SURVIVING CHILDBIRTH AND PREGNANCY IN SOUTH ASIA
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Foreword

Maternal death and disability, by its complex cultural, traditional and social causes, is an issue without an easy solution. But the growing alliance of voices and actions from the international, regional and national communities in recent years are bringing glimmers of hope to reining back its grip on women's life and health.

South Asia accounts for 30 percent of the world's total maternal deaths, with one woman or girl dying from complications of pregnancy and childbirth every three minutes. Yet these statistics - owing to mass under-reporting - do not even adequately represent the countless numbers of others who have perished, without a trace in official registry. When women's lives are caught in a steep tradition of male domination and son preference, their traditional reproductive role taking precedence over their rights to survival and development, the pattern of death will continue. It is, in fact, showing a tragic upward trend in some countries of this populous region.

The question is not the lack of technology or resources but rather the lack of priority, political commitment and society's support. Medical researches have established the certainty of at least 15% of all pregnant women who will experience a life-threatening complication. Medical solutions on treating these complications as soon as they occur have also been found. The gulf between the occurrence of complication and treatment is, however, obstructed by access, distance, ignorance of danger signs, superstitious beliefs, inadequate investment in emergency obstetric care (EmOC) services, and above all, entrenched gender biases that wrest away women's basic rights, including the right to make decisions concerning their own life.

The Women's Right to Life and Health Initiative (WRLH), a regional project started with a grant from the Columbia University's Mailman School of Public Health, is UNICEF's contribution to bridging the gulf. It is also part of a wider effort to address maternal death and disability in South Asia where investments are increasing, albeit slowly, in policy advocacy, in improving comprehensive and basic EmOC services, in strengthening health systems, in competency-based training for EmOC trainers and staff, in changing health care workers' attitude, and in mobilizing community support. Through its regional and extensive country-based presence, UNICEF also broadens its network of allies by joining force with UNFPA, the White Ribbon Alliance, medical associations such as South Asian Federation of Obstetricians and Gynaecologists, India's FOGSI, and others to address policy issues in blood supply, shortages of skilled providers, medical supplies and political support at all levels to push the agenda forward.

This paper aims to keep the momentum going and argue for further investment in EmOC and women's health. The first part presents the issues of maternal death and disability in
the context of prevailing policies and practices in South Asia. The second part documents the progress to date and looks at geographic coverage and population ratio of EmOC services, type of services available, utilization rate among clients, met needs against the six UN process indicators. The experiences gained over the last four years jointly with governments and civil societies have demonstrated positive changes where interventions are in place.

The large-scale reduction of maternal death and disability remains a long and winding process. UNICEF is committed to being a partner in the national and global efforts, and wishes to acknowledge the contributions of Columbia University's Averting Maternal Death and Disability (AMDD) programme team, JICA, DFID, JHPIEGO, UNFPA and the Bill and Melinda Gates Foundation in this joint and expanding undertaking. We sincerely hope the meaningful collaborations will continue in the challenging times ahead.

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Introduction

The old woman’s wail penetrated the still air as the elderly turbaned man approached her house, a mud-brick structure chiseled out of the barren landscape of remote Baran district in Rajasthan, India.

The weep was an occasion of grief, the Gujar’s way of greeting the patriarch of the big family, who had come miles away to mourn the loss of 17-year-old Matiya Gujar, the woman’s daughter-in-law. None spoke, and the howl continued.

Puma Gujar, sister-in-law of the dead, promptly brought the elder a cup of milky tea. "Matiya died in a pool of blood on her way to the community health center……The baby was alive, her cord still tied to Matiya when she breathed her last. We rented the tractor for two-hundred rupees," Puma lowered her head, muttering from under her embroidered veil.

The elderly man settled under the shade of a tree, stooped, surveying the courtyard where plants were melting under the scorching heat, wishing for an occasional breeze to provide relief.

“She took care of every household chore, she took the cattle out for grazing, she washed, cooked, dusted and cleaned everything……and now I have lost her," the old woman moaned, in a paroxysm of grief.

The elder looked into the distance. "Fate, it was fate. Matiya’s destined to live for only this number of years," he shook his head.

Matiya wedded her husband, 18-year-old Prema, when she was six, and was brought to the Gujar family eight years later. The lean and tall lass, along with other girls of the Gujar communities in Baran, were married off in groups of 8 - 10 each, at a dowry of Rs. 8,000 - 10,000 per girl.

“I heated up the cow dung to warm up her belly, she was too weak, the labor was difficult,” Puma continued, her eyes wet, laden with guilt. “The baby girl finally came out smoothly," she whispered to the elder, “but Matiya was
bleeding heavily." Her voice nearly faded, recounting the last scene where she assisted Matiya to deliver the child in the house.

The baby girl, Matiya's second attempt at bringing Prema a son, barely survived and was debilitated by infectious diseases. Their first child, a boy, died prematurely after it was delivered at Kelwara at a fee of Rs. 1,500. The wound of a profound loss six months ago still fresh, with a medical bill they could ill afford, Matiya decided to give birth at home with the help of Puma, known as a Dai or Traditional Birth Attendant (TBA). Puma was untrained, but no complications had ever occurred in her previous deliveries, thus the traditional ways prevailed.

"When blood gushed out profusely, Prema rushed to the next village to organize a tractor. An hour later the vehicle came, and Matiya was half conscious," she said chokingly. "On the way to Kelwara, Matiya kept pleading the car to go slow, the rough, bouncing ride was hurting her…… and the baby was shivering, bracing the wind even though I wrapped her in Matiya's shawl, already soaked with blood."

Since Matiya never made it to the government-run community health center, her death left no traces, and remained unknown, other than to the Gujars. It was not until her maternal grandparents took her sickly child to Kelwara a week later for treatment of severe diarrhea, that the health staff came to learn of it.

"There is no time to trace or take verbal autopsies, especially for women who died on the way," said Dr. Satish Agarwal, one of two doctors at Kelwara, a dilapidated health unit serving a community of 100,000 in the area. Matiya's death from hemorrhaging was a piece of knowledge that went no further than rumors. Her name did not appear in the center's register, as much as her life was lusterless, her only contribution being servitude and two failed attempts at a son, a tiny, insignificant dot fading without an official trace.

"With 60 to 80 babies born each month, an average of 2 to 4 a day, we are overstretched, because we also run the outpatient clinic," he added as he beckoned a male nurse over. A family had just brought in a 3-year-old boy with a burn injury. Almost simultaneously an old man arrived in a bullock cart, groaning, his right foot lacerated, oozing thick, yellow pus and blood. After what appeared a wait of eternity, a staff nurse, scurrying among patients, brought him cotton and antiseptic. Outpatient treatment was conducted virtually at the entrance, along the narrow, dusty corridor. It led to a congested room where women, plump ones, skinny ones, were awaiting labor or antenatal checkup or Tetanus Toxoid vaccination, or reposing with their newborns in a row of rusty iron beds.
The Kelwara Community Health Center (CHC) to which Matiya never made it was one of India's First Referral Units (FRU), a 20- to 30-bed hospital that provided Comprehensive Emergency Obstetric Care services. What set an FRU apart from an ordinary CHC was, in addition to normal delivery, its supposed readiness for handling all complications resulting from pregnancy and child birth, 24 hours a day and 7 days a week with surgical and blood transfusion facilities. The overhaul of some CHCs to an FRU was introduced in early 1990s by phase, to equip sub-district health facilities with an operating theatre along with blood storage capacity to tackle Matiya's kind of hemorrhaging. The facility also had emergency drugs to stabilize other birth complications, uninterrupted water and electricity supplies, the latter distinguished by a generator to deal with power cut in the middle of an operation.

"We conduct a couple of caesarean sections each month, and face several cases of severe hemorrhaging as well as antepartum bleeding due to retained placenta," said Dr. Agarwal, a general doctor who has undergone some basic emergency obstetric care training.

"The biggest problem is blood supply and difficulty with finding qualified anesthetists when an emergency arises," he added, pointing to a dingy room stacked with old, stained apparatus, broken chairs and desks, and a decrepit refrigerator that would soon be "cleared up," he said, as a blood storage room.

"Our current capacity to cope with hemorrhage cases is very limited. We either ask relatives to buy blood from outside or from the Baran hospital about 60 km away, which has a blood bank, or simply refer the case there," he continued, holding up a referral slip, the most frequent means of communication between an FRU and the district hospital, which serves a population of 1 - 2 million people.

Thus even if Matiya could make it to Kelwara, her chances of surviving excessive bleeding would be compromised by the time it took to arrange for blood. Two hours were all that the body could withstand from postpartum hemorrhage when death became certain. "There are very few private blood banks in this area," Dr. Agarwal shook his head, indicating the scantiness of access. Many had, in fact, closed down after a policy to license and control blood banks came into effect in 1999. Introduced under pressure of consumer groups against the lack of safe blood screening against HIV and Hepatitis, the Public Interest Litigation and the resulting policy also set many conditions that eventually put a number of private operators out of business. Even an "un-banked" direct blood transfusion, from relatives to the patient after testing it for safety, was now barred.

Postpartum hemorrhage is the leading cause of maternal deaths in India, as elsewhere in South Asia and in the world. In India alone, it robs the lives of nearly 30 percent of women who die in childbirth, women who enter pregnancy usually in already anemic conditions. In Nepal, it accounts for 46 percent of maternal deaths, in Afghanistan 39 percent, and in Pakistan 21 percent.

Hemorrhage can happen when the placenta, a pouch the shape of a mushroom that holds the fetus, is detached from the uterus too early, or when parts of the placenta do not come off after the baby is delivered, or when the uterus ruptures. All of these are "what ifs" that
cannot be predicted but for which emergency preparedness is key. A detached placenta before delivery, which causes bleeding, for instance, requires not only blood transfusion but immediate caesarean section to save the mother's life and her child's.

Surgery is required also for other common complications such as obstructed or prolonged labor, eclampsia (hypertensive disorders), and sepsis (infections) when drugs cannot stabilize the woman's condition. "I doubled up as an anesthetist with whatever I learned in medical school when birth complication cases got in that needed immediate surgery," said Dr. Agarwal, who came to the job at Kelwara 12 years ago with a Bachelor of Medicine and Bachelor of Surgery (MBBS) degree.

"Although I do everything, I'm not a specialist - whether as an anesthetist or obstetrician - but when lives have to be saved, I have to apply whatever I learn without a minute to spare," Dr. Agarwal said ruefully. He cast a look at his co-worker, Dr. Shoba, a female MBBS who also attended basic EmOC training, and who had just delivered a baby, wiping the sweats on her forehead as she stepped out of the labor room.

"The mother is fine," she beamed, "except that the baby is underweight," looking at the diminutive young life that has been placed on an incubator. As the doctors turned to other mothers and patients, a cleaner swiftly got into the delivery room, pouring detergents on the floor and started scrubbing. The baby, alone with the cleaner and awoken by the noise and pungent reek, swung his tiny fists and cried feebly.

Current regulations that restrict basic doctors from performing caesarean section or any abdominal surgery are limiting the tasks to qualified obstetricians. In all too many districts, it has resulted in a highly taxing situation where an already small number of obstetricians, one or two at the most in each district hospital, are serving an average of 2 million people. Once posted away, the hospital will await months and months for a new specialist to arrive. The number of obstetricians shrinks as health centers get smaller, such as the Kelware FRU at sub-district level, closer to villages and settlements where EmOC is unfortunately, increasingly vital.

Fearful of repercussions, many rural, non-specialist doctors shun even basic emergency obstetric procedures such as the manual removal of undetached remnants of the placenta, suturing tears, and assisted vaginal delivery. And these are simple operations that every trained medical doctor with an MBBS degree can carry out. The recent inclusion of doctors under India's Consumer Protection Act has taken away whatever little incentive that is left for them to conduct these procedures. The law, which makes it easier for patients to sue a doctor in the event of an adverse outcome, has inadvertently encouraged referral to district hospitals to avoid risks and ‘troubles’.8
The restrictive regulations essentially lay out a simple solution for medical practitioners: refer cases up - from the sub-district center to the Primary Health Care Center to the Community Health Center and finally, the overstretched district hospital.

Incongruence between policies and practice affects the attitude and behavior of the medical establishments in a way that is not intended but rather, unforeseen. Pressure of different interest groups brings about policies that demonstrate relative lack of appreciation of how the soaring rate of maternal mortality can be averted. It also reflects the low priority accorded to prevention of maternal death in the face of other competing demands, ranging from family planning to polio eradication and the prevention of HIV infections.

"Our condition is no better than the FRUs, for the fact that we handle an average of 300 - 540 births each month!" said Dr. Venu Katia, Medical Officer, the Baran district hospital. "This is the only hospital catering to hundreds of thousands of families in the district and we don't have a resident obstetrician," she added. Instead it has one gynecologist, who has to serve the entire maternity ward and attends to all of the emergency obstetric cases. "With the acute shortage of specialists, all deliveries are conducted by nurses who have undergone midwifery training," Dr. Katia continued.

"We also do not have an anesthetist, and when a complication case get in at midnight, the duty doctor will call the gynecologist, arrange for a private anesthetist, and send for the lab technician or pathologist to open the blood bank (to get the right type of blood for transfusion)," she added. "The entire process takes about an hour; our peon is well-trained to run around getting people in, and knock at the door of private pharmacies to get drugs," said the Medical Officer. "Families will have to pay for these drugs, such as anticonvulsants and oxytocics, because our own pharmacy is constantly running out of supply."

As with most public hospitals in India, drugs needed for emergency are in acute shortage. Orders for these drugs in Baran had been placed six months ago, but none had arrived from the central medical store. "We haven't even had bandages supplied for the past six years," Dr. Katia said, "and clinical gloves are recycled, washed again once our stock runs out."

