executive Summary

The Challenge

Every two minutes, somewhere in the world a woman dies from complications of pregnancy or childbirth, yet more than 80% of these deaths are preventable. The world has recognised the need to reduce this shocking level of maternal mortality. The target, specified in the fifth Millennium Development Goal (MDG 5), is a 75% reduction from the 1990 level, and should be reached by 2015.

Uneven Progress

Substantial progress has been made since 1990. By 2010 the world had reduced maternal mortality by 47%. But to achieve the targeted 75% reduction will take a huge effort, as only 11% of countries are predicted to meet MDG 5 by 2015.

The countries that are on track come from a wide range of cultural backgrounds and stages of economic development. This suggests that it is a country's policies, rather than its underlying characteristics, that most determine success in saving mothers' lives.

Learning from Others

The science needed to save mothers' lives is well understood. The real challenge is implementation – not *what* to do, but *how* to do it. This report highlights the implementation policies of those countries that are proving particularly successful. (See Figure 1 and for more details see Appendix 4). It therefore serves as a resource for studying various international approaches and acquiring ideas that could benefit your own country's efforts to achieve MDG 5.

Assessing Progress against the Five Guiding Principles for Improving Maternal Health

By analysing the countries that have made most progress, we have identified five guiding principles for improving maternal health (see Figure 2). These five principles provide a useful framework for assessing your own country's progress. Our finding is that most countries have created a coalition for change, though far fewer are effectively measuring and achieving accountability throughout the health system.

Maternal Health Ecosystem

As the five principles suggest, healthcare alone is not enough to save large numbers of women's lives. Each country should work towards creating a "maternal health ecosystem", which will ensure that women and their families have both the desire for healthcare and the ability to access that care. There are four aspects to this ecosystem:

- A. **Providing quality healthcare**, including delivery of essential interventions, task-shifting to create a sufficient workforce and investigations into each maternal death
- B. **Creating a desire for care**, by conducting campaigns on family spacing and institutional delivery, as well as by making clinical care culturally appropriate
- C. **Ensuring that care is financially affordable for all** – free if possible for those most in need, but also drawing on micro-insurance and community contributions where appropriate
- D. **Making care physically accessible**, such as by the use of temporary accommodation near medical facilities and emergency transportation

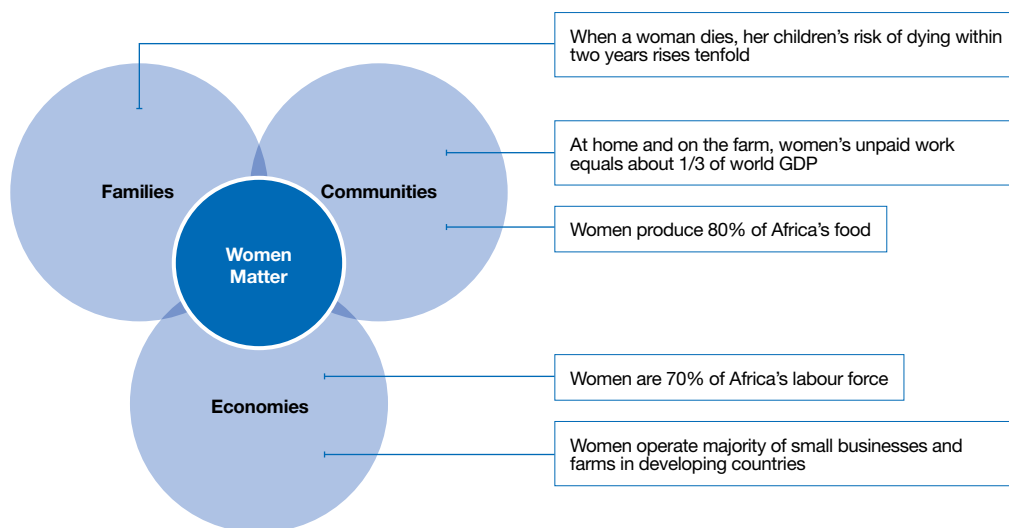
Figure 10 of this report contains recommendations on priorities in each of these four areas.

What to do tomorrow?

With just three years to go until the MDG 5 deadline, time is short. Improvements need to be made now. So this report concludes with a checklist of the specific personal actions that you can take to save even more lives (see Figure 3).

Figure 4

The world focuses on maternal health because saving women stimulates the economy, bolsters communities and strengthens families



Source:

UNFPA; UNICEF, "The State of the World's Children 2009: Maternal and Newborn Health." Julio Frenk, "It's Time to Set A Women and Health Agenda." PMNCH, "Global Strategy for Women's and Children's Health." UN, 2010, Women Deliver; Woodrow Wilson Center event, "The Impact of Maternal Mortality and Morbidity on Economic Development."

Figure 5

Countries on track to meeting MDG 5 are from various geographies and income levels, showing that success is possible in all environments

Countries on track to meet MDG 5 goals, as of 2010^{1,2,3}

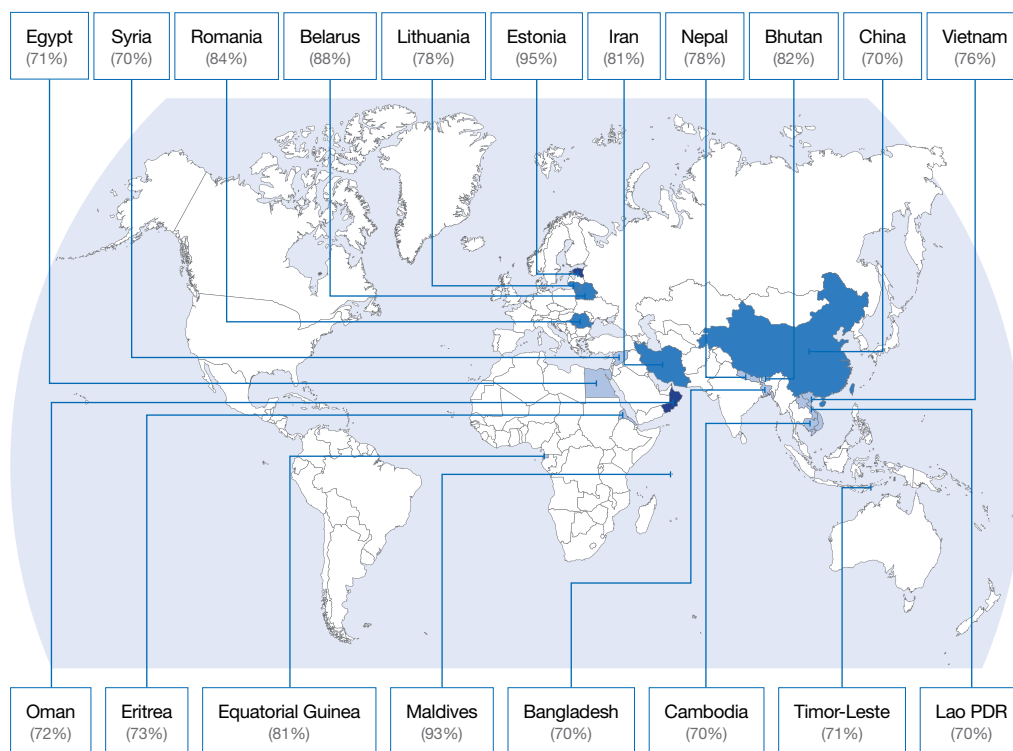
%=MMR reduction

■ Low-medium, GNI/capita
■ Upper-middle, GNI/capita
■ High, GNI/capita

- Each country is identified on the basis of the WHO report Trends in Maternal Mortality : 1990 to 2010
- MMR reduction is calculated for the years 1990-2010
- Groupings according to World Bank. Ranges (Gross National Income per capita): low income, \$1,005 or less; lower-middle income, \$1,006 - \$3,975; upper-middle income, \$3,976 - \$12,275; and high income, \$12,276 or more

Source:

Trends in Maternal Mortality: 1990 to 2010 – WHO; World Bank



Introduction

Twelve years ago, the world united around Millennium Development Goal 5 (MDG 5) and committed to improving maternal health and reducing maternal mortality by 2015 to a level just 25% of the 1990 level.¹ The basis for this initiative, recognised by country leaders, is that the health of nations rests upon the health of mothers. Moreover, saving a mother's life is not only intrinsically valuable; the impact extends to her family, her community and her country as a whole (see Figure 4).

Since the launch of MDG 5, dramatic progress has been made in saving women's lives. By 2010, maternal mortality had declined by 47% from the 1990 baseline.² This success reflects the extraordinary dedication shown by numerous stakeholders within countries, from grassroots NGOs to professional associations and from international donors to political leaders. However, even with this remarkable improvement, more than 780 women around the world still die every day from pregnancy- or childbirth-related complications,³ even though more than 80% of these deaths are preventable.

While admiring the great progress made so far, we have to recognise that the current pace of improvement is insufficient. If it continues unchanged, nearly 90% of countries will fail to meet MDG 5 on time and more than half will probably still fall short in 2040.⁴

Maternal mortality remains one of the most unbalanced health indicators in the world, with 99% of deaths occurring in low- and middle-income countries.⁵ But the good news is that the handful of countries that have really transformed their record are drawn from every region of the world and every stage of economic development (see Figure 5).

In fact, almost half of the countries on track to meet MDG 5 have a per-capita GDP below \$1,000.⁷ Of course, their impressive improvement is often due in part to their starting point of very high maternal mortality, but their achievement still shows that a low level of economic development does not represent an insurmountable barrier to saving women's lives.⁶

The success of individual countries gives us cause for hope. It argues that all countries have the ability – as well as the responsibility – to make real and lasting improvements to maternal health.