In South Asia as a whole, shortages of skilled providers, drugs and blood, and progressive policies are the most tangible causes underlying the thousands of untimely women's deaths in the region. "Making do" with whatever is available and accepting deaths as fate and circumstance is embedded in years and years of not seeing situations improve or unsupportive environments that stifle efforts to bring about positive changes.
UNICEF in South Asia has recognized safe motherhood as a key programme area to improve women's lives and make community's healthier. Enhancing society's recognition and building partnership with various sectors to reduce maternal deaths, from families to policy makers, is critical to understanding and addressing the issue. Furthermore, awareness of the perilous journey each woman confronts in the process of childbirth, combined with commitment, are key to reversing decades of neglect and preventing deaths, like that of Matiya's, from happening.

This paper analyzes the magnitude of maternal death and disability in South Asia and the actions supported by UNICEF in collaboration with the Columbia University, Mailman School of Public Health, through a grant under its Averting Maternal Death and Disability (AMDD) programme.
2.1 Beyond definitions: Giving numbers meaning

The definition of maternal death may not be immediately clear to everyone even for husbands mourning the loss of their wives or for children whose mothers have gone. For a clinician, it is easier - the term means the death of a woman while pregnant or within 42 days of delivery, miscarriage or termination of pregnancy, from any cause related to or aggravated by the pregnancy or its management, but with the exclusion of accidental or incidental causes.11 This definition, while serving the purpose of uniform record keeping, represents the tragic end of a woman struggling and failing as she completes one of life's most basic and celebrated processes: childbirth.

Every year, 529,000 women world-wide die due to pregnancy and childbirth complications,12 99 percent of these deaths claimed by developing countries.13 Far too often this desperate face of maternal death is buried under poverty and low-status without its story ever being told. Their silenced voices linger on, burdened with a beseeching message move beyond complex definitions, take action to prevent maternal deaths, and let not another woman die untimely and unnecessarily!

The South Asian region is home to 1.25 billion people or 22 percent of the world's population. It also disproportionately accounts for 30 percent of the world's maternal deaths.14 In this region, every three minutes one woman or girl dies from complications of pregnancy and childbirth. This translates into an estimated 425 deaths each day and approximately 155,000 deaths annually.15 India, Pakistan, Afghanistan and Bangladesh are among countries on the globe with the highest maternal mortality. Yet, these high numbers do not even reflect the true picture as they do not include the countless more who die at home or on the way to health facilities, deaths, like that of Matiya's, that are not reported in the absence of birth and death registries.

For those who survive the rigor of pregnancy and childbirth, the outcome is not always joyous. Millions of women as a result of a pregnancy complication are left to wage daily battle with lifelong, embarrassing, painful and disabling physical conditions like fistulae (a small opening between the tissue walls of the bladder and vagina or between the rectum

Afghanistan: Dressed in burqa and holding a baby, a woman stands amidst others.
and vagina), prolapse (when the uterus falls from the pelvic cavity into or outside the vagina), the inability to control urination as well as painful intercourse. In Pakistan, for every woman who perishes from a pregnancy complication there are 30 to 50 others who survive with a disability. In Bangladesh alone, 9 million women are living with such consequences of childbirth. The social stigma associated with many of these disabilities is often worse than the physical discomfort, posing more challenges to the quality of life for those who survive.

The consequences of pregnancy complications do not stop with just the women themselves. In developing countries, it is estimated that the risk of death for a child under age five can increase by as much as 50 percent if the mother dies.

In South Asia alone, 2.6 million infants die each year during the neonatal period, or the first month of life. The palpable increase of mortality in the earlier part of infancy is apparent in neonatal mortality data where it is documented that more than half of these deaths happen in the first week of life, and as many as half on the first day. Data in Nepal show that over 60 percent of infant deaths occurs in the neonatal period. A report of the Government of Bangladesh ascertains neonatal deaths as constituting about two-thirds of infant deaths - 45.4 of 66.7 per thousand live births - and that deaths occurring after one month of life are declining at a faster rate. Such early deaths are most often preceded by a sequence of events in the womb and during birth.

The slow rate of decline in neonatal mortality is echoed by the slow rate of decline in maternal mortality. Maternal mortality ratio (MMR), which is the number of maternal deaths per 100,000 live births, is now globally considered an indicator of the overall status of women in a country. The scenario in large tracts of South Asia is a loud statement that demonstrates the gulf between promises and commitment. This for the fact that the majority of countries are democratic, and have ratified the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), the Convention on the Rights of the Child (CRC) and other covenants that uphold human rights, which include the rights of women and girl children.

The United Nations General Assembly in its 55th Session adopted the UN Millennium Declaration, pledging to reduce maternal mortality by 75 percent by the year 2015. But even with international acknowledgement and the synergistic efforts that have been put forth thus far with respect to safe motherhood, it is still only the beginning. The road to achieving the status of the developed world remains long and winding. MMR in South Asia is stagnant or in some cases getting worse. The challenge continues to be one of
prioritizing the transfer of hopeful documents and goals to improving women’s health in the face of poverty, deprivations, difficulty of access, widespread violence against women and deep-rooted gender discrimination.

2.2 Unpacking the causes: The complexity of understanding maternal deaths

Maternal death has been given such scant attention that data collection is a real issue. Women commonly die from hemorrhage (severe bleeding), infection, obstructed labor, complications resulting from unsafe abortion or hypertensive disorder (eclampsia) - the top five given causes that are classified under maternal deaths. They account for 80 percent of all maternal deaths world-wide, even though the knowledge, evidence and medical technology on how to treat pregnancy complications exist. So why are such deaths - closely associated with the death of newborns - allowed to go on?

2.2.1 A scenario intricately linked to women’s status in society

Though South Asian countries vary considerably with respect to culture, politics and religion, a common thread that binds them uneasily is their common discrimination against women and girls. The low social status of women and girls influence greatly the way societies, communities, families and the women themselves respond to their health needs. Manifestations of such discrimination, for instance, are low literacy levels among girls and women. Female literacy rates range from 40 percent for Nepal, 41 percent for Afghanistan, 42 percent in Pakistan to 66 percent for India. These figures are dramatically lower still when literacy is stratified by rural residence.

The graph below shows that predisposing factors include: lack of care within the household (e.g. no rest, heavy workloads and poor nutrition), inadequate access to quality health services and services of skilled birth attendants, as well as lack of respect for women’s reproductive rights that leads to an increase in unwanted pregnancies, early pregnancies and unsafe abortion.

The denial of opportunities extends beyond that of education as females in the South Asia region, as with many other parts of the world, are discriminated against when it comes to intra-household food distribution. Eating last often means that nutritional values and food intake are inadequate, failing to build a physique to manage not only pregnancy but also the rigors of delivery. Women are not given more consideration during pregnancy and even if they were, the precursors for a less healthy pregnancy have been

building over a lifetime. These women are predisposed for such conditions as
tuberculosis, heart disease and anemia, amongst a host of others. In India, anemia forms
the second largest cause of maternal death (19 percent) and more than 50 percent of
women are anemic with 17 percent moderately or severely.26

The low status of women is also reflected at the policy level where commitment to
reducing maternal mortality has not been transferred from national or political agendas
beyond that of a signed document. Perceived insignificance of women's health issues,
especially those affecting women among the poor and low castes, is accompanied by
insufficient activism around maternal mortality. Further, obstetric complication is not a
communicable disease, it does not make the news headlines or generate a public health
threat such as HIV or more recently the Severe Acute Respiratory Syndrome (SARS). Still
further, the cause of maternal deaths and remedies are not well understood among
politicians and those in positions of power who can move resources to make a substantial
difference. Finally, the high rates of maternal death are symptomatic of a public health
system that is ill-prepared and ill-equipped to respond to obstetric emergencies.
The three delays: The difference between life and death

Every minute is precious in preventing maternal death and disability. A woman can bleed to death from post-partum hemorrhage in less than two hours. Other obstetric complications allow for at least 12 hours or more to receive life-saving emergency care, but any delay reduces the chance for survival, and if death does not result then perhaps a disability does.

To put the underlying causes of maternal death in context, the "Three Delays Model" was created. The Three Delays Model goes beyond clinical diagnosis to examine more closely the socio-economic, cultural and political barriers that contribute to delays in the management of obstetric complications. It also aids in the design of intervention frameworks to prevent such scenarios. The main concept it upholds is that in matters of obstetric complications, every delay could mean the difference between life and death.

The first two delays take place in communities and are significantly linked to women's status, access to information, transportation and economics. The third delay has direct implications on the health facility's quality and readiness to handle emergencies related to obstetric complications. In order to ensure success of any safe motherhood intervention, each of these delays must be addressed whether in sequence or simultaneously.

3.1 First delay: Decision to seek care

The first delay arises from both the failure to recognize and respond rapidly to danger signs that indicate a pregnancy complication. It is common that pregnant women,
husbands and mother-in-laws, the latter sometimes also a traditional birth attendant, will not know that bleeding during the pregnancy is life-threatening or that labor exceeding more than 12 hours is most likely obstructed.

In rural settings, reproductive health information is restrictive due to weak or non-existent linkages between communities and the health system. Sanctioned health posts in the periphery are often vacant, with limited hours of operation. Even with outreach efforts, undertaken by community-based staff and temporary clinics, health worker's knowledge and skill level as well as irregularities of supplies, prevent those most in need from receiving information and care. Exacerbating the situation are low literacy rates, limited exposure to the world outside, and heavy domestic responsibilities which prevent women from proactively seeking health information themselves. Many are not even aware of what services are available.

In addition to inadequate information channels, traditional values in many countries of South Asia prohibit discussion about reproductive health matters openly or between the sexes. Even if a woman or any of her family members were aware that one of the danger signs of a pregnancy was being experienced, the open acknowledgement of the emergency or the discussion on which course of action to be taken may be put off as long as possible, or not occur at all. In one province in Pakistan, a verbal autopsy of 395 maternal deaths reported by Lady Health Workers during 2000-2001 discovered that the time interval between delivery and death of the patient was 5 hours or more in more than 60 percent of cases. A study conducted in Nepal found that 36 percent of families decided to seek care and get transport in 2 hours, 15 percent in 2 - 2.5 hours and 29 percent in 1 to 8 or more days, after recognizing that the mother was encountering a life-threatening complication!

In many instances, whether or not to go to the hospital when a complication arises is not the woman's choice. Again women's low status in societies deprives them of any potential for decision-making power within the family. Usually it is mother-in-laws and husbands who decide what is best for them. In another study in Nepal, it was revealed that the decision to seek care in 81.6 percent of the cases is made by the husband. Those making decisions are often not in a position to accurately judge the severity of illness or to prioritize health matters. The multiple demands and responsibilities imposed on women's time, like preparing meals, fetching firewood and water as well as child care, will take precedence over her health needs. Consequently, only in the last possible moment care is sought.

Harmful cultural practices and beliefs related to pregnancy abound, they delay appropriate care and often inflict further injury. When complications arise, it is common for families to first seek traditional or faith healers to ward off evils rather than medical treatment. In some parts of the region, convulsions due to eclampsia are treated with severe beating of the woman, believed to be possessed by the spirit, which should be driven out even when

### Major danger signs of pregnancy

- Bleeding during pregnancy or after delivery
- High fever
- Convulsions
- Severe pain (head or abdomen)
- Severe or persistent vomiting
- Prolonged labor
- The water breaks before due time for delivery

she is in the throes of delivery.\textsuperscript{30} In certain parts of Nepal, women are left in livestock sheds to deliver by themselves because blood from childbirth is traditionally deemed impure. Household rules dictate that women remain alone in these livestock sheds for over a week following the childbirth, a critical time when 70 percent of maternal deaths take place.\textsuperscript{31}

3.2 Second delay: Reaching the appropriate health facility

The second delay, reaching the appropriate health facility, is in large part attributable to being unprepared for an emergency. In the South Asia region, the majority of women deliver at home: more than 90 percent in Afghanistan, Bangladesh and Nepal, over 80 percent in Bhutan and Pakistan and over 70 percent in rural India.\textsuperscript{32} Pregnancy, for most, is an ordinary event where no special care is perceived needed and women deliver alone or with the assistance of untrained traditional birth attendants (TBA). Emergencies are not anticipated and panic, laden with consequences, results. Time is wasted looking for transportation and the most appropriate health facility or the funds to pay for each of these.

Villages are often scattered and roads are poor or non-existent in many parts of the region, and the monsoon can create lengthy detours. Lack of good road infrastructure severely limit transportation options and in some areas non-motorized means (horse cart, bicycle, being carried on foot) are all that exist. During the night, any type of movement may be restricted due to security issues, as in Nepal, or prohibition of women being out past dark as in many rural parts of South Asia.

The distance and terrain from an appropriate care facility can mean hours for some, or days of traveling for others and this has potential to be even longer as is common with those that first go to an inappropriate site for care. Studies conducted in Andhra Pradesh, Maharashtra, and Rajasthan states of India show that 52 percent, 47 percent, 42 percent of maternal deaths, respectively, happen on the way to a hospital or at home.\textsuperscript{33, 34, 35}

The pursuit of care, other than transportation availability, is closely linked to economics. The cost of care and
transportation is forbidden to many, especially the poor, especially families residing in the rural and remote areas. When families do reach the hospital, they are financially unprepared for the additional costs of tests administered before treatment, and of medicines and supplies, which are routinely prescribed and need to be purchased from local pharmacies. The high cost of care - relative to the meager earning of the poor - is a deterrent for facility-based delivery. The minutes ticking away between bleeding, as in the case of Matiya, and finally organizing money and transport to send the mother to the health facility often rob the chance for survival.

3.3 Third delay: Receiving appropriate and high quality care at the health facility

Arrival at the health center after a strenuous or long journey does not entail immediate care. In many cases, women who are hemorrhaging will die at the health facility if there is no blood storage or transfusion facility. An oxytocic drug could stop hemorrhage, but it is often unavailable or time is needed for the family to buy it from pharmacies outside. Further, the absence of obstetricians and anesthetists means almost zero capacity for surgery. Even when general doctors with some EmOC training could potentially conduct caesarean sections, remove undetached remnants of the placenta, suture tears, and perform assisted vaginal deliveries, restrictive policies and the tendency to refer cases to district hospitals mean families will not get the service they need in time.