This report looks at the success factors at work in various countries, so that they can be tried elsewhere. This information will be applicable to countries at all stages of the journey to meet MDG 5 – from countries that are just starting to gather momentum for change to countries that are in the “final mile” of optimising maternal health. The information is presented in the following forms: a set of five guiding principles for improving maternal health; a shortlist of critical initiatives; and a checklist of progress-friendly tasks that can be carried out tomorrow.

Methodology

“Maternal health” is understood as a woman's health from pre-pregnancy to postpartum, including pregnancy termination (miscarriage, stillbirth or abortion). To gain deeper insight into how countries might improve maternal health, a working group of senior figures from government, business, non-profit organisations and academia was formed (see Appendix 1). The group carried out the following tasks: compiling ideas based on their experience and expertise; interviewing stakeholders in countries that have already made significant progress; and soliciting input from other leaders, policy-makers and on-the-ground implementers from around the world (see Appendix 2).

* All costs in this paper are expressed in US dollars.

The group's methodology consisted of three steps. First, they conducted interviews with global experts and reviewed the medical literature to synthesise what is currently known about maternal health. This enabled them to identify the health interventions and the maternal health ecosystem described later in this report. Second, they investigated successful initiatives from around the world, to build a global view of what has worked and why. Finally, they visited some countries that have met MDG 5 and some that are struggling with the challenge and thereby were able to test the themes emerging from the first two steps and to translate the lessons learned into guiding principles.

This paper summarises the group's detailed discussions and analyses. In that way, it describes *what* is currently known about maternal health policy and, more importantly, *how* country leaders can translate that strategy into results. The objective is to clarify how people around the world are saving women's lives.

Figure 6

Change begins with understanding 5 principles that can further improve maternal health

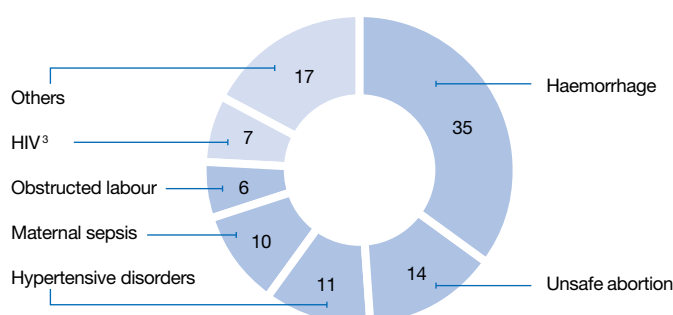
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Figure 7

The majority of maternal deaths could be prevented by 7 health interventions

Causes of maternal death¹

100% = 358,000 (2008)



Potential to reduce maternal mortality²

Thousands of lives saved (% of current deaths)

Health intervention²

Health intervention ²	Thousands of lives saved (% of current deaths)
Family Planning	Family timing/spacing and contraception: 107 (30%)
Safe abortion	Vacuum aspiration or medical abortion: 46 (13%)
Maternal care	Prevent haemorrhage: 34 (9%)
	Treat haemorrhage ⁴ : 29 (8%)
	Prevent/treat infection: 21-28 (6-8%)
	Caesarean section: 27 (7%)
	Prevent eclampsia / treat pre-eclampsia: 24 (7%)

Targets deaths due to...²

Targets deaths due to... ²
(Preventive) All causes
Unsafe abortion
Haemorrhage
Haemorrhage
Sepsis
Obstructed labour
Hypertensive disorders

(% of maternal deaths saved)

- For 2010, the total figures by cause were not available. However, total maternal deaths have reduced to 287,000 in 2010.
- Medical interventions have been prioritised and chosen on the basis of their link with key causes of death and high-impact potential to save lives, and have been validated through literature review and expert opinion.
- HIV data is estimated. Various sources state the total burden to be 3-17%. The 7% estimate is based on Spectrum modelling data.
- Examples of treatment include uterotonics, uterine massage, balloon tamponade, uterine compression sutures, hysterectomy.

Sources:
WHO, UNFPA, UNICEF, AMDD, Lancet, Team analysis

Guiding Principles for Improving Maternal Health

The work needed to further improve maternal health may appear overwhelming at first. It includes a wide range of interventions to be delivered within a complex maternal health ecosystem – everything from providing basic drugs and equipment to improving education and women’s rights. So it was a daunting task for the working group to determine the right areas and initiatives to focus on and to design an effective structure for implementation and impact. Nevertheless, after extensive research and analysis, the group identified five guiding principles that every country leader can follow (see Figure 6).

1. Entrench maternal health as a national priority by strengthening existing coalitions:

Leverage groups of individuals who are passionate about maternal health and unite them around a shared vision of success.

Most countries already have a number of passionate advocates for maternal health. They may be individuals or associations (for example, the White Ribbon Alliance and the Partnership for Maternal, Newborn and Child Health). By harnessing and increasing these advocates, a country can quickly form a “coalition for change” a group of key people who will commit to driving maternal health improvements. This coalition should include members from government, professional associations, NGOs, donors, implementers and the private sector.

Once formed, this coalition should promptly agree on the overarching goal: to meet MDG 5 targets as soon as possible. The initial priority should be to elevate the issue of maternal health to public prominence, such that it is acknowledged nationwide as an issue of vital importance. Rwanda serves as a good example here: its government worked successfully with maternal health stakeholders (including NGOs, the public and private sector and professional organisations) throughout the country to align everyone on a specific set of goals.

One successful method of advocating for maternal health is this: craft a poignant and compelling change-story – one that explains why mothers matter to the country – and then use this story to rally people to the cause of maternal health.

Another effective method is to link maternal health to a country’s other priorities. In many areas, maternal health has been closely linked with both children’s health and HIV prevention, for instance, but it can also be linked to more general social improvements. For example, improved roads enable women to reach hospitals more quickly; and lower poverty levels will enable more people to afford healthcare. If country leaders can identify other issues that are already national priorities, they can leverage those issues to inspire improvements in maternal health.

2. Focus on selecting and implementing a few, targeted initiatives:

Several innovative solutions to reduce maternal mortality have been successfully implemented around the world. Select and focus on the ones that will work for your local context.

Before countries can begin to deliver solutions for reducing maternal mortality, they need to gain a full and clear picture of the issues – which health interventions matter, what will work in their particular context – and to focus on delivering a few key initiatives.

The most common causes of maternal deaths globally are these: haemorrhage, sepsis, obstructed labour, unsafe abortion, HIV and hypertensive disorders. There are seven specific interventions that address these causes directly. If countries make these interventions widely accessible, they can significantly reduce maternal mortality (see Figure 7).

The interventions are: prevention of haemorrhage, treatment of haemorrhage, prevention/treatment of (pre)eclampsia, prevention/treatment of infection, Caesarean sections, family timing/spacing/contraception and vacuum aspiration/medical abortion.

Each of these seven health interventions can be broken down into a set of specific tools and actions and can be mapped to sites of care in the community, at primary-care level and in hospitals. See Appendix 3 for a delivery model for these health interventions.

The seven interventions can also be grouped into three core areas – family planning, safe abortion and maternal care. Of the three, family planning is probably the most effective at improving women’s health, in terms of both costs and maternal outcomes. It also drastically reduces the need for abortion services. Currently, an estimated 220 million women around the world are unable to time and space their families, because of a combination of a lack of the necessary information on contraception and the inability to regularly access contraceptives (of their choice).⁷ If family-planning services and supplies become widely available, that alone could reduce maternal mortality by up to 30%.⁸ It would also improve child health and boost the country’s overall development. However, it is not a panacea – each year 33.5 million users of family planning will experience accidental pregnancies, owing to method- or user-failure. So family planning on its own will not fully prevent all unintended pregnancies or make abortion services redundant.

Rwanda provides an instructive example of the power of family planning. The country managed to reduce maternal mortality by 50% within three years, and one major factor in that achievement was the family-planning initiative. Encouraged by its political leaders, the country implemented an integrated family-planning and maternal health programme focused on modern contraception techniques and facility-based births attended by skilled personnel.

In the opinion of the working group, family planning makes such an impact that it warrants substantially increased attention, investment and new research – within countries and globally.

The second core area, safe abortion, can also play a crucial role in reducing maternal mortality, given that 14% of maternal deaths globally result from unsafe abortions. In Romania, the legalisation of abortion caused maternal mortality rates to plummet. Thanks to the combination of safe abortions, family planning and teenage sexual education, the country’s maternal mortality declined by 85% in the 20 years from 1990-2010.

Success stories emerge from the third core area also – maternal care. Tamil Nadu state in India set out to improve access to and demand for obstetric care. The province invested in enhancing maternal healthcare services, concentrating on 24/7 availability, transportation, infrastructure upgrade and training in cultural appropriateness. To overcome resource constraints, the authorities contracted private doctors. Thanks to these measures, maternal mortality in the region fell by 75% during the 1990-2010 period.

As these and many other examples demonstrate, high-quality healthcare is crucial to saving mothers’ lives. All the same, healthcare alone is not the full solution. Our fieldwork has shown that even when high-quality healthcare is available, there are often delivery obstacles – physical, financial and cultural – that prevent women from accessing it.