The general absence of skilled attendants and staff shortage in facilities at the sub-district level and below - a glaring issue in nearly every South Asian country - substantially affects the quality of care. Even when facilities are there, the delay in finding the obstetrician or anesthetist or pathologist or drugs, the delay in attending to less visible complications such as prolonged labor (as opposed to bleeding), the delay in making correct diagnosis of a complication, the delay in attending to families of lower caste or low economic status, all collude to take away a woman's life. Yet those who seek care at public health facilities have entrusted their faith in medical practitioners, not knowing that such delays are more often the outcome of inept handling, inefficiency and poor attitude rather than assumed medical procedures. A Maternal Mortality and Morbidity Study conducted in Nepal, 1998 showed that hospital delay was a key factor in almost 80 percent of maternal deaths. A verbal autopsy review conducted in one province in Pakistan between 2000 and 2001 documented that 50 percent of reported maternal deaths occur in health facilities.

When staff is in place, their attitudes do little to encourage a timely response to an emergency. Health workers’ attitudes are often negative, as a result of placement without choice, incentive or supervision. This in turn produces a climate of apathy, low motivation and a lack of confidence, often leading to unnecessary referrals whereby additional lives will be lost in transit. The availability of skilled service providers and their ability to provide quality services often determines how much a facility is utilised. In Bangladesh, a series of focus group discussions revealed that half of the participants (50 percent males and 43 percent of females) consider hospital delivery as a trip with no apparent benefits. The disadvantages cited include poor attitude of service providers, extra payment to providers, lack of medicines, and unnecessary interventions. A detrimental cycle perpetuates: staff are unable to improve their core clinical competencies through practice as a result of low patient flow.
Saving Mothers’ Lives: Common strategies and their challenges

The three delays model lays a framework from which interventions to avert maternal death and disability can be designed. To reduce maternal deaths effectively, programmes must be able to mobilize communities on preparedness, create demand for services, ensure for skilled attendance during all stages of pregnancy and treat obstetric complications. Addressing the first and second delays requires a focus mostly at the community level and this can be achieved through what is called “Birth Preparedness and Complication Readiness”. Preventing the third delay, ensuring that there is no time lost at the health facility, begins with establishing Emergency Obstetric Care (EmOC) sites through improving the overall functionality of health systems, from upgrading staff skills to renovation efforts and sustainable supply mechanisms. Overlapping these interventions, with respect to where deliveries take place (at home or at a health facility), is the strategy to strengthen the cadre of skilled birth attendants to ensure that each pregnancy and birth is effectively assisted.

While these interventions are supported by research and evidence, debates continue about which are the most appropriate and effective. In the past much emphasis was placed on investing in good antenatal care (ANC) because early detection allows some obstetric complications to be remedied in time. ANC is important to the control of anemia and detecting hypertension in women during pregnancy, but the skills-intensive nature of EmOC is beyond what an untrained attendant that characterizes much of ANC services can deliver. Most obstetric complications cannot be predicted, and the role of antenatal care in averting death is limited. Evidence has shown that the five main direct obstetric causes of death account for nearly 80 percent of maternal mortality. These deaths can be prevented through combined actions which are effective and affordable in the South Asian country settings. The table below illustrates the main causes of death and the interventions to prevent them.
### TABLE 1: Maternal deaths - causes and recommended interventions

<table>
<thead>
<tr>
<th>Causes of maternal deaths</th>
<th>% of maternal death causes</th>
<th>Recommended interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postpartum hemorrhage</td>
<td>25%</td>
<td>ANC: treatment of anemia during pregnancy; Skilled Birth Attendant: prevent/treat bleeding with correct drugs, replace fluid loss by IV drip; EmOC: transfusion if severe; active management of third stage of labour</td>
</tr>
<tr>
<td>Infection after delivery</td>
<td>15%</td>
<td>Skilled Birth Attendant: clean practices, antibiotics if infection arises, and maternal nutrition</td>
</tr>
<tr>
<td>Unsafe abortion</td>
<td>13%</td>
<td>Skilled Birth Attendant: give antibiotics, removal of retained products in the uterus, replace fluids if needed, counsel and provide family planning</td>
</tr>
<tr>
<td>Hypertensive disorders</td>
<td>12%</td>
<td>ANC: detect during pregnancy; treat with appropriate drugs; EmOC: refer for assisted delivery</td>
</tr>
<tr>
<td>Obstructed labor</td>
<td>8%</td>
<td>Skilled Birth Attendant: detect on time; EmOC: caesarean section</td>
</tr>
<tr>
<td>Other direct obstetric causes</td>
<td>8%</td>
<td>Skilled Birth Attendant/EmOC</td>
</tr>
<tr>
<td>Indirect causes</td>
<td>19%</td>
<td>Disease-specific interventions (HIV, malaria etc)</td>
</tr>
</tbody>
</table>


### 4.1 Birth preparedness and complication readiness

Birth preparedness and complication readiness is an approach that aims at raising awareness at the community level and creating a stronger demand for quality health services. Because pregnancy is perceived as an ordinary event, most families do not plan for a birth nor do they expect an emergency. When a pregnancy complication arises, the family is unprepared and while gathering funds, finding transportation and reaching the appropriate health facility, time is usually wasted and in many cases, it is too late. Thus it is imperative that all women and their families are equipped with adequate information about the danger signs of a pregnancy complication and what actions should be taken. In addition, building or strengthening networks in the community is essential in order to ensure timely referrals and establish reliable transportation options.

Birth preparedness and complication readiness interventions range from activities to raise awareness on danger signs (health education, street dramas, radio programmes) to tours of health facilities, aimed at strengthening linkages between the community and health system. The approaches vary, but ultimately all interventions result in equipping women, families and communities with the information, skills and resources to respond rapidly to any complication scenario.
4.2 Skilled birth attendance

Skilled attendance during pregnancy and delivery has been demonstrated to be one of the most effective means of reducing maternal death and disability. Reaching this conclusion has been an intense developmental process of research and interventions spanning over 15 years, which has seen much refinement of the skilled attendant definition and the parameters of their effectiveness to save lives.

Until the mid 90s, the term "trained attendant" was used by many agencies, and national statistics on coverage tended to group both professional and non-professionals (e.g. trained TBAs) together as long as they had received some sort of "training". From 1996 onwards, however, the word "skilled" was used, recognizing that someone who has been trained is not necessarily skilled. Thus "trained" implies but does not guarantee application, whilst "skilled" implies the competent use of knowledge.39

Skilled attendant40 was then defined, based on the joint WHO/UNFPA/UNICEF/World Bank statement as:

> People with midwifery skills (for example doctors, midwives, nurses) who have been trained to proficiency in the skills necessary to manage normal labor and deliveries, recognize the onset of complications, perform essential interventions, start treatment, and supervise the referral of mother and baby for interventions that are beyond their competence or not possible in the particular setting.

In 2000, however, the Safe Motherhood Initiative Inter-Agency Task Group went on to make a further and very critical, distinction between "skilled attendants" and "skilled attendance". Skilled attendance is defined as "the process by which a woman is provided with adequate care during labor, delivery and the early post partum period" and requires both a skilled attendant AND an enabling environment. An "enabling environment" includes adequate supplies, equipment, and infrastructure as well as effective systems of referral. It also includes "the political and policy context in which skilled attendants operate, the socio-cultural influences, as well as proximate factors such as pre- and in-service training, supervision and deployment and health systems financing."41

In addition to "skills" and "enabling environment", however, the place of attendance (home or institution), time of attendance and extent of attendance are important to consider. But there still seems to be a great deal of ambiguity regarding these three issues.42 Concerns have also been expressed that the term skilled attendant may not adequately capture women's access to good quality care, particularly when complications arise. Standardization of the definition of skilled attendant is a real challenge because of differences in training of health personnel in different countries. In Bangladesh, for instance, skilled birth attendants are government field workers (female health assistants and family welfare assistants) who receive additional 6-month training in basic midwifery skills, but this does not entail the full qualification by WHO/UNFPA/UNICEF standards.43 Throughout the region, the training of skilled birth attendants varies from 5 weeks to 4 years.44 Annex 1 provides an overview of current definitions and training on midwifery skills in South Asia.
The provision of skilled care is one of the main strategies to prevent maternal death and disability. Interventions that reduce consequences of immediate causes of maternal mortality are proven to work with skilled birth attendants trained to handle complications in an emergency situation. The proportion of births attended by skilled personnel is used as a key indicator to track progress in reducing maternal mortality. In regions such as South Asia, where skilled attendants are not routinely available, the goal is to have skilled attendants at 90 percent of births by 2015.

This ambitious goal that has potential to save thousands of lives, sets a steep challenge for South Asia as only 35 percent of births in the region take place with the attendance of skilled care, the lowest rate in the world despite the huge population size. The majority of women deliver babies attended by a family member or a traditional birth attendant (TBA), who often lack the knowledge to detect danger signs, let alone respond skillfully to complications with drugs, such as oxytocics to stop bleeding. In Bangladesh, 60 percent of births are attended by a family member, neighbour or relatives, and close to 30 percent by TBAs with less than 15 percent by those who have been "trained". The percentage is slightly higher in India, with 35 percent of births attended by TBAs, and just over 40 percent attended by health professionals. Countries in South Asia where the rate of skilled attendants at delivery is high tend to have fewer maternal deaths. This is evident from Sri Lanka’s experience, which has the lowest maternal mortality ratio in the region, reporting around 97 percent of deliveries attended by skilled attendants.

Likewise, neonatal death and stillbirth, closely linked to the mother’s death, is more likely to be prevented when skilled birth attendants and emergency obstetric care are available, along with antenatal care during pregnancy. Tables 2 and 3 show the main causes of newborn deaths and still births and the recommended combined interventions:
Main causes of newborn deaths

<table>
<thead>
<tr>
<th>Causes of newborn deaths</th>
<th>% of deaths</th>
<th>Recommended interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infections (sepsis, meningitis, pneumonia, neonatal tetanus, congenital syphilis)</td>
<td>33%</td>
<td>ANC: TT immunization, syphilis screening and treatment; Skilled Birth Attendant: clean delivery, warmth, support for early exclusive breastfeeding, early recognition and management of infections</td>
</tr>
<tr>
<td>Birth asphyxia and trauma</td>
<td>28%</td>
<td>Skilled Birth Attendant: EOC: effective management of obstetric complications</td>
</tr>
<tr>
<td>Prematurity/Low birth weight</td>
<td>24%</td>
<td>ANC: malaria prevention and treatment; nutritional advice to mother and family Skilled Birth Attendant: warmth, breastfeeding counseling and support, infection control, early detection and management of complications, STI treatment.</td>
</tr>
</tbody>
</table>

Recommended interventions

<table>
<thead>
<tr>
<th>Main causes of newborn deaths</th>
<th>% of deaths</th>
<th>Recommended interventions</th>
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</tr>
</tbody>
</table>


Strengthening and enlarging the cadre of skilled birth attendants is challenged by the sub-standard level of skills and few numbers of health workers per rural population that exist. The minimal competency that health workers have to apply life-saving techniques for women experiencing pregnancy complications is often a result of ineffective training.

Throughout South Asia, training tends to be based on curriculum and methodologies that are out-of-date, left "as it is" out of neglect or resource constraints without new techniques and research incorporated. Trainings tend to rely heavily on theoretical knowledge as opposed to providing situations for practice and coaching. The poor resource settings are often not taken into consideration when manuals and approaches are adapted from developed countries. This scenario extends further when "trained" staff returns to their respective health facilities and either the low numbers of patients, hierarchy of staff or restrictive policies prevent them from using their new skills, and consequently, competency dwindles. There is also the dilemma of upgrading skills of staff in rural areas.
or what is commonly known as the periphery, but at the same time confronting a high turnover. Many health posts, in particular, those in rural and remote areas have vacant positions for potentially 6 months or more.

The training of skilled birth attendants, whether to upgrade or expand numbers of staff, thus demands planning with strategic foresight and commitment. The dilemma has been persistently systemic, stemming from corrupt practices, nepotism, inefficient bureaucracy and inept management in the health system, political instability and shifting priority of different administrations that are coming into power. All of these factors persist against a backdrop of indifference toward women’s health where human resource investment is traditionally lacking and not a priority.

4.2.1 The value of other birth attendants: Traditional and/or trained

With the high percentage of home deliveries in most countries of South Asia, it is obvious that the role of Traditional Birth Attendants cannot be dispensed with. A TBA is understood as a woman who initially acquires her skills by delivering babies herself or through apprenticeship with another TBA. A trained TBA is one that has gone through a short training under the modern health system to upgrade her skills. This, however, does not make her a “skilled birth attendant”.

Continued investment in the training of TBAs without investing in a functioning referral system and EmOC services as well as promoting support from professionally trained attendants or health workers, is not effective in reducing maternal mortality. TBAs should be trained wherever the rate of institutional deliveries is low, access to the formal health system is poor and the rate of deliveries by TBAs is high. But such training, in addition to practice of safe delivery, should focus on early recognition of danger signs during delivery and knowledge of the referral system. TBA training will contribute to the reduction of maternal mortality only when it is part of a broader strategy that includes strengthening the referral system, supervision and evaluation and therefore fostering the link between the formal and informal systems of care for women. Further, TBAs can provide culturally appropriate care at community level, serving as a bridge between the community and the formal health sector, and can participate in micronutrient distribution.

4.3 Emergency Obstetric Care: Saving lives of those most in need

Despite the availability of medical technology to treat these complications and prevent maternal death, women and their newborns will continue to die if they do not have access to a nearby, functioning EmOC facility. Here, access and a functioning facility are key words. The Commission on Macroeconomics and Health, prepared by the World Bank, states that foremost, the absence of facilities, infrastructure, drugs, equipment and blood supplies needed for both normal and complicated deliveries are major constraints to reducing maternal death.