Figure 8

Healthcare alone is not the answer: maternal-health improvement must be made across an ecosystem of supply, demand, affordability and accessibility

A Provide quality healthcare

Ensure that the 7 health interventions across 3 areas can be provided with skill and empathy

B Stimulate desire for care

Ensure that women and their influencers know the importance of family planning and maternal care, and are willing, enabled and empowered to seek these services

C Ensure financial affordability

Innovate to provide affordable care to those who can contribute and free care to those who need it most

D Ensure physical accessibility

Overcome barriers that prevent women from accessing care by bringing women to healthcare or bringing healthcare to women



Source:
Team analysis

Accordingly, the best maternal health programmes seek a broader stage on which to implement changes – a larger and more holistic “maternal health ecosystem”. This ecosystem has four elements: quality, desirability, affordability and accessibility. More specifically: high-quality maternal healthcare is provided and is made available when needed; women and their families receive engaging information on the importance of maternal care; strategies are implemented to enable women and their families to afford healthcare; and mechanisms exist to ensure that healthcare is easily accessible (see Figure 8).

First, improved quality of care: consider the case of Morocco. The country has made considerable investment in such improvements, including an audit and upgrade of medical facilities, more training for doctors and midwives and the deployment of mobile medical teams into rural areas to identify high-risk pregnancies. The use of skilled birth-attendants rose from 71% in 2007 to 83% in 2009. More to the point, maternal mortality registered a 60% fall in the period 1990-2010.

As for increasing the desirability of care – publicising the need for care and stimulating demand for care – some countries have developed innovative approaches to the challenge. In India, for instance, where cultural and communication barriers have long been preventing some people from seeking healthcare, the national government is collaborating with women’s groups among poor and rural populations. The initiative has now reached 55% of women of reproductive age from the target population and enabled them to access essential maternal health education. Other effective ways of stimulating demand for care involve community health workers who are trained to encourage mothers to seek help if experiencing complications during pregnancy.⁹

As for affordability, many countries are developing creative ways of enabling women and their families to pay for the care they need. Without going to the extent of providing free universal care, governments might strive to reduce the out-of-pocket cost-burden for individuals, by adopting the following approaches (singly or in combination): subsidising care provision; involving the private sector; and offsetting individual costs through innovative insurance solutions. In India again, the government of Gujarat oversaw a Public-Private Partnership (PPP) that opened up the private sector and contributed to the 60% reduction in maternal mortality during the 1990-2010 period.

Figure 9

Casas maternas are key to addressing both access to care and cultural acceptability of facility-based births in Peru



Entry to urban casa materna, close to clinic



Expecting woman with providers at rural casa materna



Bedroom at urban casa materna

Casas maternas...

Started in poorest regions with large indigenous populations and high mortality to **increase access to care**. They provide a place for women to stay close to the clinic where they will give birth.

Bring women closer to basic care, and to an ambulance to bring them to emergency care if needed. Casas maternas are often close to clinics that provide only basic care, but an ambulance is available if needed.

Have since **become a tool to ensure acceptability of care**. Some casas maternas allow births in an environment that reflects the important cultural aspects of home births: vertical delivery, qualified female providers, ability to eat/drink traditional foods and teas during labour.

Work well, by addressing women's concerns over leaving their families and homes. Nationally, women create birth plans that identify who will care for their children, home, and livestock.

Finally, accessibility: for most pregnant women, the requisite health services can be provided in their communities or at a primary health centre (one equipped to assist with basic deliveries but lacking an operating room). However, some women will require emergency obstetric care and it is crucial that they are able to reach a hospital. To that end, many countries are creating emergency transport systems. Some are building “maternal waiting homes” near clinics that have emergency transportation and during the last weeks of their pregnancy, women stay at these homes with their children. Peru’s *casas maternas* are a case in point (see Figure 9).

The *casas* are located near basic health clinics, which can arrange for ambulance transport during emergencies. Furthermore, the *casas* incorporate local customs and foods, to make mothers-to-be more comfortable and hence more willing to seek care. If other countries follow the Peruvian example, they should maximise community support by involving local leaders in decision-making and ensuring that the initiative is respectful towards local culture.





There are many other innovative ways of addressing the accessibility issue – the use of visiting health workers or mobile clinics to provide basic health services to women in their communities; the setting up of telemedicine clinics; the push for wider distribution of important drugs (for example, misoprostol for postpartum haemorrhage) and so on. In the rural Punjab, a private for-profit company has established healthpoints that provide low-cost benefits to the local residents. The company combines clean-water distribution with basic healthcare services; where necessary, physicians examine patients via telemedicine techniques/interview, supported by trained assistants on the ground.

Critical Initiatives across the Maternal Health Ecosystem

The countries most successful at improving maternal health are those that have implemented initiatives for every part of the ecosystem. The working group have drawn up a list of particularly effective initiatives – initiatives that have made a striking impact in many countries (see Figure 10). It is worth comparing the items on this list against the initiatives that your country has undertaken so far.

Figure 10

A few critical initiatives can dramatically improve maternal health

 Provide quality healthcare	 Stimulate desire for care	 Ensure financial affordability	 Ensure physical accessibility
Create and train healthcare workers in clinical guidelines that cover the 7 core medical interventions	Develop individual birth plans for women who face significant barriers to accessing care	Segment your population so you can provide free essential care to those who need it most	Provide temporary accommodation close to medical facilities for mothers who live in remote areas
Ensure 100% availability of clean delivery kits, uterotonics (e.g. misoprostol) and other life-saving drugs (such as antibiotics and magnesium sulphate) at health facilities	Respect local cultural constraints when providing clinical and other healthcare	Use micro-insurance for those who can afford small premiums	Send a caregiver into rural areas 1-3 times per year, to promote awareness of maternal health and to provide contraceptives of choice
Investigate each maternal death and make local leaders responsible for prevention	Use local context and cultural references to communicate the importance of family spacing and institutional delivery to at-risk populations	Encourage local contributions by enabling community insurance	Provide emergency transportation between primary care centers and hospitals And Consider innovative, remote solutions, e.g. mobile healthcare / tele-health

Source:
Team Analysis

Although this list of initiatives may seem long, it does not imply great expense. Maternal health can be improved relatively cheaply. From a survey of five countries and one Indian state, we know that a successful initiative to reduce maternal mortality costs governments between \$1 and \$6 per targeted woman (see Figure 11).

Furthermore, the money spent on improving maternal health goes far beyond saving women's lives. Experts estimate that programmes emphasising family timing and spacing could save more than \$5 billion globally, by reducing the need for treating mothers and their newborns.¹⁰ Other research suggests that for every \$1 spent on family planning, governments could save \$4 on the treatment of complications from unplanned pregnancies and \$31 on social services (including healthcare, water, education, housing and sewers).¹¹ So investments in women's health, when combined with sound economic and social policies, can drive economic gains, improve living standards and reduce poverty levels.¹²

One area of great interest is that of nutrition. It lies at the edge of the maternal health ecosystem, but it shows how interconnected health goals are. By improving nutrition for women in adolescence, before conception and during pregnancy, you improve outcomes generally. But the challenge is often cultural rather than financial. Many poor women face food taboos that restrict their diet even when food is plentiful; these and similar issues can be addressed by national-health and nutrition-promotion initiatives.

Figure 11

Significant improvements in maternal health have been achieved for between \$1-6 per targeted women

Case example	Funding covers ...	Total annual cost USD millions ¹	Targeted women Million	Cost estimate USD/ targeted woman ²	Annual reduction in MMR Percent	MMR 2011
Morocco (2008 - 12)	Free emergency obstetric care Facility upgrades/quality Emergency transport	44	8.2	5.3	-12.0	75
Tamil Nadu (India) (2005 - 11)	24-hour services 2,000+ additional nurses Training/equipment upgrades	22	16.4	1.3	-6.5	97
Romania (2003 - 11)	Family planning/education Quality improvements	12	4.8	2.6	-5.8	25
Vietnam (2000 - 09)	Training of doctors and facility upgrade. Education of population. Micro-insurance	31	22.9	1.4	-4.3	54
China (2000 - 09)	Facility upgrade Demand-creation	728	317.7	2.3	-6.8	27
Peru (2009 - 15)	Facility upgrades/quality Casas Maternas Emergency transport	22	7.0	3.2	-5.7	52
Total cost <0.1 of GDP in all countries						

1 Costs for government spending

2 Women in reproductive age (15-49)

Source:

Plan Maroc 2008; MoH; Tamil Nadu Health System Project; Sexual and Reproductive Health Strategy; MoH Romania; USAID; The Lancet; Plan estratégico nacional para la reducción de la mortalidad materna y perinatal, MoH Peru; Centre for Community Health Research and Development Vietnam; UNICEF Report on China; Chinese MoH Maternal H. Program

3. Strengthen ownership at the grass-roots level:

Inspire your people to continue to make a difference in maternal health and ensure they have the skills and power to drive the solution locally.

Because change often happens at the grass-roots level, the best people for finding appropriate solutions are often local individuals. Make sure that they can relate to the story for change and give them a sense of pride and ownership in the outcomes. In that way, a country's leaders can transform MDG 5 from a national priority to a personal priority for everyone involved. If leaders empower people to act (and ensure that they know what to do and how to do it), that will speed the progress towards saving mothers' lives.

A maternal health programme needs to have unified standards at every point of delivery, so everyone involved in women's healthcare should receive clear guidelines and manuals on how to implement the needed medical interventions. (These guidelines and manuals can be based on existing materials, such as WHO documents).¹³ The programme should allow flexibility, however, so that solutions can be adapted to local conditions. In the antenatal period, for instance, community volunteers might help women to develop individualised birth plans. These would be based on uniform, easily understood templates, developed nationally; and they would reassure the mother-to-be by specifying who will take responsibility for her family, household and livestock during her confinement.

Leaders also need to create accountability at all levels. To that end, they should require frontline staff to consult the guidelines on medical interventions regularly – the materials should not sit unused on dusty shelves. In Vietnam, for instance, even at small primary-care centres, the staff are well-versed in the guidelines on maternal health. Witness the manager of a clinic in Luong Son District: she had her Ministry of Health guidelines ready to hand and could report exactly the required skills of each staff member, the supplies that should be in stock and so on.