The pervasive absence of obstetric services and lack of awareness of their importance in South Asia, place the majority of women at great risk. For however much is devoted to averting the 1st and 2nd delay, 15 percent of all pregnant women will experience a life-
threatening obstetric complication, most of which cannot be predicted or prevented. Essential Obstetric Care (EOC) describes the elements of what is needed for the management of normal and complicated pregnancy, delivery and the postpartum period. The complete range of services to treat birth complications is a subset of EOC, known as Emergency Obstetric Care (EmOC). Eight key procedures, or signal functions, classify health facilities as EmOC providers and equipped to save the lives of women most in need. EmOC can further be divided into two categories: Basic Emergency Obstetric Care (BEmOC) and Comprehensive Emergency Obstetric Care (CEmOC) as outlined and associated with the leading causes of maternal death, in the table below. The main difference between the two is that CEmOC sites are able to perform surgeries, in particular caesarean sections, and give blood transfusions.

<table>
<thead>
<tr>
<th>Signal Functions</th>
<th>BEmOC</th>
<th>CEmOC</th>
<th>Leading causes of maternal death prevented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration of parenteral antibiotics</td>
<td>✓</td>
<td>✓</td>
<td>Sepsis, complications of abortion</td>
</tr>
<tr>
<td>Administration of parenteral oxytocic drugs</td>
<td>✓</td>
<td>✓</td>
<td>Prolonged/obstructed labor, hemorrhage</td>
</tr>
<tr>
<td>Administration of parenteral anticonvulsants for pregnancy induced hypertension</td>
<td>✓</td>
<td>✓</td>
<td>Eclampsia</td>
</tr>
<tr>
<td>Performance of manual removal of placenta</td>
<td>✓</td>
<td>✓</td>
<td>Hemorrhage</td>
</tr>
<tr>
<td>Performance of removal of retained products (e.g. vacuum aspiration)</td>
<td>✓</td>
<td>✓</td>
<td>Hemorrhage, sepsis, complications of abortion</td>
</tr>
<tr>
<td>Performance of assisted vaginal delivery (e.g. vacuum extraction, forceps)</td>
<td>✓</td>
<td>✓</td>
<td>Prolonged/obstructed labor</td>
</tr>
<tr>
<td>Performance of surgery (e.g. caesarean delivery)</td>
<td>✓</td>
<td></td>
<td>Hemorrhage, prolonged/obstructed labor, sepsis</td>
</tr>
<tr>
<td>Performance of blood transfusion</td>
<td>✓</td>
<td></td>
<td>Hemorrhage, complications of abortion</td>
</tr>
</tbody>
</table>

In order to meet the needs of the 15 percent of pregnant women confronting life-threatening complications, international standards state that there should be at least 1 CEmOC site and at least 4 BEmOC sites per 500,000 population. In order to achieve mass benefits to the population, these services must be offered 24 hours a day, 7 days a
week. Applying this standard is, however, challenging as CEmOC sites are often urban-centric, found mainly within cities and district headquarters. The requirement for surgery, blood storage and transfusion, and continuous water and electricity supply as well as a host of specialists make it a real challenge for servicing rural areas.

The expansion of BEmOC to the vast rural area is a recommended strategy to cope with the reality in South Asia where more than 70 percent of births are taking place at home. Functions performed at a Basic EmOC facility have the capacity to save the lives of women at scale because some of the symptoms can be prevented simply by skilled administration of drugs. Even when more specialized care is needed, treatment at BEmOC facilities can stabilize the women so that she does not die on the way or arrive in a near-fatal condition at the CEmOC facility.58

Most health centers at sub-district level or even a professional midwife can and should be able to carry out BEmOC services given a period of training. BEmOC in a conducive environment is still a cost effective solution to complications that can be treated with drugs or obstetric procedures not requiring surgery. But the limitation confronting resource poor settings, such as lacking 24 hour electricity and water supply, is often a barrier to establishing BEmOC sites or scaling up such a vital service in rural areas. A needs assessment survey undertaken to determine the current status of EmOC services in three development regions in Nepal, showed a major deficiency in the availability of BEmOC services. Of 157 health facilities surveyed, only five provided BEmOC services, far below the 102 facilities recommended for this population size.

Despite the constraints of rural settings, EmOC is not beyond the grasp of developing countries. An investment in emergency obstetric care facilities is, more often than not, a case of minimum upgrading rather than the acquisition of ultra-modern and expensive equipment. An efficient referral system and synchronized efforts to increase utilization are equally important to the functioning of EmOC services. Most importantly, it entails investment in health workers, foremost the training of skilled EmOC providers, including midwives for providing skilled attendance at delivery. Restrictive policies in the region abound, limiting the role of staff that have the capacity to provide EmOC services and furthermore reducing the already low number of qualified EmOC providers. Annex 2 provides an overview of “who is allowed to do what” in providing EmOC services in South Asia.

The absence of skilled birth attendants has made the full-scale introduction of CEmOC and BEmOC a huge challenge. Most countries in South Asia have in place a network of district hospitals and primary health care centers, health posts or health units that try to provide services to the rural majority. And while government policies and strategies to expand reproductive health services in the region are increasing in number, the investment in human resources is slow to match the pace needed for MMR reduction. EmOC services place a high demand for health workers in terms of their number and competencies. However, the issue is not just one of increasing training, for the deployment or replacement of staff is equally pressing due to the perpetual lack of incentives for health and medical practitioners to go for peripheral postings.
Women's Right to Life and Health Initiative: Investing in what makes a difference

For the past five years, UNICEF has joined the league of organizations that advocate for investment in access and functioning EmOC facilities, including basic EmOC services. These are necessary steps toward enhanced probability of survival for women going through pregnancy and childbirth.

The UNICEF Women's Right to Life and Health Initiative (WRLH), has been implemented in South Asia as a key intervention to making emergency obstetric care available to more women. WRLH has been supported through the technical and financial partnership of Columbia University's Averting Maternal Death and Disability (AMDD) programme, made possible by an $11 million investment from the Bill and Melinda Gates Foundation. Since November 1999, coordinated by the UNICEF Regional Office for South Asia, WRLH began its work in six South Asian countries (Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka) with the addition of Afghanistan in 2003.

The WRLH initiative applies a rights-based approach to the reduction of maternal mortality, based on a conceptual framework of three elements required for successful and ethical implementation of the programme - a comprehensive perspective that includes quality life-saving technology, excellence in management, respect for human rights. The WRLH vision is that the self-determination and dignity of all women are universally valued, and this value is reflected in each woman's realisation of her right to a safe, life-enhancing pregnancy and birth. The mission nurtures a transformation of individuals, societies and systems that results in a reduction of maternal mortality as the right of every woman and enhances her status, dignity and self-determination.

Through the WRLH initiative, UNICEF together with AMDD, other development partners and national governments have invested resources in health systems, specifically addressing areas of physical infrastructure, skilled attendance, hospital management and policy, with the aim of increasing access and availability of EmOC services.
The following sections provide an update of the initiative, its key interventions that comprise facility upgrade, training, addressing the issues of blood supply and administration of anesthesia, policy advocacy and facility-based management in the seven countries. The initiative has induced visible changes even though its impact on MMR reduction remains long and winding, requiring continued mobilization of resources, partners’ support, policy advocacy and commitment of governments, development agencies and civil society. The latter part of this paper looks at the initiative’s milestones measured against the six UN process indicators.

5.1 A glimpse of progress

No agency or organization can accomplish MMR reduction alone. The UNICEF WRLH initiative is but one among a number of interventions - supported by others - that are currently in progress. Within the UNICEF geographic definition of South Asia, Bangladesh and Bhutan are the only two countries that have implemented WRLH initiative nationwide. For Bangladesh and Bhutan this includes all 123 and 23 public district hospitals respectively that are at the focus of upgrading to EmOC standards. In India, two states (Rajasthan and Maharashtra) serve as project sites, covering over 60 facilities. In Nepal, four districts (Dang, Kapilvastu, Saptari and Panchthar) are supported. In Pakistan, the project covers a population of around 7,250,000 in three districts (in two towns of Karachi West, Hyderabad district and Sanghar district) in Sindh Province. Based on the findings of a needs assessment, Sri Lanka is focusing on quality of care, already having functioning EmOC facilities in place. For the six original WRLH countries, a total of 247 facilities were selected to meet geographic distribution standards of EmOC sites per population. In 2003, when the WRLH Initiative was expanded to include Afghanistan, priority interventions there focused on expanding and improving one EmOC service in each of the 32 provinces throughout the country, which included setting up five Centers of Excellence in regional hospitals and supporting 27 provincial facilities.

In the initial phases of the project, WRLH aimed at building a foundation for change in project areas and setting in motion an approach to saving women's lives that would integrate with and reshape policies at the national level. Country project teams together with government counterparts introduced a series of steps and processes towards setting-up district and sub-district facilities to ensure readiness for obstetric emergencies and improved quality of obstetric care. Infrastructure improvement, skills training and capacity building, engaging the commitment of leadership, advocacy and mobilization of civil society have all contributed to outcomes that have made a difference for many. The following section provides highlights of the WRLH Initiative, the innovative efforts amidst a host of challenges.

5.2 Facility work: Equipping for success

“The elders in Jahanara’s community warned that male doctors would attend her delivery at the hospital, whereas if she stayed at home, the ‘dai’ or traditional midwife would assist. As if forecasting weather, her family said plainly that it didn’t matter if she or her baby died, this was left to fate. But it mattered to Jahanara,
and so she went anyway to the hospital. She had heard from others about how well-equipped and clean it was and this was enough to make her bold decision.”

- Bangladesh UNICEF Country Office Case Study

While some may argue that appearance is not everything, community perception of health services is greatly influenced by the physical status of the health facilities that dispense them. A small addition such as a curtain between beds can make all the difference to a shy woman who values her privacy above all else.

Upgrading facilities to the standards of BEmOC services is less resource intensive than that of CEmOC. Improvements at the community health centers include renovations such as toilet construction, roof repair and water installation as well as supplying essential drugs such as Oxytocin. CEmOC is more demanding as performing surgical services requires anesthesia equipment and designated rooms, as well as drugs and supplies, for both operations and blood transfusion.

WRLH in the seven countries of South Asia aimed to equip 284 facilities for Basic or Comprehensive EmOC service capacity. The task, daunting at first given the run-down conditions that some of the facilities were in, has proven doable and successful. As of December 2003, 235 facilities had achieved EmOC functioning status - equipped for operations - achieving 83 percent of the target.

| TABLE 5: Functioning EmOC Facilities set up under WRLH until December 2003 |
|-----------------|-----------------|-----------------|
| Countries       | Basic EmOC      | Comprehensive EmOC |
| Afghanistan     | 26              |                   |
| Bangladesh      | 32              | 79               |
| Bhutan          | 9               | 7                |
| India           | 39              | 19               |
| Nepal           | 4               | 2                |
| Pakistan        | 8               | 10               |
| **Total**       | **118**         | **117**          |

By the end of 2004, 15 BEmOC and 11 CEmOC facilities were functioning in Bhutan with the support from AMDD and UNICEF. Nepal was able to set up a third functioning CEmOC facility in 2004.

**Site set-up and supply:** Dynamic environments, in terms of harsh weather, limited local resources and labor availability dependent on agriculture seasons, often dictate the pace of renovation work as well as the need for repairs. The list of set-up work is as long as it is varied, involving everything from repairing a leaky roof to the complexity of establishing a
blood transfusion unit. Equipment and supplies must also be ordered, and when delivered, proper instruction on installation, use and maintenance is critical to ensure the proper handling and longevity of each item. This process of assessment, procurement and renovation continued for the remaining 49 planned facilities throughout 2004.

**Renovation:** With 123 planned EmOC sites, it was beyond the capacity of WRLH Bangladesh to renovate all facilities. However, in efforts to be systematic with countrywide expansion of EmOC service sites, WRLH drafted guidelines for assessing and performing minor renovations. Now with these guidelines in circulation, renovations and the responsibility of ensuring room-by-room readiness are in the hands of district health facility managers. This ownership felt at the district level is in large part due to the government’s commitment to making emergency obstetric care services more available to women and placing this agenda in its National Health Sector Plan.

In the four programme districts of Nepal, the renovation of labor and waiting rooms, post operative wards and toilets in 2 CEmOC sites and the upgrading of another BEmOC site, has greatly enhanced access to emergency care as previously, there were not any EmOC sites in these districts. In Bhutan nine facilities were renovated with project support, and all 16 district public hospitals have become either comprehensive or basic EmOC sites. As a result of renovation of operation theatres and standardization of equipment, for instance anaesthesia machines, ventilators and blood bank equipment, the availability of other surgical services has also expanded.

When the WRLH Initiative in Sindh Province, Pakistan started in the year 2000, only three facilities were operating 24 hours a day and seven days a week providing EmOC. By the end of 2003, eighteen health facilities total had been renovated and equipped and furthermore considered functional as EmOC sites, eight comprehensive and ten basic.

**5.3 Competency based training: Ensuring the transfer of applicable knowledge and skills**

“We are not the best, but we try our best. The doctors did not want to learn from us. Even some midwives did not want to learn from us. But we accepted this and got on with the work. We convinced everyone with evidence and practices that we were not looking to find what was wrong with the hospital. That they know themselves. Before we were sad, thinking that we couldn’t conduct the training, but now we have their respect.”

- Gulalai, nurse midwife, now EmOC CBT trainer, from Afghanistan

It is not enough to have only the infrastructure for EmOC services in place. EmOC sites
must be operational 24-hours a day, 7-days a week in order to meet the needs of women who develop obstetric complications. The extent of this continuous coverage is demanding and dependent upon a team of health professionals. One staff's lack of skill or absence will have a direct bearing on whether EmOC services are administered effectively and are able to save lives when it matters most. Throughout South Asian countries there exists a chronic shortage of skilled medical doctors, nurses and midwives who are equipped with adequate knowledge and skills to perform emergency obstetric care. The dearth of skilled providers becomes even worse in health facilities at district and sub-district levels as shown in the table below from India's coastal state of Maharashtra. The number of obstetricians, gynecologists, pediatricians, pathologists and anesthetists, all of them vital to the continuous functioning of CEmOC facilities, decreases drastically in respect to facility level.

| TABLE 6: Percent of health care establishments having specific staff in India |
|---------------------------------|-------|-------|-------|
| Percent having staff (%)        | DH    | FRU   | CHC   |
| Staff category (n =)            | (210) | (760) | (886) |
| Obstetrician/Gynaecologist      | 78    | 48    | 28    |
| Paediatrician                   | 78    | 37    | 19    |
| RTI/STI specialist              | 35    | 8     | 3     |
| Pathologist                     | 45    | 10    | 6     |
| Anesthesiologist                | 70    | 22    | 10    |
| Laboratory technician           | 93    | 86    | 74    |
| Staff nurse                     | 94    | 93    | 87    |
| Pharmacist                      | 96    | 92    | 88    |
| Training of medical officers in specific skills | | | |
| Sterilization                   | 32    | 28    | 21    |
| IUD insertion                   | 25    | 27    | 22    |
| Emergency contraception         | 19    | 17    | 11    |
| RTI/STI                         | 24    | 26    | 21    |
| Newborn care                    | 21    | 22    | 17    |
| Emergency obstetric care        | 19    | 17    | 11    |


However, the dearth of practical skills among service providers is not for the lack of global technical standards. The WHO manual Managing Complications in Pregnancy and Childbirth - a Guide for Midwives and Doctors endorsed by several leading partners provides the ‘gold standard’ for service providers working at district level. The challenge is to adapt and provide appropriate training to match the evidence-based norms and standards.

A cornerstone of the WRLH initiative has been to build a cadre of skilled health professionals able to train and support other health professionals in their respective countries. The key ingredient in achieving this ambitious goal was the application of Competency Based Training (CBT) for acquisition of core EmOC skills. Using CBT addressed the issue regularly identified by government representatives and country programmers that clinical providers, when available, lacked the skills to provide EmOC because they had been trained with theoretical emphasis as opposed to more practical methods. CBT is learner-centered and provides trainees with guidance and coaching to
ensure the transfer of applicable knowledge and skills to specified standards before completion of the training.

Dr. Amina, a gynecologist from Afghanistan who participated in the EmOC CBT proudly gave feedback about the differences she feels and notices in her work environment since the training. "The greatest personal change has been in the practical [or clinical] area. Before these training programmes started, there was no standard of practice… I would do one thing and another doctor would do something else". With the adoption of standards, "everyone is now using one way. This is good for the patients, good for the trainer and good for students." 64

At the same time, the CBT approach fosters confidence in its participants so that those trained will be able to return to their duty stations and apply what they have learned. Skill confidence is especially important to EmOC settings when any hesitation or doubt in dealing with a complicated emergency, especially when it leads to unnecessary referral, can and does cost the lives of many women and newborns.

Learning by doing makes all the difference. Dr. Shabnum from Qatar Hospital, Pakistan, also a training participant, feels that the CBT training methods have enhanced her technical skills, enabling her to immediately apply life-saving care. "The training was different to the usual. The practice on the models gave me confidence with the skills and I learned many new things. I am using the new practices that I learned, for example, partograph, delivery in the squatting position, restricted use of episiotomy, and vacuum extraction delivery." When training colleagues on these new procedures, she remarks, "Already the doctors and midwives openly accept these new practices as they are eager to upgrade their skills to a higher and consistent standard." 65

The evidence-based support and positive results that WRLH experienced fueled the goal of integrating this type of training for EmOC at the national level. Prior to the WRLH initiative, apart from Bangladesh where the National Safe Motherhood Programme had already made a one-year EmOC training programme operational, none of the countries in South Asia had an in-service EmOC training process. 66 It was therefore a major yet exciting undertaking to set a massive regional capacity building process in motion. UNICEF in partnership with AMDD, first organized a regional training of trainer programme to build a pool of master trainers. Nurses, midwives, anesthetists, obstetricians and gynecologists from Afghanistan, Bangladesh, Bhutan, Nepal and Pakistan came to this first ever South Asia regional master training programme hosted by the Government of Bangladesh in 2002. JHPIEGO, AMDD's technical partner, developed in consultation with government specialists from the region, the training curriculum for doctors and midwives and conducted the training. The training programme, structured into two parts, focused on updating the participants'
Competency-based training is the learner-centered mastery of specific knowledge and skills performed to specified standards.

How was it done? A step-wise process
1. Agreement by national/sub national governments to initiate CBT
2. Selection of training sites
3. Selection of trainees based on specific criteria
4. Commitment of trainees and training institutions to initiate CBT
5. Site assessment
6. Site preparations and set up
7. Training of trainers
8. Plan of action for standardization of skills and training of service providers
9. Monitoring and on going mentoring of service providers
10. Training of service providers and training of more trainers


knowledge and clinical standardization and strengthening clinical training skills.

Following the master training programme, the competency-based training of trainers in EmOC was completed later in the same year. This new cadre of trainers were now fully equipped and prepared to set-up training sites and initiate CBT for other service providers nationwide in their home countries. Follow-up visits by JHPIEGO, to the concerned countries were conducted to provide assessment, feedback and coaching and furthermore support the achievement of accepted standards for training sites and trainers.

With the EmOC master and ToT trainings completed, a cascade of EmOC CBT ensued in all the programme countries. In just two years, each country established a CBT training site and has a core team of trainers certified by JHPIEGO’s master training team. By the end of 2003, Bhutan and India had completed one batch of service provider training, and Bangladesh and Pakistan two batches. Nepal managed to accomplish four BEmOC trainings and one in CEmOC. In India, three additional CBT workshops were conducted in 2004 for general nurse midwives (GNMs) and medical officers in Maharashtra and West Bengal. Follow-up monitoring has reported improvements in the accurate use of partographs to detect obstructed labour and referrals, timely treatment of eclampsia using magnesium sulfate, a drop in the case fatality rate and a heightened confidence amongst the practitioners in managing complicated cases.

Afghanistan’s challenge to achieving EmOC functionality in all provincial hospitals has led them to investing in a continuous, full-scale CBT training programme for in-service providers and pre-service midwives. Course evaluations and the experience from the country-level training show that trainees felt sufficiently confident to perform their new skills on completion of the CBT course. As a result, there is now a growing body of skilled EmOC and anesthesia service providers and competent trainers with these skills. In turn, this has led to the strengthening of EmOC facilities. Experience gained through standardization and operationalization of EmOC practices, training and service delivery packages is positively affecting and strengthening capacity of health system and facility managers.

CBT builds accountability for quality obstetric services. As a result of the CBT programme there is improved capacity of the health system to support 24-hour delivery of operative and emergency services in district hospitals. In fact, the impact goes beyond obstetrics...
and positively affects on other hospital services-building a foundation of quality care in the hospital-through updated knowledge and expanded surgical practices; broadened anesthesia skills; strengthened operation theatre and general nursing skills; improved infection prevention practices; and the heightened importance given to emergency readiness. In general, the perception that evidence-based practices, standardized protocols, competency and teamwork are all important, is making a difference to the way service providers work, and is making their work more meaningful.

5.4 Blood supply and demand

Hemorrhaging (excessive vaginal or cervical bleeding before or after childbirth) is a leading cause for maternal mortality in countries of South Asia. Two hours without treatment or blood transfusion, is all the time it takes for women experiencing post partum hemorrhage to bleed to death. For those who are already anemic, the chances of survival are even grimmer. More than 500ml of blood will flow from the vagina, draining the body of its life force and shutting down all systems. Losing consciousness is common, perhaps one last gift from the body to numb the pain and block the awareness of such a horrific exit.

Thus, timely transfusion of blood is an important intervention which can save the lives of many hemorrhaging women, if blood supply can meet the demand. However, accessibility and availability of safe blood, particularly in rural areas is a major challenge to reckon with in most countries of the region. Many women who are in dire need of timely and safe blood find a blood bank only at the district level. For the majority of women and their families living in rural areas, this is too far to reach in time if a complication occurs.

Establishing blood transfusion units is a complex and involved process, but essential to the functionality of a CEmOC facility. The WRLH initiative supported trainings for lab technicians and senior medical officers on managing blood banks and the latest blood transfusion procedures. In India, a blood storage management training module was developed and has further been adopted by the State Government of Rajasthan to train others. WRLH India has also supported a training of trainers to meet the demand for setting up blood transfusion sites. With a view to ensuring an ongoing supply of blood for all blood groups, a crucial step in the process of strengthening the EmOC services is on the recruitment and maintenance of voluntary blood donors. WRLH Nepal and Pakistan have been successfully addressing this issue of blood supply through conducting community motivator trainings that aim at establishing blood donor societies and voluntary donation. Where an on-site blood bank is not possible due to physical space constraints, the WRLH initiative assisted to ensure 24-hour blood transfusion services through supporting blood donor camps and setting up priority donor lists.
India has experienced first hand the limitations of having competent staff and willing blood donors without supportive policies in place. Providing emergency obstetric care closer to communities was already envisaged in the early ‘90s under the Child Survival and Safe Motherhood Programme (1992-1997) by setting up First Referral Units (FRUs) at the Community Health Centre/sub-district hospital level. However, most of the identified FRUs did not become fully operational for a variety of reasons, including non-availability of blood transfusion and storage facilities.\(^{73}\)

Amending policies and protocols is often a time consuming and elaborate exercise. It took till December 2001, to amend the National Blood Policy to establish blood storage centers at sub-district level health facilities which are identified as First Referral Units.\(^{74}\) After another one and a half years, in June 2003, the guidelines for setting up the blood storage facilities, standard operating protocols and clinician's guidelines for appropriate use of blood and blood products were eventually developed and in place.\(^{75}\)

Once these critical steps were done to make safe blood more widely available in India's rural areas, development partners were in a position to assist in improving availability and access to safe blood. UNICEF and the World Bank joined hands and supported setting up of blood storage centers in 13 First Referral Units in Maharashtra.\(^{76}\)

The following graph illustrates the increase of blood use in maternity units after the policy had been changed and staff trained.

The new blood policy and guidelines have been major landmarks to increase availability of blood and blood products in the rural areas of India. WRLH continues to focus on bringing safe blood closer to women and their families through advocating for appropriate policies, operating protocols and clinician's guidelines as well as sensitizing communities for blood donation.

### 5.5 Anesthesia

As with blood supply, the numbers of anesthetists is not enough. Doctors who specialize in anesthesia in India as in neighboring countries undergo 1 to 2 years of training as part of postgraduate study. Once attaining the specialist status, most of them either join the private practice or live in cities for better income and a more comfortable life. Few willingly take on a challenging assignment to work in rural and remote areas or what is commonly called "the periphery" where, unfortunately, most of the tragic drama - of birth turning into grief - unfolds.

Most general practitioners learn how to perform spinal anesthesia, local anesthesia, and general anesthesia. In India, the latter requires supervision\(^{77}\) during their medical training, based on curriculum stipulated by the Medical Council of India (MCI).\(^{78}\) But national regulations do not allow these doctors to perform spinal or general anesthesia in practice.
in order to prevent adverse outcomes. To ease the acute shortage of anesthetists, some state governments support anesthesia training of doctors for three months, but only as a back up for abdominal sterilization operations and not for other surgical needs, and certainly not in EmOC.

WRLH was prepared to take on these challenges, as without anesthesia services Comprehensive EmOC sites will lack the capacity to provide life-saving surgeries. Making headway with this CEmOC component was slow to start. Bangladesh was ready to equip hospitals with anesthesia machines, but held off due to a lack of anesthetists. In 2003 though, due to trainings that upgraded medical officer skills, anesthesia services could be provided and subsequently 10 anesthesia machines were procured for 10 CEmOC facilities. WRLH Nepal in 2003 was able to support the training of three paramedics in anesthesia training bringing the total number of anesthesia providers trained by the project to six. Relentless WRLH advocacy in Nepal also contributed greatly to expanding the role of nurses to serve as anesthesia assistant for all surgery at district and zonal hospitals.

While Bhutan lacks adequate in-training facilities, the initiative was taken to support a one-year nurse-anesthetist training in Bangkok for four staff nurses. In India, the government of Maharashtra State has decided to designate more specialist posts so that obstetricians and anesthetists are ensured at all times. A decision has also been adopted under the government’s Reproductive and Child Health scheme to train medical officers for 18 weeks in anesthesia. However, many of the medical officers trained to date voice their hesitancy to practice these crucial skills in times of emergency without receiving a legal waver from the Consumers Protection Act. While the number of anesthetists remains low, WRLH has experienced that supporting governments with revising out dated human resource projections and modifying training requirements is a gradual but key entry point to improving the situation.

5.6 Infection prevention

One of the most commendable efforts of teamwork is improving infection prevention (IP) practices. It involves everyone—administrators, cleaners, technicians, doctors and nurses. It not only assures safety, protecting both staff and patients, but it improves the whole physical and visual environment, which influences staff morale and patient satisfaction. Thus far Nepal has conducted whole site infection prevention training in all of its EmOC sites. Master trainers from 11 facilities in Pakistan, completed the training in infection prevention, and are now responsible for training the relevant staff of their own hospitals. Other countries in the region are also involved with IP initiatives, accepting the responsibilities and valuing the outcomes. Dr. Rahim, an anesthetist from Afghanistan, was inspired after the CBT exposed him to
the simplicity of infection prevention, but the profound difference it can make. “We have to do this. We want an IP committee for the hospital. It doesn't depend on having money; it depends on us doing it. I am ready to help with any non-anesthesia work.”

5.7 Gender

UNICEF Bangladesh conducted, what no other country under the WRLH initiative did, gender training. For long they felt a need for a shared commitment among those who are involved with the functioning of the health system to address the needs of women and providing for their health care. UNICEF started with gender training of their own staff and then trained a range of senior health directorate officials, civil surgeons, medical officers and obstetric consultants. The WRLH initiative has imparted gender awareness, provided conceptual clarity and generated a shared understanding of issues related to gender equality and human rights. This started a process of change among service providers towards women and their rights and dignity.