4. Continually innovate to maximise available resources:

Focus on using current assets creatively and efficiently, while also leveraging the power of the private sector and other contributors.

Most countries already have in place many of the building blocks they need for creating an individualised, effective approach to improving maternal health. Though extra financing and staff would always be welcome, leaders tend to make the most of what they have and often use the available resources very effectively in improving the lives of women. Even very straightforward projects (improving the training of existing healthcare workers, for example, or ensuring basic drug and equipment supplies) can make a powerful impact on the quality of women's health.

Leaders also need to foster any private healthcare provision that already exists and maintain the supply of high-quality health products and services.¹⁴ In Tanzania, for example, the Ministry of Health – in partnership with Management Sciences for Health – has launched the Accredited Drug Dispensing Outlets (ADDO) programme, to register, accredit and regulate retail drug outlets and pharmacies. The effect has been to weed out substandard businesses and focus the registered ones on providing high-quality medicines and services to their surrounding populations.

To bring out the best in people and get them working to their full potential, leaders and line managers can adopt various innovative methods. They should define roles clearly – which personnel should perform which tasks – and target resources to where they are most needed. To optimise resources, for example, they might experiment with physician-rotation programmes and task-shifting. Mozambique overcame a shortage of doctors by training surgical assistants to perform obstetric operations and in rural areas. 90% of Caesarean sections are now conducted by these surgical assistants – at 25% of the cost and without significant loss of quality.

To maximise the reach of existing finances, leaders (and the coalitions for change that they establish) have much to do. They should avoid financing in silos and should work closely with other ministries or programmes that benefit maternal health, such as education and economic development. They should use new ways of reducing costs, such as micro-insurance, voucher programmes and conditional cash transfers. Such programmes – which are often best executed in partnerships among health ministries, health facilities and even mobile phone providers and transportation operators – channel resources through the public sector but encourage even the poorest patients to make use of private services. This approach is exemplified by the aforementioned work in Gujarat. One further technique is to exploit high demand by buying in large volume and thereby securing lower prices with the private sector.

Working effectively with the private sector is crucial. Leaders should determine when and where the private sector outperforms the public sector in accessibility or quality and then enable it further in those areas, if appropriate. Conversely, in those areas where the private sector underperforms, leaders should consider strengthening the regulations. Pakistan exemplifies an effective policy towards the private sector. After outsourcing family-planning services to private-sector contractors, the country registered a 15% increase in the use of contraceptives.

Finally, many of these policies can also be applied to foundations and other contributors – Bill and Melinda Gates Foundation, UKAID, USAID, IFC, CIDA, Save the Children, PLAN, PATH, Care, World Vision and so on.

**5. Reinforce accountability
by consistently
measuring what matters:**

*Regularly track leading
indicators for maternal health
and establish seamless
and sustainable monitoring
to ensure accountability
throughout the system.*

Four elements are essential for ensuring accountability. First, leaders should identify a clear set of data for monitoring improvements in maternal health and integrate them into a “minister-level” dashboard that highlights both process and outcome indicators. Such monitoring can generate data on a variety of measures; for example, the percentage of women whose babies are delivered by skilled birth-attendants, the percentage of women giving birth in properly equipped facilities, the number of stock-outs for contraceptives and drugs such as oxytocin and the number of interventions that can be appropriately conducted at each facility. Sometimes other, more direct monitoring may be called for, including on-the-ground investigation of specific maternal deaths. In Peru, for instance, direct monitoring provides details about each maternal death: the Ministry of Health dispatches a team to establish the main cause of each death and to implement solutions that will prevent a recurrence of the problem.

Second, leaders should develop short cycles for generating data and should conduct active monitoring. To be effective, indicators need to track progress of work at all levels in the health system and by all stakeholders involved in implementing maternal health initiatives. There should also be clear delineation of responsibilities for reporting data and providing feedback. Monitoring progress is often of great value in driving accountability; it also helps leaders to understand when and why targets are not met and to make prompt course-corrections accordingly.

Third, leaders should seek to promote accountability at all levels in the health system. This is particularly necessary when different levels have to hold one another accountable. For instance, a small hospital might be responsible for checking up on its subsidiary health centres and ascertaining that their staff are well-trained and their supply of essential drugs is maintained. The small hospital might, in turn, have its performance monitored by a larger, regional hospital.

Finally, leaders should promote friendly competition by highlighting achievements and rewarding success. When people do well, they should earn appropriate recognition. At the aforementioned Vietnamese clinic, the manager was proud to show off the many awards on the wall, the most recent being for second place in the district for best provision of care.

In addition to the steps discussed here, note the considerable amount of work that has recently been done by others in monitoring maternal health, in particular the recent WHO report on “Keeping Promises, Measuring Results”.¹⁵

Unifying Stakeholders on a Common Goal

Since committing to MDG 5, the world has registered remarkable progress in saving women's lives. As mentioned, this success is a tribute to the dedication of so many stakeholders in so many countries – the grass-roots NGOs and the professional associations and the international donors and the political leaders. Because each of these groups brings a strong and proven skill-set to the mix, we are confident that the world can reduce maternal mortality further and will meet MDG 5 in the foreseeable future, even if it misses the original target date.

Of the five principles outlined above, two should be the responsibility of national government – the first and last. National governments have both the strategy-setting responsibility and the convening power to engage other organisations concerned about maternal health and bring them into a coalition for change. That could achieve the realisation of the first guiding principle (*Entrench maternal health as a national priority by strengthening existing coalitions*). In addition, given that MDG 5 is measured on a country-level, it is national government that must take primary responsibility for our fifth guiding principle (*Reinforce accountability by consistently measuring what matters*).

National governments also have a role to play in implementing other guiding principles, though they can draw on a great deal of support from elsewhere. Many donors and technical groups are well-suited to help achieve the second principle (*Focus on selecting and implementing a few, targeted initiatives*). Similarly, professional organisations, NGOs and local advocacy groups are often well positioned to help achieve the third principle (*Strengthen ownership at the grass-roots level*). And the private sector and other organisations can contribute to implementing the fourth principle (*Continually innovate to maximise available resources*). Many other synergies are possible too. For example, a regional NGO could help in tailoring a national solution to a local context, or the private sector could raise the profile of maternal health and help to make it a national priority.

There is no single simple method for bringing all five principles to fruition. Each country must decide its own path. One thing is certain, however: to speed up progress on MDG 5 will require commitment and collaboration. So let us all pledge ourselves once again to work together for the sake of saving women's lives.

Getting Started: Tomorrow's Checklist

The five principles provide a reference point for all countries – those that have already made considerable progress, as well as those that need to increase their pace. We must all keep faith with this simple consideration: the world *can* reduce the rate of maternal mortality to the level targeted by MDG 5. It is neither impractical nor idealistic to accept that possibility. Countries all around the world have achieved that level already and we can learn from their example. Saving women's lives is not only an important goal in itself. By reducing maternal mortality and meeting women's need for family planning, you help to optimise the future adult population of countries, strengthen healthcare systems and create long-lasting improvements in society.

So what can you do tomorrow? How can you translate the five principles into action? The following checklist (Figure 12) can point you in the right direction.

Figure 12

What can you do tomorrow to save more women's lives?

✓	Commit to making maternal health a personal priority
✓	Ensure there is a compelling case for change in place that inspires everyone – from village mother to Prime Minister – to join you in saving mothers' lives
✓	Identify any existing alliances for improving maternal health and handpick a few influential leaders who will drive change starting tomorrow
✓	Use others' success as inspiration - create a shortlist of 2-3 innovations that could dramatically improve maternal health in your country
✓	Define and commit to follow up personally on the most relevant process & outcome indicators* for your top 2-3 initiatives (e.g. availability of contraceptives, facility-based deliveries, maternal mortality ratio)
✓	Prevent resource constraints from stalling progress – start change with what you have
How many more lives could you save?	

*Good indicators are those suggested by the UN for MDG 5 (see <http://mdgs.un.org/unsd/mdg/Host.aspx?Content=indicators/officialist.htm>)

Appendix 1: Working Group Members and Acknowledgements

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Appendix 2: Interviews, Country Visits and Literature Review

Interviews were carried out with:

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Literature Review:

WHO documents
Lancet
UNICEF
UNFPA
MDG monitor
AMDD (Averting maternal death & disability)
RCOG (Royal College O&G)
BMJ (British Medical Journal)