As well as the gender training, a ‘women friendly’ initiative has been implemented. This initiative certifies health facilities that show capacity to address violence against women, prioritize the formation of linkages between the community and facility stakeholders as well as incorporating issues of gender equity into health interventions, as 'women friendly'. The initiative has proven to be a proactive approach in addressing the needs of women.

WRLH in Nepal, like in many of the other countries, has witnessed the empowering effect of the training on the service providers, who are by and large female, making them more confident, assertive and able to communicate more effectively with male supervisors and colleagues.

5.8 Practical tools for health workers

Sharing innovative approaches and experiences on a broader scale has been made possible by WRLH through creation of various tools and manuals. Quality improvement tools, for such things as hospital and room readiness, were developed and the first of their kind for many of the health facilities now implementing them. In addition to these tools, two workshop facilitation manuals were developed under the WRLH initiative:

- "Emergency Obstetric Care: Community Stakeholder Facilitation Manual" was developed to work with communities in order to generate support and participation for emergency obstetric care at the district hospital level.

- "Emergency Obstetric Care: Hospital Facilitation Manual" was designed based on the rich real life experience from working with service providers in a hospital setting. The manual provides the 'how to' for facilitating change and supporting "whole-site transformation". This is all done to improve overall quality of care, increase team effectiveness, personal performance and leadership skills that lead to tangible results in the availability of quality emergency obstetric care.
5.9 Investing in management capacity

Hospitals are social living systems that form an integral part of the health system. Because they are dependent on the performance of people - managers, clinicians, technicians, administrators, guards, cleaners, store-keepers - to function, they definitely possess the potential to create and drive appropriate change. To promote and sustain quality EmOC services 24-hours a day, everyday, takes considerable critical thinking, strategic planning, effective service management and above all else, team work.

However, hierarchy is still deeply entrenched in South Asia and many public hospitals tend to be a microcosm of this construct. The lingering of traditional top-down administration coupled with rigid patriarchy has fostered an environment of limited sharing of information and minimal participation in decision-making, particularly by women and lower cadres of staff. The lack of understanding about why decisions have been taken and why tasks and responsibilities are to be carried out in a particular way has led to a general frustrated acceptance of the status quo. These perceptions and attitudes have contributed to an environment of low morale and motivation and a general lack of innovation and ownership. 83

To build and improve the management of EmOC services, "investing in people and building social capital" was identified as a core strategy under WRLH to achieve the availability and utilisation of obstetric services that save, protect and enhance the lives of women.

The first thing that had to happen was to make EmOC a priority by acknowledging the urgency required in saving women’s and newborns lives. If the priority was to reflect in action then stakeholders at every level had to be involved and motivated to make the change from the status quo to a state of life-saving readiness. Clearly, processes were required to manage that change and achieve the expected results - the availability and utilization of 24-hour emergency obstetric care services at peripheral hospitals.

To improve management of life saving EmOC, UNICEF through the WRLH initiative, supported an intensive process to facilitate participation in managing change. Government and UNICEF programme staff participated in a week-long regional orientation workshop to prepare them as mentors and facilitators for EmOC in their countries. They in turn, conducted advocacy meetings at national, sub-national and district levels to sensitize and prepare leaders, managers and programmers. The meetings were designed to increase understanding of why women die, what is required to avert avoidable deaths and disabilities, and how it is possible to bring about change by working together towards the common goal of maternal mortality reduction.

Following this, each country selected a group of facilitators - government, NGO, and UNICEF - to attend preparatory workshops that provided an orientation to the hospital planning and review cycle, and, by going through the process themselves, assisted them to internalize the level of thinking and participation required. They were then mentored through a process of facilitation to enable them to guide hospital managers and staff through a similar process.
5.9.1 What is Appreciative Inquiry? Asking and listening

“I matter, what I do matters and people are willing to listen to what I have to say”.
- Girraj, a cleaner in the operation theatre in Baran District Hospital of Rajasthan, India

Appreciative Inquiry (AI) is a part of a management programme designed to improve quality of care of EmOC, complementing technical skill advancement by fostering team work and an enabling environment. It uses a whole-site, whole-systems process, involving all hospital staff and recognizing the importance of each contribution towards saving women’s lives. A climate of respect results, and enthusiasm abounds encouraging staff to go beyond the minimum defined in their job descriptions. Many would agree that the AI process carried out in selected facilities under the WRLH Initiative has truly broken the traditional boundaries hampering participation at the hospital level.

The change is evident as Girraj continues, "I have been working here for 23-24 years. But, I have seen a lot of changes in the last few months. We all sat together, doctors, nurses and all of us to talk about our work, we gave opinions as equals. This was the first time that anything like that has happened. I feel that as a result my enthusiasm has increased. I feel happy and important. Before I thought that my duty was till 2 p.m., now I stay as long as I am needed.”

The process of positive inquiry (interviewing and story telling), experiences and knowledge shared amongst staff have set the stage for behavioral and attitudinal shifts in health facilities, irrespective of medical hierarchy. Over time, by focusing on the preventable nature of maternal deaths and hospital readiness, health staff realize that making change is possible and furthermore are confident that together transforming priorities into action can be done. One of the EmOC teams in Rajasthan, India, outlined a vision that “no woman will be referred to a higher center or die for want of blood in this hospital.” As a result, a blood team was formed to ensure availability of blood at all times. An EmOC team in Pakistan was so motivated that they managed to raise a significant amount of funds from a local philanthropist for new female wards, waiting rooms for patients' attendants and midwifery schools.

Managing change using appreciative inquiry was new, exciting, and already a major shift from the norm of administrative management, but it required intensive training of facilitators - Government, NGOs and UNICEF. The facilitators' workshops were conducted in-country and abroad (Nepal, India and Bangladesh) and included pre-workshop interviews, facilitation during the workshop, on-going coaching and regular reviews. The learning would continue when these facilitators would return to their respective countries and provideorientations, pre-workshop interviews and whole site workshops for hospital staff. The process, which began by sharing and drawing on each person's best experiences, opened doors of communication to discover the human heart of the hospital as a social living system.

“Before these workshops I couldn’t have imagined the stories that the staff would come out with. I didn’t realize what they have to do and the importance of these EmOC services.”
- Programme Officer with the Health Department, Bhutan
With lines of communication open and an appreciation of each contribution, staff envisioned the hospital they wanted to work in and explored ways to create that environment - an achievable and desirable future - around the priority of saving women's lives. Together, they decided what needed to happen, formed thematic teams, mapped out annual work plans, and prepared monthly action plans. The teams held regular meetings and hospitals decided on review schedules to assess progress towards desired results.

Komal, a staff member at Baran District Hospital in Rajasthan, India, explains the importance of whole-site appreciative inquiry, "The first most important result is that every part of a machine is important whether it is the engine or the tyre, i.e. the doctor, or the nurse or the ward attendant. This is how we have created our teams. We have learnt to value our work and ourselves. The whole process is like a creation or art that we have been given the opportunity to draw and paint with our own hands and mind. We have also realized that behind every successful planning there needs to be belief and commitment, a vision of what we want and a proper workplan to achieve what we want." 88

5.9.2 It's HAP-pening in Bangladesh: Hospital Action Plan (HAP), an effective micro-planning tool

UNICEF, Bangladesh had taken on 123 hospitals, many of them at Upazilla Health Complex (UHC) level, so although they pilot whole-site management in 18 facilities, they also developed a five-step microplanning process called Hospital Action Plan (HAP). The HAP was designed to reach more facilities in a shorter time, while paying attention to team building and the details of 24-hour EmOC readiness. In contrast to using appreciative inquiry the HAP uses self-assessment to improve individual performance and capacity for emergency response. It was conducted in 71 facilities and reviewed in 29 by the end of 2003.

HAP was developed as a participatory process focused on advocacy and action for management of 24-hour services with specific objectives to:

- Overcome delays in establishing EmOC services by focusing on each step necessary to achieve functioning facility status
- Organise and build the EmOC team for effective management and performance of quality EmOC services
- Organise and set up the facility room by room with equipment, instruments, drugs, linen and other supplies
- Create "readiness" in each room to respond to obstetric emergencies around the clock
- Strengthen the record-keeping, reporting and review functions
- Improve basic functions such as cleanliness, infection prevention practices and ensuring privacy for patients.

HAP requires the formation of an EmOC team - guard, cleaner, nurse, doctor, lab technicians. The aim of the team is to improve collective action through planning, defined roles and responsibilities of team members, and periodic review meetings. In HAP the investment is in the local EmOC team, which is a substantial number of staff at UHC level. It takes four days to complete the five-step process, including assessment of one's knowledge and skills; room-to-room readiness and site-set up for emergency action; preparation of a plan of action; allocation of responsibilities; and monthly team reviews. As plans are completed, new ones are formulated and tasks undertaken that will continue to drive quality improvement and ensure maintenance of hospital systems that support EmOC.
Barek saves lives

Mohamed Abdul Barek, a 35 year old ward helper at the Kaliakoir Upazilla Health Complex in Gazipur District, Bangladesh, has a quiet demeanor, often going unnoticed as he delivers tea and looks after the hospital grounds. To many staff he was invisible, his involvement in anything besides housekeeping was not sought, his potential never tapped. But this all changed. The WRLH team started the Health Action Planning (HAP) initiative, a participatory planning process, at Kaliakoir in 2001 and Barek was included. Pride filled him. He felt honored and eager to be able to contribute more.

The lesson that Barek took to heart from the HAP process, was that his contribution mattered. It was this reassurance and acknowledgment of his role at the facility in a grander perspective that led to an event that changed his life and that of two others.

Barek is accustomed to working throughout the oppressive heat of a Bangladeshi summer day, though for the general population it has the potential to cripple most activities and confines them to the indoors. For those who must brave the heat, morning hours are preferred and as a result the Kaliakoir Upazila Health Complex in Gazipur District, like many other government facilities, is its busiest during this time. Barek noticed amidst the flurry of hospital activity, a near lifeless pregnant woman being carried into the waiting area. The woman did not have the strength to speak, but her mother-in-law who was by her side told Barek of how labor had painfully persisted for hours without progress. It was the woman's fifth pregnancy and like the others, she was planning on delivering this child at home.

Barek took immediate action, alerting the doctors to the emergency. A drip was inserted in order to ease the delivery. But then breathing problems developed and she began to shiver. Her condition necessitated additional medications, but the money required to cover the cost of drugs were beyond the family's capacity to pay.

Barek decided to get the required drugs from the pharmacy on loan. He had learned in the HAP training that with obstetric emergencies there isn't time to waste. While the drugs momentarily stabilized the woman, she would need to be transferred to the Dhaka Medical College Hospital, the closest referral site for a Cesarean section. However, the ambulance had broken down and so if this woman's life was to be saved, an alternative means of transport was necessary. Barek at once took off on his motorbike in search of any private vehicle that could substitute for the ambulance. When the micro bus was found, he insisted on accompanying the woman to the referral site. In one hand he held the IV fluid and in the other the referral slip. An hour later they reached the hospital and she was rushed into the OT where the doctors operated immediately. Barek received the good news that the woman and baby were alive and well. Barek went back to Kaliakoir, relieved and exhausted but most of all proud that he helped to save her and her baby's life.
5.9.3 Managing change: The results of teamwork

Working together has brought results. The following is an overview of what under the WRLH initiative was achieved to improve management, readiness and response to obstetric emergencies.

In the 76 facilities where management processes were introduced in Bangladesh, improvements to meet the requirement of obstetric emergencies initially focused on room to room readiness in maternity and operation theatres. These areas were systematically set-up and are maintained for 24-hour obstetrics and emergencies. Emergency drugs are now incorporated into the medical supplies register.

In several cases separate obstetric units were established and consultants are providing their services beyond normal working hours and duty rosters for emergencies and surgery are maintained. Uniforms were provided to cleaning staff and in some facilities, infection prevention practices are improving, although similar to other countries infection prevention practices require continuous, long-term investment.

With respect to planning and monitoring, guidelines and quarterly monitoring formats are now in use in most facilities and all nursing staff of 59 district hospitals (2360 nurses) were trained in the use of planning guidelines. A critical part of good planning relies on data. Better record keeping has been noted and the introduction of computer software has immensely helped with data compilation and management, especially with respect to making routine collection more systematic and efficient.

In Bhutan, reorganising and setting-up a woman friendly environment that is always ready for an emergency, has been the priority and data on obstetric services are showing a positive increase in utilisation. Paro Hospital is a 55-bed hospital in a busy district of Bhutan, and was one of two sites selected for the whole site management process. The EmOC Team has rearranged the beds to allow for more privacy and the maternity team is providing a maternity unit orientation to women at 34 weeks gestation. They have sign-posted the hospital to direct women to the emergency and maternity areas and are assisting women to prepare their birth plans during routine antenatal visits, so they know the danger signs and know what to do and where to go in an obstetric emergency.

The maternity team has also increased the number of delivery packs, updated their neonatal resuscitation procedures and is maintaining a continuous supply of consumable supplies. The blood bank team has procured the equipment required including transfusion sets, and collection supplies, negotiated with MoH to provide a trained lab technician to manage the bank and initiated a blood donor system. Together, they mobilised an emergency blood donor network, which now has 50 potential donors tested and registered.

In Pakistan, EmOC teams identified between 10 and 17 "breakthrough" tasks required to improve quality of EmOC services. Of the six facilities where whole-site appreciative management was introduced, two have achieved all breakthroughs and four have achieved 80 percent of their planned breakthroughs. The publication of EmOC manuals and protocols were completed and printed and disseminated. Some of these tasks included making signboards to label rooms and services, renovating reception areas to make them more user-friendly and equipping operating theatres.
For Sri Lanka, the example of change is based on the results from the past two years that have led to reorganised and refurbished hospitals. Some of the positive changes include a central unserviceable items store so that damaged items are no longer scattered throughout the facility and a waste disposal system that provides separate bins are color coded for all types of waste and a colour code chart is on the wall above each waste disposal area. Also through color coding, a patient identification system has been set up to flag during the busy ante-natal care clinics first visit mothers and women in their last month of pregnancy.