Country Visits

Peru
Vietnam
Nigeria

Appendix 3: Delivery Model for the 7 Health Interventions

		Where to do it?			Who could do it?					What is needed
		Community	PHC	Hospital	Women	CHW	SBA	Train Assist.	Obst/ Gyn	Commodities
1. Prevent haemorrhage	Uterotonics	✗	✗	✗	✗	✗	✗	✗	✗	Uterotonic ¹
	Controlled cord traction	✗	✗	✗			✗	✗	✗	
	Uterine massage	✗	✗	✗			✗	✗	✗	
2. Treat haemorrhage	Recognize and referral	✗	✗	✗	✗	✗	✗	✗	✗	
	Uterotonic	✗	✗	✗	✗	✗	✗	✗	✗	Uterotonic ¹
	Balloon Tamponade		✗	✗			✗	✗	✗	Balloon, OT ³ , anesthesia
	Uterine Massage		✗	✗			✗	✗	✗	
	Blood Transfusion			✗				✗	✗	Blood, IV fluids
	Removal of Placenta		✗	✗			✗	✗	✗	Uterot., Blood, IV fluids, anesthesia
	Manual Compression		✗	✗			✗	✗	✗	
	Brace suture			✗				✗	✗	Blood, IV fluids, anesthesia
3. Prevent/treat (pre) eclampsia	Hysterectomy			✗				✗	✗	Blood, IV fluids, OT ³ , anesthesia
	Calcium supplements	✗	✗	✗	✗	✗	✗	✗	✗	Calcium pills
	Low dose aspirin	✗	✗	✗	✗	✗	✗	✗	✗	Aspirin pills
	Blood pressure	✗	✗	✗		✗	✗	✗	✗	
	Urine dipsticks	✗	✗	✗		✗	✗	✗	✗	
	Magnesium sulfate (MgSo4)	✗	✗	✗		✗	✗	✗	✗	
	Anti-Hypertensives		✗	✗			✗	✗	✗	Anti-Hypertensive drugs ¹
	Recognize and referral	✗	✗	✗	✗	✗	✗	✗	✗	
4. Caesarean Section	Induction of labor			✗				✗	✗	Drug
	Caesarean Section			✗				✗	✗	See below
	Recognize and referral	✗	✗	✗			✗	✗	✗	Blood pressure monitor
	Blood transfusion			✗				✗	✗	Blood
5. Prevent/treat infection	Anaesthesia			✗				✗	✗	Anaesthetics
	Surgery			✗				✗	✗	Operating theatre
	Clean delivery kits	✗	✗	✗			✗	✗	✗	Clean delivery kit
	Oral antibiotics	✗	✗	✗			✗	✗	✗	Oral antibiotics ⁴
6. Family timing / Contraception	Intravenous antibiotics			✗				✗	✗	IV Antibiotics
	Recognize and referral	✗	✗	✗		✗	✗	✗	✗	Transport
	Counselling	✗	✗	✗	✗	✗	✗	✗	✗	
	Condoms	✗	✗	✗	✗	✗	✗	✗	✗	Condoms
	Pills	✗	✗	✗	✗	✗	✗	✗	✗	Pills
7. Safe abortion	Implants/intruterine devices			✗				✗	✗	Implants/IUDs
	Sterilizations							✗	✗	Operation theatre
	Medical abortion		✗	✗			✗	✗	✗	Misoprostol
	Vacuum Aspiration		✗	✗			✗	✗	✗	Vacuum aspirator

1 Oxytocin Ergometrine – for self medication of women: Misoprostol.






2 Ampicillin, Gentamicin, Metronidazole.

3 OT = Operating Theatre.

4 Methyldopa, Hydralazine, Nifedipine.

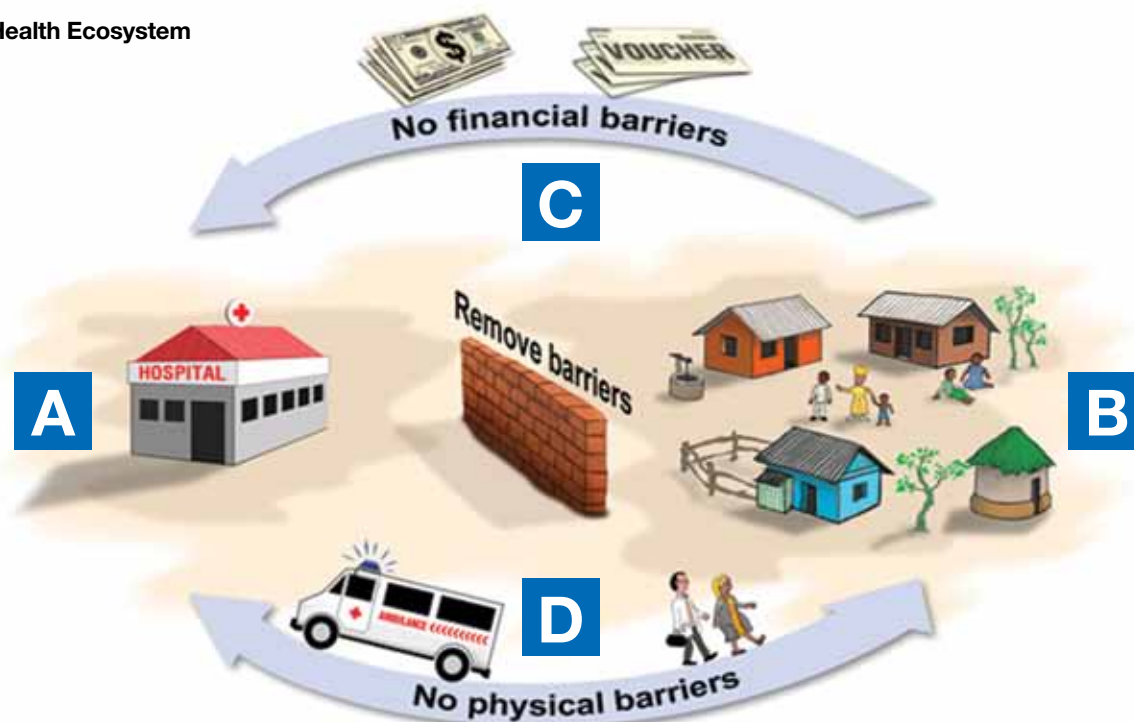
Source:

Team Analysis, Partnership for Maternal Newborn & Child Health.

 Obstetric Care
 Family Planning
 Safe abortion (where permitted)
 ✗ Could be done
 ✗ Needs to be done

Appendix 4: Country Case Examples

Maternal Health Ecosystem



Bangladesh

Family planning program helped to half maternal mortality

Key summary: Bangladesh reduced maternal mortality and fertility rate by 50%, driven by their strong focus on family planning. Outreach workers were recruited to educate women about contraception, clinics were founded to provide permanent sterilisation. Multiple NGOs supported both with content and financing.

Starting points:

- A** Contraception or family planning not provided in rural areas
- B** Low awareness of need for family planning and belief that large families are better
- C** Poor population – no financial means to afford contraceptives
- D** No access to contraception for women in rural areas with limited mobility

What did you achieve?

- Contributed to MMR reduction from ~600 to <300 (avg. annual decline of 4.2%)
- Fertility rate reduction from 6.3 to 3
- Increase of contraceptive usage from 8% to 60%

What tangibly did you do?

- Recruit and train outreach workers to educate about contraception
- Distribute temporary contraception and establish clinics for permanent sterilisation
- Communicate with mass media (social marketing)

What were key factors for your success?

- Setting up a coalition of multinational organisations for programme design and financial support
- Strong political commitment after famine highlighting the high fertility rate being a major challenge for the country
- Focusing all efforts on family planning instead of trying to solve too many problems at a time
- Using the private sector in social marketing and franchising models
- Embrace the culture of the population by recruiting educational workers from the villages

Source:
Center for Global Development,
Washington DC; UK Dpt. of
international development

Bolivia

Payment for clinic attendance stimulated 3.5m consultations

Key summary: Bolivia reduced maternal mortality and stimulated additional 3.5m consultations per year through cash incentives. Women were empowered to take responsibility for their health and overcame dysfunctional beliefs about medical abuse in hospitals.

Starting points:

- A** Sufficient medical services available in the cities, poor care in rural areas
- B** Limited demand due to traditional roles and rumours about medical abuse
- C** Women lack financial support to seek care, women culturally encouraged to defer
- D** In rural areas very difficult accessibility due to slowness and cost of transport

What did you achieve?

- 3.5 million more consultations per year
- Contributed to 20% decrease in maternal mortality ratio (end MMR: 180)
- Successfully empowered women to take responsibility for care

What tangibly did you do?

- 4 separate stipends of \$7 each paid to women during pregnancy, 12 further payments for infant check-ups and institutional delivery
- Expand clinic provision and birth certificate distribution
- \$25 million spent on project
- Dispelled rumours of medical abuse of women in hospitals

What were key factors for your success?

- Understand complex root causes of traditional roles and prevalent view of medical abuse restricting female attendance and focus on the empowerment of women
- Fully use capacity of existing healthcare infrastructure before extending the network
- Strong support through vision of the Bolivian president and the commitment of the government

Source:
UNECOSOC, UNICEF, Lancet

India (Gujarat)

PPP scheme opened up private sector for poor mothers and helped reduce maternal mortality by 60%

Key summary: Gujarat established a subsidized insurance scheme reducing the out-of-pocket cost for deliveries in the private sector from 100 USD to 18 USD leading to institutional delivery rate of 99% and 60% drop in maternal mortality. Cost were borne by public households and private sector.

Starting points:

- A** Overstrained public institutions, but sufficient private healthcare providers
- B** Many poor women not aware of need for health services during maternity
- C** Poor women can't afford institutional delivery in the private sector
- D** Physical accessibility is given

What did you achieve?

- Helped reduce maternal mortality from 160 to 67 for total population
- Helped increase institutional delivery rate for poor population from 56% to 99%
- Access for poor population to 817 private providers through scheme covering ~400,000 deliveries per year
- Reduction of total cost per delivery borne by for women and public sector by 30%

What tangibly did you do?

- Contract with private providers in maternity insurance scheme for the poor
- Negotiate reduced prices; partially subsidize through government
- Register women below poverty line (eligibility check via BPL¹ cards)
- Pilot in one district (2005) and roll out in 2nd phase (2007)

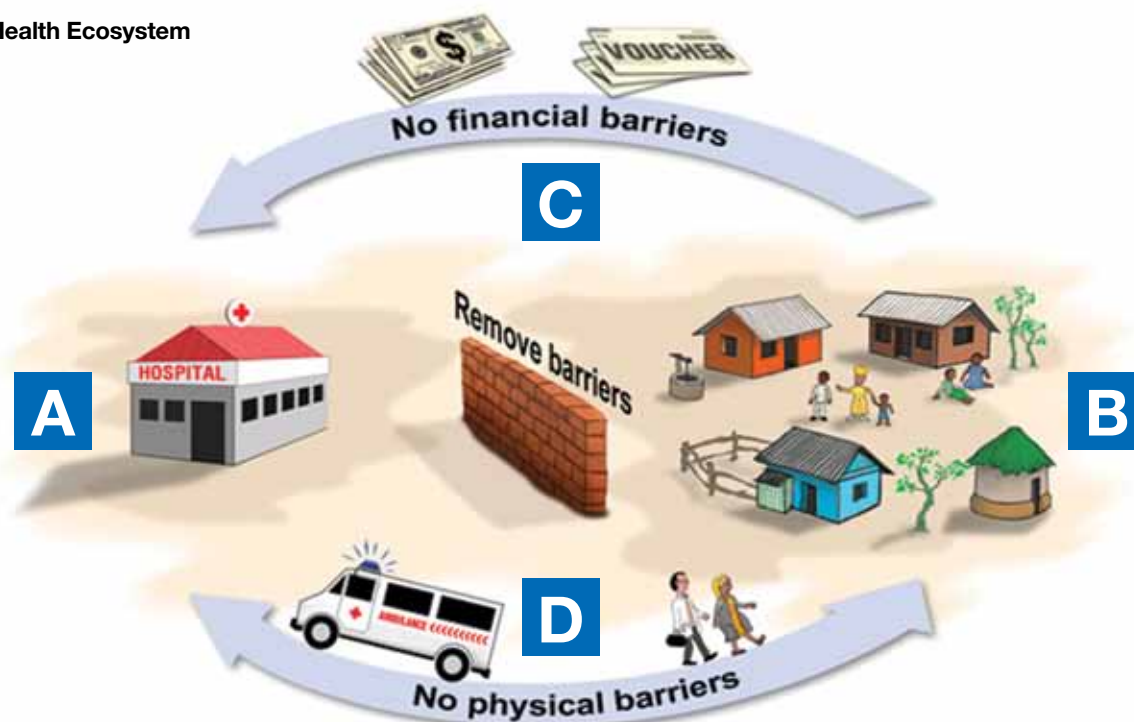
What were key factors for your success?

- Target women below poverty line who have highest mortality ratios
- Include the private sector in a partnership model to expand resources and to lower cost
- Measure what matters: Set targets and track institutional deliveries and C-Sections across the entire scheme

¹ Below poverty line

Source:
R. Bhat, Indian Institute of Management,
UNICEF

Maternal Health Ecosystem



India (Nationwide)

Pilot of women's groups helped to reduce MMR by 25 percent

Key summary: India is piloting participatory education in women's groups which led to MMR reduction from 680 to 521. Initiative targets poor and rural population and provides education basic maternal health knowledge in a culturally appropriate way. Women are encouraged to find their own individual solution. Men of the communities are involved as well.

Starting points:

- A** Health infrastructure is in place, even though not at optimal level
- B** Low awareness of population for importance of institutional delivery, >80% of home deliveries
- C** 40% of population below poverty line
- D** Difficult access to infrastructure in rural areas

What did you achieve?

- Aided maternal mortality reduction from 680 to 521
- 55% of women of reproductive age attend groups
- Improved hygiene in intervention groups

What tangibly did you do?

- Build on existing women's groups and add additional groups
- Identify additional group facilitators with language and culture skills
- Provide 7 days of training of participatory education and continuous coaching
- Communicate to women in reproductive age in the villages
- Involve men through community health committees
- Conduct monthly group meetings for 20 months, teach maternal health basics and let women develop their individual health strategy

What were key factors for your success?

- Understand the cultural preferences of women and match them in regards to language, educational stories and self-creation of solutions
- Build on existing structure of women's groups to benefit from acceptance and scale up
- Let mothers develop their own the solutions to ensure sustainable behavioural change
- Use simple meeting format and simple stories to communicate the essentials

Source:
P. Trivathy, Lancet 2010

India (Punjab)

Innovative establishment of for-profit private telemedicine clinics in rural areas bring care to women

Key summary: The private for-profit company eHealthpoint established 8 healthpoints in rural Punjab providing quality medical services at affordable cost. The company combines clean water distribution with provision of basic healthcare services. Physicians are centralized and examine patients via telemedicine supported by trained assistants on the ground.

Source:
Harvard Business Review October 2011;
www.ehealthpoint.com;
www.savinglivesatbirth.net

Starting points:

- A** Overstrained public institutions with frequent shortage of electricity
- B** Women still use traditional healers and have little trust to modern medicine
- C** Public medicine is affordable
- D** Public institutions are close, but no modern private providers

What did you achieve?

- Established 8 healthpoint facilities, 6 of them break even or profitable
- Provided >30,000 consultations and >17,000 diagnostic tests in 1 year
- Provides clean water to 300,000 people per day
- Gained 'saving lives at birth award' for offering basic maternal and child health services according to WHO guidelines
- Receives expansion proposals from other states in India

What tangibly did you do?

- Raised 2m USD from investors, foundations and Punjab government
- Recruited doctors with cultural fit to rural areas in central location
- Recruited assistants/midwives and health workers within villages
- Drilled sources for clean water to attract people for healthcare

What were key factors for your success?

- Make best use of existing resources by recruiting health workers in villages and leaving the doctors in the place where they like to be
- Cooperate with the private sector to get the required technology
- Use simple solutions: Provide clean water to attract people to healthcare services
- Be targeted who you want to attract and go where the highest need is

India (Tamil Nadu)

Invested in access to emergency obstetric care which contributed to reducing MMR to 90

Key summary: Tamil Nadu invested in quality and availability of maternal healthcare services reducing MMR by 75% over 15 years. Focus areas were 24/7 availability, transportation, infrastructure upgrade and training and cultural appropriateness. Resource constraints were overcome by contracting private doctors.

Source:
Padmanaban, Ministry of Health and Family Welfare, India; World Bank

Starting points:

- A** No 24 hour care or complex care such as blood banks. Limited doctors
- B** Women avoid clinics due to lack of social support in the labor rooms
- C** Public care is provided at no/low cost
- D** Lack of emergency transport poses barrier

What did you achieve?

- Contributed to MMR reduction from 390 to 90 over 15 years
- Aided in increase of institutional delivery: from 64% to 88%

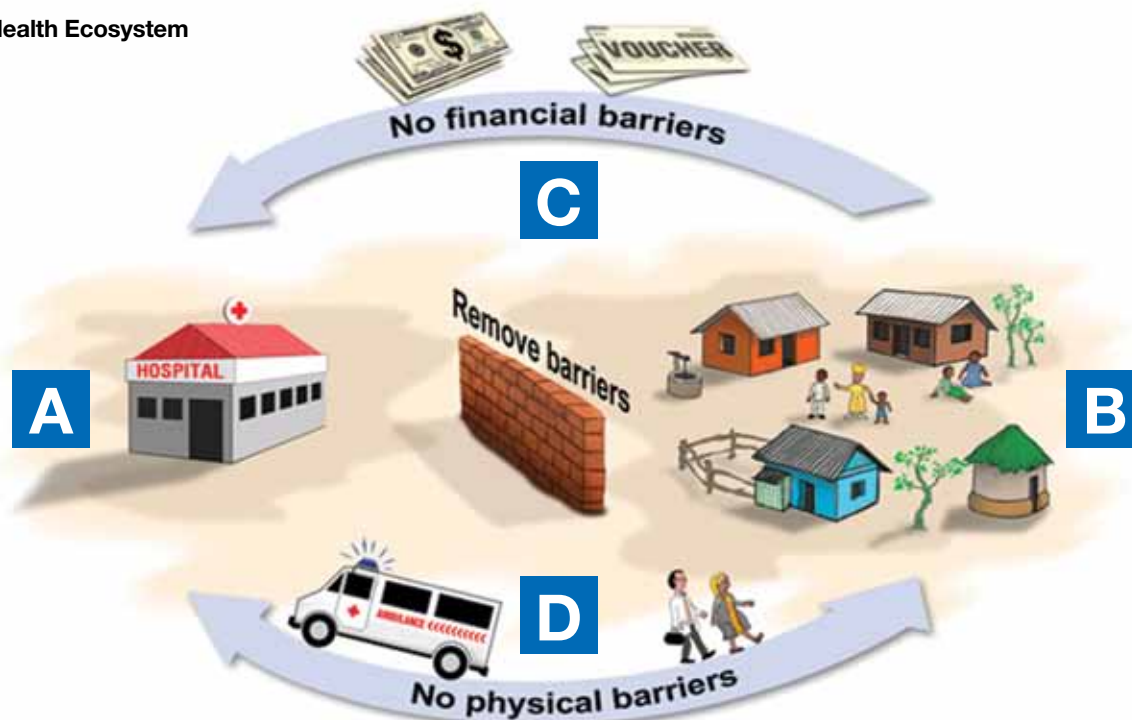
What tangibly did you do?

- Increase nursing staff in primary healthcare center to offer 24/7 services
- Outsource emergency transportation
- Select critical first referral units and upgrade to comprehensive emergency obstetric care units - one in reach within 2 hours from everywhere
- Allow mothers to bring female companion for social support

What were key factors for your success?

- Engage your leaders to implement the solution and ensure continuity of key personnel
- Use private healthcare providers as additional resources and secure the quality of their care visits
- Understand cultural barriers and simply invite women to traditional ceremonies at facilities and antenatal care
- Increase ownership of women by keeping a small financial contribution (stake in the game)

Maternal Health Ecosystem



Morocco

Focus on quality and affordability to drive demand for obstetric care in the entire country helped reduced MMR by 60%

Key summary: Guided by a national commission for maternal health, Morocco invested in a comprehensive programme to improve the quality of obstetric care, including facility upgrades and provider training. Improving patient experience, providing ambulatory transport in rural areas and making obstetric care free for all drove up demand for care.