Planning and review workshops based on appreciative inquiry were completed in the four project districts in Nepal with the involvement of both health staff and stakeholders. These review and planning workshops resulted in improved readiness, teamwork, leadership in facilities and the development of a positive environment in the health facilities. The Medical Superintendent of Saptari Zonal Hospital, Dr A. Mishra, made the commitment during one workshop that “No woman would die due to lack of medicine”. Community stakeholders have also participated in these workshops resulting in increased supportive action. The increase in community awareness of the three delays has resulted in an increase in community responsibility for community health services, including financial contributions and the devolution of responsibility to nurses as direct service providers has also increased coverage of services. In order to assess the coverage of services a mapping of the villages from which the patients came was conducted. From this mapping exercise barriers to EmOC access were identified and EmOC funds were established and utilized to address the situation.

The following graph illustrates the contribution by community stakeholders in one district towards financing emergency obstetric care, highlighting the level of participation that has developed between medical and lay stakeholders.

Some of the best practices on FRU operationalization in India, especially related to administrative and policy matters, were shared during a study tour to Chennai, and were found useful for adapting in the Maharashtra State set-up. In hospital teams, making better use of hospital funds was recognized as a need. Innovations brought about by the more judicial use of funds for minor activities has included stretchers, housekeeping trolleys, a central oxygen system, and site renovations including waiting areas for relatives were undertaken. These are simple, yet commendable achievements. All facilities have mobilized community and private sector funding for hospital improvements. Three hospitals have introduced Patient Welfare Committees to support donations in kind and cash, including blood donation. Several hospitals have built shelters for relatives and established midwifery and EmOC training facilities, including quarters for trainees.
5.10 Creating supportive environments

To save women’s and newborns life a host of issues have to be addressed necessitating a supportive environment. Particularly policies and regulatory frameworks not only need to be in place, but also have to be implemented and monitored.

The following section outlines WRLH’s influence on policies and regulatory frameworks that support maternal and neonatal mortality reduction, in particular emergency obstetric care. In addition, the role of professional associations of obstetricians/gynecologists, nurses and midwives is explored.

5.10.1 Translating policy into progress: National maternal and neonatal health agendas

Efforts to decrease maternal and neonatal mortality and morbidity in South Asia are not new. Besides, the governments in this region have committed themselves and ratified various international conventions and documents which emphasize women’s rights to life and health. For instance all eight governments have ratified the Convention of the Rights of the Child, the Convention on the Elimination of all Forms of Discrimination against Women. Six of the eight have also signed the Maternity Protection Convention (as of May 2003). However, translating these conventions into national policies and frameworks has been marked with many challenges. One of which is that maternal and neonatal mortality reduction has to be firmly positioned on the policy agenda, where public officials are required to consider maternal and neonatal health when they allocate resources, pass laws and make policies.

In India, the government has time and again been making policy and programmatic statements and set objectives to reduce maternal mortality. The following table is an overview of the various MMR reduction goals manifested in previous national policy and programme documents in the country.

<table>
<thead>
<tr>
<th>Year</th>
<th>Document</th>
<th>Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1983</td>
<td>Health Policy Statement by Government of India</td>
<td>MMR reduction to 200-300 by 1990 and below 200 by year 2000</td>
</tr>
<tr>
<td>2000</td>
<td>National Population Policy</td>
<td>MMR reduction to 100 by 2010</td>
</tr>
<tr>
<td>2002</td>
<td>National Health Policy</td>
<td>MMR reduction to 100 by 2010</td>
</tr>
<tr>
<td>2002-2007</td>
<td>Tenth Five Year Plan</td>
<td>MMR reduction to 200 by 2007</td>
</tr>
</tbody>
</table>

In spite of these good policy intentions, progress on the ground is slow and has yet to be translated into significant reductions of maternal deaths. In 2000, India had a MMR of 540 per 100,000 live births. Some argue that this could be attributed to factors such as inadequate investment and monitoring of maternal mortality reduction activities, and an earlier reliance on not very effective interventions such as traditional birth attendants and antenatal care, and paying insufficient attention to emergency obstetric care over the last decade.
The recognition of obstetric care as a key intervention to reducing maternal mortality, however, is not new. India had already in the early '90s identified obstetric care as part of the Child Survival and Safe Motherhood (CSSM) Programme (1992-1997). But the overall implementation of the safe motherhood components, not just obstetric care, was hampered by many different factors. Among them were the lack of clear strategies, realistic targets and lack of training for health workers and medical officers.

The subsequent government programme to improve maternal and child health in India, the Reproductive and Child Health Programme I (1997-2004), recognized essential and emergency obstetric care, 24 hour deliveries at PHC/CHC level and essential newborn care as key interventions. RCH I, however, had been noted for the lack of systematic convergence of inputs at PHCs or CHCs in any district. There was also insufficient focus on outputs and results to improve EmOC services or other services. EmOC was by and large neglected in the implementation of various components of RCH I (family planning, adolescent health, STIs etc).

While policies and national programmes, which sought to reduce maternal mortality and improve maternal health had been in place for a while, the actual implementation seemed to have been hampered by limited capacity to develop strategies, track changes and monitor, coupled with small resource allocations and insufficient number of sanctioned staff posts for maternal health programme at national as well as at state levels.

Though geographic coverage was small in the context of India's population, the WRLH initiative, implemented in six districts of two States (Rajasthan and Maharasthra), was an attempt to demonstrate the "HOW TO DO IT" of EmOC programming. Examples included the use of a combination of strategies, such as hospital micro-planning and appreciative inquiry processes to improve planning and management, or developing competency based training programmes for doctors and nurse/midwives. In addition, previous protocols did not provide much guidance for emergency obstetric care. As a result of persistent advocacy, the State Government of Maharasthra and Rajasthan developed standard protocols to handle major obstetric emergencies based on the manual developed by WHO, UNFPA, UNICEF and the World Bank on "Integrated Management of Pregnancy and Childbirth" (IMPAC).

The WRLH initiative - through its demonstrative effect - brought renewed focus to EmOC and placed women's right to emergency obstetric care more firmly on the Government's policy agenda. Perhaps most importantly WRLH provided the government and others with concrete lessons on how to go about implementing and monitoring changes at district and sub-district levels. For instance, one learning from the WRLH initiative had been translated into a bold policy decision. After a team from the Government of India participated in the annual conference of the Averting Maternal Death and Disability (AMDD) programme and learned about the feasibility and successful implementation of a short course in anesthesia training from another country in the region, the government specialists swiftly acted to start addressing the shortage of anesthesiologists. The team developed and launched a new training programme for MBBS doctors in anesthesia and resuscitation for EmOC at FRU level in India. In 2002, a module for the short training course in anesthesia was developed. And in 2003 eight medical officers were trained on a pilot basis. Legal clearance is, however, still hindering this initiative from moving rapidly forward.
Moreover, in 2003 when the Ministry of Health and Family Welfare in India formulated the next phase of the Reproductive and Child Health (RCH) Programme the lessons learned in setting targets and developing strategies to operationalize EmOC at sub-district and district level from the WRLH initiative were taken into consideration in technical discussions and policy analysis to formulate the second phase of RCH, which provides the national framework to reduce maternal and neonatal mortality and morbidity.98

RCH II seeks now to improve the coverage of basic and comprehensive EmOC according to the UN recommended norms: four basic EmOC facilities per 500,000 people and one comprehensive EmOC facility per 500,000 people. RCH II intends to reduce the 'unmet need'99 for EmOC by 50 percent by the end of the financial year 2005.100

Like in India, the MMR policy agenda in Bangladesh has featured emergency obstetric care as a key intervention for some years. Bangladesh's previous sector wide programme (1998-2003)101 established emergency obstetric care as part of the larger Safe Motherhood package with resource allocated for its implementation. Following a national survey, the government went in 2001 a step further and developed a national strategy for maternal health which entails clear targets and strategies for EmOC services. In fact, the national maternal health strategy positioned EmOC on top of its priority list.102 As such it is not surprising that Bangladesh at the end of 2003 was the only country in the region which has a nation wide EmOC programme with 79 of 123 facilities performing comprehensive emergency obstetric care and 33 providing basic emergency obstetric care all over the country.103

UNICEF in Bangladesh has long been an advocate for maternal health and women's rights. The country programme began to support measures to improve maternal health as early as 1993, and was engaged in policy advocacy and reform. When in 2000, after extensive consultations with government counterparts, the WRLH initiative was launched, it found a ready made environment and prior experience in EmOC. National policies and plans were in place. Stakeholders in government and development agencies had recognized EmOC as a critical intervention to save women's lives. What's more the government ensured policy and planning continuity. The new Health, Nutrition and Population Sector Programme (2004-2006) again firmly entrenched EmOC in its priority list.104

The WRLH experience in Bangladesh has demonstrated that the technology of life saving services for women with obstetric complications can be made available in rural centers without relying on specialists in capital cities. Rather, the critical elements required are deployment and retention of skilled and competent service providers, essential equipment and supplies, ensuring readiness through hospital micro-planning, and most importantly, the motivation and will - at all levels - to ensure availability of quality services. For all this strong policy commitments, demonstrated rigor in tracking progress and taking action are vital.105

In Pakistan, the policy environment for maternal and newborn health presents a very different picture than the situation in India or Bangladesh. To date the country does not have an explicit national policy to reduce maternal and neonatal mortality. There is no particular department at federal level set up and charged with the responsibility to plan, strategize or track changes in the health status and death rates of mothers and newborns. There is also a notable absence of a strong advocacy coalition of civil society
organizations which could buttress efforts to move maternal and neonatal health higher and forward on the national and provincial policy agenda - and this even if estimates suggest that in Pakistan about every 20 minutes a woman loses her life while giving birth.

Nonetheless, the WRLH initiative launched in 2000 in Sindh Province, Pakistan, was able to contribute critical aspects to maternal and women’s health issues in the country as a whole. Firstly, WRLH was vital to bringing the concept of EmOC as a key intervention for maternal mortality reduction into the country. Prior to the WRLH initiative only very few facilities offered EmOC, and those which did provide EmOC were mainly in the private sector in large cities. Secondly, WRLH uncovered numerous factors at facility level which needed to be addressed to reduce the delay in receiving appropriate treatment.

Thirdly, the needs assessment tools, training materials, supervisory checklists and MIS formats are being replicated in the ADB funded Women Health Project and target districts of the UNICEF-Government of Pakistan Country Programme 2004-2008. Fourthly and perhaps most importantly, "in a country where honour killings of women are still taking place, WRLH has brought in the rights’ dimension. It has helped to look at women not just as pregnant beings but as women with human rights!” says Dr Shershah, Associate Professor, Department of Obstetrics and Gynecology, Qatar General Hospital in Karachi.106

It is against these developments and after persisting advocacy efforts that the government charged in February 2003 the National Committee on Maternal Health (NCMH), an advisory body to the government, to draft a national policy on maternal health. With the support from UNICEF, NCMH drafted the policy on maternal and neonatal health, which is under review by different parties. However, policy development and eventually its implementation don’t solely rely on the technical capacity and political will, but also on continued commitment of the federal government. As a member of the NCMH explained “For the maternal health policy to see the light of the day, it also depends on how long the current acting Secretary Health will stay in his post. In the last ten years, Pakistan had eight Federal Secretaries Health.”107

To harness and foster government commitment, the WRLH Initiative (which is in all countries required) created stakeholder committees to plan, guide and monitor progress. In Pakistan, the Committee is chaired by the Secretary Health. Initially the Secretary Health was neither convinced nor supportive of the project. One of the members explains: “We were sitting in a meeting with the Secretary Health to invite him to chair the committee. We had organized a presentation on maternal mortality and the presenter went into great details on the drastic effects of APH and PPH[108], but he was still not convinced. Until one of the committee members couldn’t help it and said ‘but Secretary
Health, these women are dying’. He replied ‘but WHY are they dying?’ The colleague said ‘because they are bleeding to death!’ It wasn’t until then that the Secretary Health developed an interest in the project, because where he was born also many women die in childbirth or due to pregnancy related complications. But no one had tried to explain this to him before in understandable terms.”

Bhutan, geographically one of the smallest countries in the region, the WRLH Initiative triggered a range of significant policy and programmatic changes. The ninth-five year plan of the government aims to further expand the number of basic and comprehensive emergency obstetric care services. Basic EmOC skills have been made a minimum core competency required for all new medical officers joining the health sector. The Royal Institute for Health Sciences in Bhutan has taken a decision to integrate competency based training in basic EmOC into the pre-service training programme of nurse-midwives. The National Drug Committee has approved the inclusion and supply of all required EmOC drugs for district distribution. What’s more, the country has decided to make a maternal death a notifiable event.

In Nepal, the WLRH initiative in close collaboration with the National Safe Motherhood Project managed successfully to advocate for an expanded role of nurses in EmOC. The new National Safe Motherhood Training Strategy, developed with support from JHPIEGO during 2002/2003, allows officially staff nurses and senior ANMs to provide BEmOC services - a remarkable development in South Asia!

5.10.2 Professionalizing midwifery for normal delivery and obstetric first aid

Midwifery is not recognized as a separate profession in India. It is part of the nursing training. Auxiliary Nurse Midwives (ANMs) in their 18months training spent 9 months on midwifery. There has been a recent amendment in their curriculum which is now increased to 24 months with additional 6 months training in midwifery skills.

To professionalize and expand midwifery in India, UNICEF is in dialogue with the Government of India to pilot a midlevel cadre of workers between the TBAs and ANMs to increase access to skilled care at childbirth. This cadre is called ‘Community Level Skilled Birth Attendants’. Other UN agencies, such as UNFPA and WHO have also expressed an interest in supporting such an initiative.