Starting points:

- A** Substantial infrastructure in place
- B** Perceived poor quality deterred many women from delivery facilities
- C** 74% of women report financial barriers to care
- D** 60% of women report physical barriers to care; 43% population is >6km away from the most basic health facility

What did you achieve?

- Helped reduce MMR to 112 (2010), a 60% reduction from 1990
- Use of skilled birth attendant increased from 71% in 2007 to 83% in 2009

What tangibly did you do?

- Ensure obstetric ambulances for rural settings
- Identify high-risk pregnancies in rural areas through mobile medical units
- Increase training of doctors and midwives
- Audit, upgrade maternity care facilities
- Improve quality of patient experience in facilities
- Provide free emergency and obstetric care

What were key factors for your success?

- Build a change network in form of a national commission for maternal health including all relevant stakeholders
- Diagnose the situation based on surveys and be targeted in the strategy (quality and patient experience, transport, affordability)
- Build on the strong leadership from the King and the Minister
- Create accountability throughout all levels of the administrations by measurement of success and follow up

Source:
 Morocco Ministry of Health. plan d'action pour Accelerer la reduction de la mortalite maternelle et infantile, 2008 – 2012;
 Ministry of Health, Morocco. Reducing maternal mortality in Morocco. Sharing experience and sustaining progress. Kingdom of Morocco, Ministry of Health, Rabat, 2011.

Mozambique

Task shifting to overcome the lack of doctors led to 75% cost reduction at equal quality levels

Key summary: Mozambique overcomes shortage of doctors by training surgical assistants to perform obstetric surgeries. 90% of Caesarean Sections in rural areas are conducted by trained surgeons at 75% lower cost and same quality. WHO and UNFPA support the program with content design and quality assurance.

Starting points:

- A** Extremely poor coverage of obstetric care (26 obstetricians in entire country)
- B** Tradition of home births in rural areas
- C** Very low financial means (annual total health expenditure at 25 USD per capita)
- D** 62% of population live in rural areas – while obstetricians have migrated into cities

What did you achieve?

- Training of 61 surgical assistants providing care at same quality as obstetricians (since 1984)
- 92% of surgeries performed by surgical assistants
- 90% of surgical assistants trained remained in rural areas
- Cost of Caesarean section decreased \$144 to \$39

What tangibly did you do?

- Offering 3 year apprenticeship style training course for surgical assistants to cover unmet need of surgeries
 - Caesarean sections, repair of uterine rupture, tubal ligation
- Received content support in program design from WHO and UNFPA

What were key factors for your success?

- Ensure quality by assessing outcome measures of surgical assistants to ensure quality of care
- Use knowledge of NGOs involved to ensure training effectiveness and learn lessons from previous HIV task shifting project
- Focusing on target population: Mothers in rural regions
- Generate financial benefits by reducing cost through by 75%

Source:
BJOG 2007, BMJ 2011, UNFPA,
Columbia University

Nepal

Distribution of misoprostol for self medication in rural areas helped reduced MMR from 281 to 72

Key summary: Nepal piloted misoprostol drug packets for self-medication to prevent haemorrhage after delivery. Women were educated about medication by female healthcare volunteers and purchased drugs for \$0.30 a course from established franchising outlets previously selling contraception. The pilot study showed 75% MMR reduction and was later scaled up.

Starting points:

- A** Few services to prevent or treat postpartum haemorrhage
- B** Illiterate population with long tradition of home births
- C** Health care spend per capita \$2 in poor nation of \$235 GDP per capita
- D** Low attendance by skilled birth attendance due to terrain

What did you achieve?

- Misoprostol use in delivery increased from 12% to 74%
- MMR contributed to reduction from 281 to 72 in researched area
- Program scaled from 11 to 75 remote districts

What tangibly did you do?

- Advocacy groups lobbied the government to grant misoprostol drug licensing for self-medication
- FHCVs¹ instructed women in taking misoprostol coupled with promotional campaigns specifically targeting the illiterate (55% of population)
- Pilot phase funded by NGOs, results monitored by household survey
- Government approved national level expansion

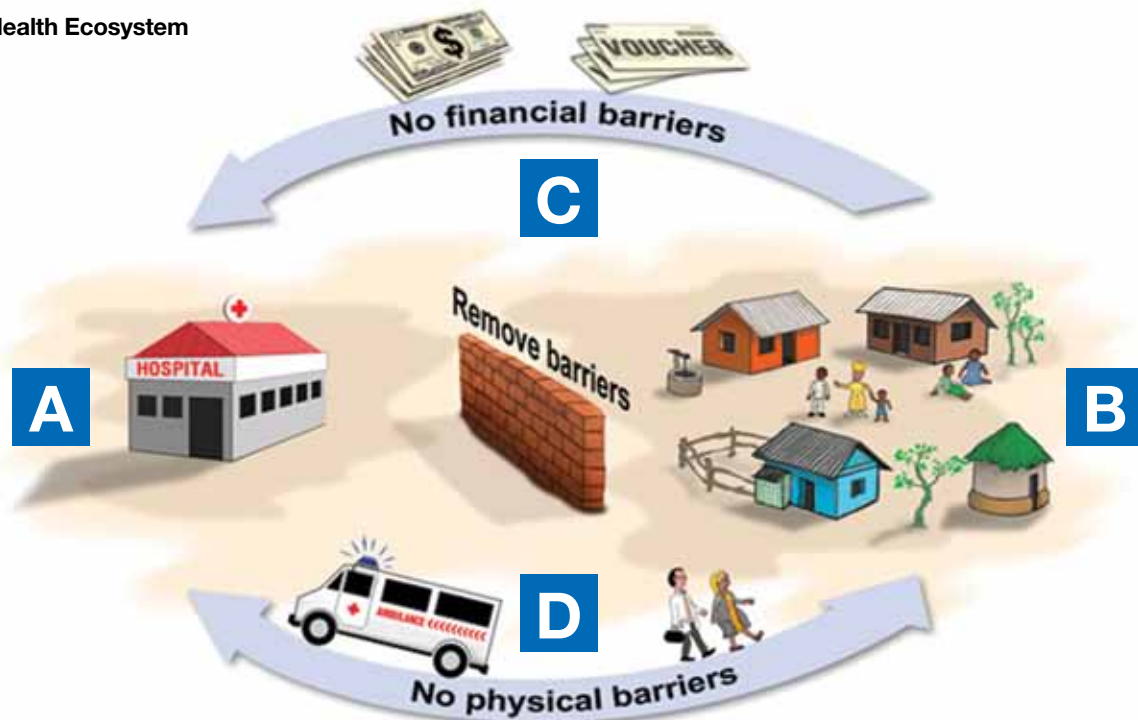
What were key factors for your success?

- Use existing health volunteer network to educate, and private sector social franchising network for drug distribution
- Find a simple solution to overcome geographical barriers by distributing tablets
- Joint collaboration in financing: NGO's funded the start up costs, pharmaceutical firms donated the drugs. The government then took over programme costs, yet women still pay an affordable \$0.30 per course

1 Female health community volunteers

Source:
Nepal Family Health Program Technical Brief #11, VSINNOVATIONS, Ministry of Health and Populations Nepal, ASCON 2011, Int J Gynaecol Obstet

Maternal Health Ecosystem



Nepal

Legalization of safe abortion and increase of abortion services contributed to MMR reduction of 50% and fertility reduction of 25%

Key summary: Strong advocacy and collaboration led to legalisation of safe abortion and successful facility and staff training upgrades reducing maternal mortality by 50% as well as female hospitalisation from abortion complications.

Starting points:

- A** No availability of safe abortion due to legal situation, leading to high number of deaths from unsafe abortion
- B** Women subservient to men and strong pressure to conform to ideal family sizes
- C** Health care spend per capita \$2 in poor nation of \$235 GDP per capita
- D** No public facilities for safe abortion

What did you achieve?

- Contributed to maternal mortality reduction from 539 to 281
- Drove fertility reduction from 4.1 to 3.1

What tangibly did you do?

- Abortion task force lobbied for change and engaged international media
- Abortion legalised with continued advocacy to ensure implementation
- 206 safe abortion facilities staffed, trained, and equipped– train the trainer programme used to train physicians
- Task shifting of abortion procedure from doctors to nurses
- Education of men, women, and law enforcement bodies focusing on highly visual campaigns for illiterate

What were key factors for your success?

- Build a network for change with international partners lobbying for change and ensure successful implementation
- Plan it simple: Single central training centre with trainer the trainer approach
- Understand what mothers need and communicate adequately through an advertisement campaign targeted to illiterate women (53% of population illiterate)

Pakistan

Outsourcing of family planning services to NGO and private providers contributed to a 15% increase in use of contraceptives

Key summary: Pakistan used the private sector to provide family planning services, leading to 15% increase of contraceptive prevalence rate. Green Star logo represents a high quality network comprising of 11,000 providers in 40 cities. NGO is running the program management and quality assurance, while funding is through government and four donors.

Source:
Social Franchising as a strategy for expanding access to reproductive health services

Starting points:

- A** Overstrained resources for family planning – private sector not involved
- B** Women have low economic status, are often illiterate and do not trust public family planning
- C** Low per capita spend on family planning (~ \$0.30)
- D** Only 25% of the population had access to the family welfare centres

What did you achieve?

- Family planning client visits increased from 7,800 to 8 million
- Increase in contraceptive prevalence rate by ~15%
- Program scaled from 3 to 40 cities with more than 11,000 providers

What tangibly did you do?

- Granting responsibility to NGO for design and roll out of family planning (counselling, hormonal methods, IUD, promotion of contraceptives)
- Have NGO ensure right selection of providers, adequate training, constant supply of products and high quality standards
- Create mass awareness by giving each accredited provider a Green star logo representing high quality and using famous personalities for promotion
- Diversify the funding base by having several donors

What were key factors for your success?

- Use the resources that you have and integrate already established NGO and private sector for providing services and monitoring quality
- Understand your population's needs and focus both on female and male providers to allow population to choose
- Use management information system to measure progress by collecting data on outlets and assess quality of care

Peru

Casas Maternas allow women to live close to facilities enabling them to deliver in safe environment

Key summary: As part of the country program, Peru supports maternal waiting homes which facilitate women to overcome the tradition of unsafe home birth. Waiting homes allow women to stay with their children close to facilities and deliver in a safe environment, and was one of the contributing factors to Peru's MMR reduction of 50%.

Source:
Lancet, WHO

Starting points:

- A** In many rural communities facilities for safe delivery are not available
- B** Long standing tradition of women giving birth in villages
- C** Poor countries with up to 60% of population in poverty
- D** Mountainous countries with up to 25% of population in rural areas

What did you achieve?

- 50% mortality reduction in Peru from 1999 – 2005 (driven in part by Casas Maternas)
- Birthing homes staffed by 6-16 healthcare staff
- Change in perception among men enabling women to leave home for birth

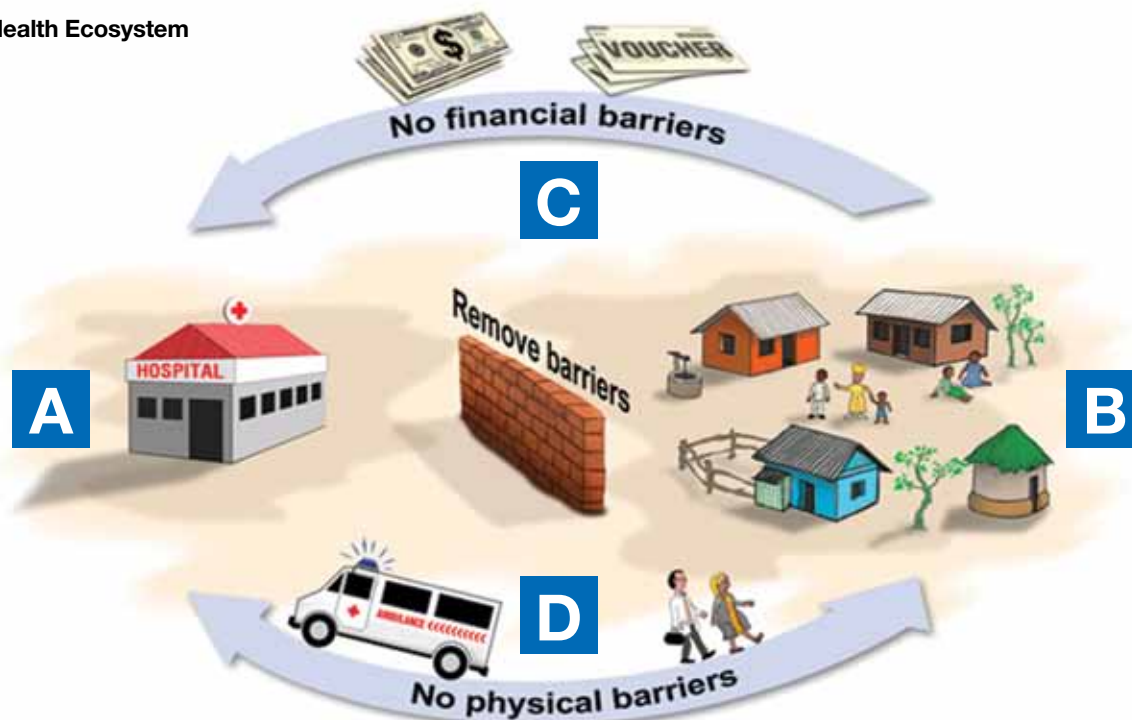
What tangibly did you do?

- Establish birthing homes for women to await labour
- Referral system, protocols and radio connection with local hospitals
- Collaboration with other maternal health initiatives in area
- Midwifery training and outreach to encourage attendance
- Funding from NGO

What were key factors for your success?

- To understand that the simple solution of waiting homes can work, instead of complex road infrastructure and transport solutions
- To understand that mothers need to bring their children, which led to changed rules for waiting homes and greater acceptance
- Substantial support in financing came from charities supported by local donations

Maternal Health Ecosystem



Romania

First legalized safe abortion, then focused on family planning and teenage education, contributing to a MMR decrease from 170 to 25.

Key summary: Romania legalized safe abortion in 1990, increasing abortion rates and contributing to a dramatic reduction in MMR (from 170 to 65). Targeted family planning then led to even lower abortion rates and further reduction of MMR to 25. In parallel, increase of quality of care and focused teenage education led to a further increase in antenatal care visits.

Starting points:

- A** Established healthcare services but lack of family planning in rural areas
- B** Lack of demand for antenatal care or understanding of unsafe abortion risks
- C** Low financial barriers
- D** Low difficulties in accessibility

What did you achieve?

- Maternal mortality reduced from 170 to 25 between 1990-2011
- 75% of population with over 4 antenatal care visits in 2004
- 80% of the rural villages had at least one provider trained in modern family planning by 2006

What tangibly did you do?

- 1989 – 2001: Legalization of abortion and strong focus on family planning
- Since 2001:
 - Behavior change campaigns (contraception, risks of abortion, risks during pregnancy)
 - Focus on sexual education of teenagers
 - Integrate family planning in rural family doctor's activities
 - Ensure supply with free/affordable contraceptives
 - Increase quality of abortion
 - Standardize procedures and upgrade facilities based on WHO guidelines

What were key factors for your success?

- Build the change network by collaborating with WHO and NGOs for funding and programme support
- Show the political commitment by providing 2/3 of program funding
- Measure what matters: KPIs, regular reports and population survey
- Communicate consistently and use targeted campaigns (e.g. reaching out to school children)

Source:
Sexual and Reproductive Health Strategy, MoH Romania; USAID - Final project report 2008; Health Survey Romania, MoH.

Rwanda

Focus on family planning and quality obstetric care contributed to a 50% reduction of MMR in three years

Key summary: Driven by political leaders committed to family planning, Rwanda implemented an integrated family planning and maternal health program focused on use of modern contraception and facility-based births attended by skilled personnel. Initiatives successfully addressed both supply and demand to enable rapid scale up and results.

Source:
Rwanda UNFPA Country Office. Maternal Mortality Reduction Programme in Rwanda. 2011: USAID. Factors Affecting Maternal Health Care Seeking Behavior in Rwanda. 2008. Rwanda Ministry of Health Annual Report, July 2010 - June 2011; USAID, "Rwanda: Mutuelles Increase Access to Improved Services." ONE, "Maternal and Child Health in sub-Saharan Africa."

Starting points:

- A** Lack of human resources and insufficient facilities
- B** Low demand for modern contraception and skilled birth attendance
- C** Increasing number of mutuelles to help families pay for basic healthcare
- D** Insufficient transport system poses significant barrier, in rural areas only CHW available

What did you achieve?

- MMR 383 in 2008 (contributed to approx. 50% reduction in 3 years)
- Use of modern contraception at 45% in 2010, up from 10% in 2005

What tangibly did you do?

- Trained CHWs to provide contraception; focus on long-term methods
- Developed and implemented training protocols for emergency obstetric care
- Tapped into mutuelles (community-based micro-insurance program) to promote affordability of facility-based care; provided free family planning services and commodities
- Mass communication campaigns and community campaigns that included male involvement stressed family planning and smaller families

What were key factors for your success?

- Develop a strong vision and align the change network of UN organizations, donors and implementers and align all parties
- Use existing resources, e.g. a new community health worker cadre to supply contraceptives
- Understand cultural barriers of your population against family planning and use targeted communication programs to shift public opinion
- Include the financial contributions of private households through community-based insurance
- Create ownership through performance based incentivizes for your staff

Vietnam

Implemented a multi-faceted program targeted to poor and rural population and helped achieve a 60% MMR reduction

Key summary: Vietnam's political leadership invested in a comprehensive program leading to 66% MMR reduction since 1990. Poor and rural population was targeted with referral programs for emergencies within communities, training of healthcare managers and midwives, microcredit programs for females and broad media activities.

Source:
National Bureau of Asian Research, BMC Public Health, UN ESCAP

WPF:
World Population Fund ADB: Asia development bank GTZ: German Technical Cooperation

Starting points:

- A** MMR initially at 223
- B** Multiple previous initiatives mean women aware of obstetric healthcare
- C** Significant health spend with 8% of budget spent on healthcare
- D** Mountainous regions where 70% deliver at home compared to 5% in urban regions

What did you achieve?

- Contributed to MMR reduced from 223 in 1990 to 80 in 2005
- 85% of women received 3+ ANC visits, and 95% trained birth attendants

What tangibly did you do?

- Community based referral programmes for emergencies
- Healthcare worker and manager training
- Multiple government directed time limited plans to improve maternal health
- Microcredit programmes to increase female autonomy
- Media coverage of the reproductive health messages

What were key factors for your success?

- Be visionary and show the political commitment to drive maternal health
- Develop a change network with 8 multinational NGOs and government officials to improve health
- Measure what matters through an audit processes and enhanced data collection
- Understand where the burden is and target initiatives target to remote poor provinces with low and ability to pay

Endnotes

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Notes