In addition, in July and October 2004, UNICEF sponsored two consultative meetings of experts in Delhi to develop a consensus on the skills related to the levels of care, and scope of practice and competencies for skilled attendance at birth within the context of RCH-2. At present there is no policy allowing staff nurses and ANMs to practice independently life saving midwifery skills such as prescribing medications like oxytocins and magnesium sulfate without supervision. The specialists therefore made a series of recommendations on the use of antibiotics, IV infusions, oxytocins, anticonvulsants and
manual removal of placenta/retained products. These recommendations are presently being considered by policy makers and the Drug Controller of India.\textsuperscript{111}

In \textbf{Pakistan}, there are some private institutions (e.g. private hospitals and the Agha Khan University\textsuperscript{112}) which provide training in midwifery skills to nurses. In the public sector, however, the training of nurses and LHV\textsuperscript{s} in midwifery is by and large inadequate. The final year in nursing and 6 months in the LHV course are devoted to midwifery, however, this tends to be knowledge and not skills-based.\textsuperscript{113} As a result, many of them tend to have little up to date knowledge and even fewer skills to help deliver babies, not to mention the competencies needed to provide basic obstetric first aid. This dilemma is aggravated by the lack of collaboration between various private institutions and the public sector in midwifery training. However, in Sindh province this challenge was faced head on. Three midwifery schools have been established in hospitals which are supported under the WRLH initiative. By the end of 2003, these new schools had trained 180 midwives. The establishment of three midwifery schools, plus the development of a curriculum and the training of a small cadre of tutors, all achieved as a result of joint efforts of the WRLH initiative, the public and private sector, are major milestones. The next challenge ahead is to expand this pool of quality tutors and trainers in midwifery and to get the midwifery text book, which has been translated into Urdu, to all the midwifery schools.\textsuperscript{114}

In \textbf{Afghanistan}, UNICEF in partnership with Health Net International and JHPIEGO took on the challenge to set up a community midwifery programme in 2003. In a country which has gone through two decades of conflict and has a history of discrimination against women, enrolling women who have basic education and are allowed by their families or partners to work as midwives in their communities, is not an easy task. However, the first batch of midwives has already been trained and is doing supervised work in the training facility. In addition, the first 21 hospital based midwives have completed the full competency based training programme, with revised midwifery curricula and a six month practical and supervised work.\textsuperscript{115}

\section*{5.10.3 Advocating with professional associations}

Professional associations of doctors, nurses and midwives have a vital role to play in South Asia so that far fewer women and newborns are dying due to avoidable causes. As custodians of the professions’ ethics, they are critical to ensuring that policies, standards and protocols are based on latest evidence. Their roles are manifold. Ranging from policy dialogue with government, to ensuring training and development of health professionals generates skilled and competent providers, right up to advocating for greater resource allocation and better utilization. Accordingly, professional associations in all their diversity are critical to aid that promises to reduce maternal and neonatal mortality are kept.
While in South Asia goals, size and capacity of national associations vary immensely, almost all countries have organizations of different health professions. The most recent one established is the Afghan Society of Obstetricians and Gynecologists, which obtained professional membership with the International Federation of Gynecologists and Obstetricians (FIGO).

When UNICEF kicked off the WRLH Initiative in 1999, close cooperation with various professional associations of doctors, nurses and midwives in the different countries was sought. In Bangladesh, Nepal and Sindh Province in Pakistan, professional obstetric and nursing/midwifery associations have been vital partners in the development and implementation of revised standards of practice in emergency obstetric care. In Pakistan, where there are over 90 midwifery training institutions, the Association of Nurses and Midwives were swift to update the practices in the 2002 edition of their training curriculum. In Bangladesh, a close collaboration was forged early in the national EmOC programme between the Society of Obstetricians and Gynecologists and the national training institutions. They worked side-by-side to refine the EmOC training and their technical and monitoring support continues to be central for the training and human resource development. In many countries, these associations are critical actors so that the experiences with the CBT programme initiated under WRLH can be integrated into larger in-service and pre-service training programmes for service providers.

For instance, Pakistan has started the process of involving the Society of Gynecologists and Obstetricians (SGOP), Pakistan Medical and Dental Council (PMDC), College of Physicians and Surgeons (CPSP) and Pakistan Nursing Council (PNC) in efforts to initiate pre-service EmOC trainings in the country.

The Federation of Obstetrics and Gynecological Society of India (FOGSI), an 18,000-strong body, has made major headway to build skills among many more young graduate doctors in dealing with obstetric complications. Based on the successful experience of the competency-based training of health professionals from Maharashtra State, FOGSI started developing a four months long training for MBBS doctors in emergency obstetric procedures including caesarean section. Until recently only specialist obstetrician or surgeons were allowed to perform these procedures. With support from UNICEF, FOGSI trained in December 2003 a group of master trainers. The Government of India is now considering introducing the training of MBBS doctors in obstetric management skills on a wider scale in other medical colleges.

At regional level, UNICEF ROSA has been closely collaborating with the South Asia Federation of Obstetrics and Gynecology (SAFOG). To move at much greater pace forward in addressing maternal and newborn mortality issues, SAFOG, UNICEF and other development partners launched in April 2004 the South Asia Maternal and Neonatal Mortality and Morbidity Reduction Network. The new network is tasked to address three strategic areas: advocacy for action, human resource development and policy. Notably, the network has unanimously agreed to make EmOC a priority in national health and development programmes.
5.11 Data and tracking of maternal and neonatal deaths

In South Asia, the scenarios that question the completeness and accuracy of collected maternal and neonatal death data are many. National maternal mortality figures tend to disguise the potentially huge geographical variations and differences among population groups, some of which may be more affected than others (such as scheduled or lower casts and certain ethnic groups). Data at sub-national levels that may better reflect the health of the entire population it represents is difficult to find, and even when readily available statistical significance is questionable. As with the skilled attendance, indicator definitions are often changing, making trends over time and accurate comparisons difficult to analyze.

In Nepal for example, systematic processes and administrative capacity required for birth and death registration are in general lacking at the village and district levels, which translates into lower numbers of maternal deaths being documented. At the health facility level, gaps of misclassification also exist between the clinician who makes the diagnosis and the health worker who records. Inconsistencies abound as the latest knowledge on clinical classifications is absent amongst many staff. There are countless other women experiencing pregnancy complications that won't even have the 'opportunity' to be misclassified, they die in their homes or on the way to the health facility.

In India, despite various policy goals of reducing maternal mortality, there was neither encouragement for nor any monitoring of deliveries conducted in the health facilities, or by skilled health staff like doctors and midwives. Many maternal deaths remain un-registered, un-audited and often virtually forgotten. Unfortunately, this gives the implicit message to the health system that maternal health was not a priority of the health system, even though policy statements and programme objectives included reduction of maternal deaths. Consequently these unaccounted for maternal deaths do not become part of the statistics, unable to lobby for more resources to prevent deaths like their own.

Quality data is at the core of all policy and programme decisions. In efforts to better inform governments, donors, and all those involved with WRLH about the situation of women's health and the progress of the initiative, focus was placed on improving data collection and recording. Working closely with governments, WRLH assisted the integration of EmOC indicators in national Health Management Information Systems (HMIS) in Afghanistan, Bangladesh, Nepal and Pakistan.

In Bangladesh, the quality of record keeping and reporting has been improved tremendously. Orientations for service providers and statisticians on proper use of common record keeping and reporting formats as well as implementation of a computer software package for EmOC that stores, sorts and analyzes data, are making data more reliable and meaningful.
For all WRLH CEmOC facilities in India, registers for OT, labor room, abortion and maternal death were printed and are being put to use. These additional registers are aiding in the documentation of complications which were previously missed and making data more comprehensive. On a regular basis, clinical teams are reviewing and analyzing data, looking at trends and making decisions based on the results. In order to further improve the recording of maternal death, there are plans to conduct interviews in communities with family members of the deceased or verbal autopsies.

Verbal autopsies assist in tracking maternal deaths, especially those women that never reach a health facility, and also they provide clues to more comprehensive understanding of the death. It is an important tool that steers programming in more effective directions, providing additional information on the magnitude and causes of maternal deaths.

In Nepal, the WRLH initiative in close tandem with the Nepal Safe Motherhood Project (NSMP) has worked relentlessly to initiate a national EmOC reporting system. In fact by the end of 2004, EmOC process indicators are being reported by the government reporting system in 13 districts which are supported by the NSMP and WRLH initiative. Further, in the four programme district hospitals improved recording systems have been set up with the use of the partograph for monitoring progress of labor. To address classification discrepancies, weekly continuing medical education (CME) sessions have begun as well as adherence to standards through implementation of the Clinical Protocols for Reproductive Health.

For the first two years, Pakistan had difficulty in collecting and organizing MIS from the targeted health facilities. The system when put in place was met with significant resistance from the various hospital staff when asked to carry out record keeping and updating. It was considered an extra burden and a way of increasing the workload. Now though, three years down the road, most staff has been trained in record keeping, is now more comfortable with updating and recognizes the importance of a strong database especially with respect to planning and working more efficiently. Moreover, in mid 2004, obstetric record keeping and reporting tools have been developed in collaboration with the national HMIS unit. The Government of Pakistan and UNICEF are devising plans to pilot these tools in the WRLH target districts and then replicate them nationally.

Embedded in all WRLH work with improving data quality, is the promotion of the UN Process Indicators for uniformly monitoring EmOC services.
The following section documents the overall contribution of the WRLH Initiative to addressing maternal death and disabilities as measured against internationally accepted indicators. But any reduction in the number of maternal deaths during the past four years in South Asia can not solely be attributed to the WRLH efforts, as simultaneous and collaborative contributions of many of UNICEF’s national and international partners, have also made a difference. Likewise, the dynamic nature of the region with respect to politics and social movements is also of influence. It is though a fair statement to say that WRLH’s investment in health systems has saved lives and has the high potential to keep doing so. WRLH in partnership with governments has built the foundations for change and set the process of establishing quality emergency obstetric care services in motion.

Measuring the impact of WRLH in just the brevity of four years would be premature, but the progress so far is visible and this is best shown through a set of six process indicators, termed the UN Process Indicators. These process indicators were created through a joint effort of Columbia University and UNICEF and furthermore published in Guidelines for Monitoring the Availability and Use of Obstetric Services in 1997. The indicators are based on the understanding that in order to prevent maternal deaths, certain types of obstetric services must be available and used. These indicators will show whether EmOC services are available to women in sufficient quantity, and whether women who most need them - those who experience a life-threatening obstetric emergency - are, in fact, using them. These six process indicators are an integral part of the WRLH programme, measuring progress towards the initiative’s goal of avert maternal death and disability through improved access and availability of emergency obstetric care. Collectively, the WRLH investment in strengthening the cadre of skilled attendants, introducing innovative management practices, equipping facilities with other essentials and advocating at the policy level have demonstrated a positive difference as shown by the indicators below.
TABLE 8: The Six UN Process Indicators and Recommended Levels

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<tr>
<th>UN Process Indicator</th>
<th>Definition</th>
<th>Recommended level</th>
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| 1 Amount of EmOC services available | Number of facilities that provide EmOC                                       | Minimum: 1 Comprehensive EmOC facility for every 500,000 people  
Minimum: 4 Basic EmOC facilities per 500,000 people |
| 2 Geographical distribution of EmOC facilities | Facilities providing EmOC well-distributed at sub-national level | Minimum: 100% of sub-national areas have the minimum acceptable numbers of basic and comprehensive EmOC facilities |
| 3 Proportion of all births in EmOC facilities | Proportion of all births in the population that take place in EmOC facilities | Minimum: 15%                                                                                         |
| 4 Met need for EmOC services | Proportion of women with obstetric complications treated in EmOC facilities | At least 100% (Estimated as 15% of expected births)                                                   |
| 5 Caesarean sections as a percentage of all births | Caesarean deliveries as a proportion of all births in the population | Minimum 5% Maximum 15%                                                                              |
| 6 Case fatality rate | Proportion of women with obstetric complications admitted to a facility who die | Maximum 1%                                                                                         |

Source: Columbia University (2003) Using the UN Process Indicators of Emergency Obstetric Services, Questions and Answers. Mailman School of Public Health, AMDD Workbook. USA.

6.1 Coverage and access

There are many implications associated with where one is born. Whether entering this world screaming and vibrant or weak and malnourished, babies won't have a say into whose arms, home and country they will be received, yet these factors will shape their lives in critical ways. Basic rights, such as the right to a healthy pregnancy and safe childbirth, should but are not always accorded to all at birth. The very process of delivery in many countries in South Asia has high potential to take the lives of mothers and newborns, especially if a nearby EmOC facility is lacking or not functional. Adequate coverage of EmOC sites is therefore vital in terms of providing a life-saving option in times of need. UN Process Indicators 1 and 2 look at whether the WRLH Initiative has contributed to making access to health care more equitable.

Each UNICEF country office of South Asia together with their respective government counterparts, identified areas where the need for EmOC facilities was strikingly apparent. According to the set standards of UN Process Indicator 1, for every 500,000 population, at least 4 Basic EmOC facilities and at least 1 Comprehensive EmOC should be established. In many of the identified WRLH project sites, potential but not much else existed. For example, Nepal did not have any Basic EmOC sites and only 1 CEmOC site in its 4 WRLH districts. Pakistan was not much better off with a total of 3 EmOC sites for a population of over 7 million people.127 As another guideline of assessment and project planning, UN Process Indicator 2 examines access of EmOC services to see if they are
equitably distributed at the sub-national level. Due to difficult terrain in many of the project areas and lack of infrastructure, assessing distribution is not possible from maps and housing clusters alone. More accuracy with respect to geographic distribution can be achieved through factoring in time required to reach a facility.

The UN Process Indicator guidelines together with the parameters of funding, set the scope of the WRLH initiative to cover 284 facilities, of which at baseline only 113 could be classified as providing EmOC services. In just four years, 235 are providing all the services of basic or comprehensive emergency obstetric care, achieving approximately 83 percent of the target.  

Considerable progress has been made in all countries. In Nepal, Bhutan and Pakistan for instance, where virtually no or very few EmOC facilities existed, women’s access to life saving services enhanced double or triple-fold with the improved service sites. In Bangladesh, the number of EmOC facilities increased by almost 50 percent and each of the country’s 64 districts except for 11 has a fully functional EmOC site. The data for India must be analyzed carefully, since the start of the initiative in 1999 there was a change in the criteria for classifying sites as EmOC. Before, only a subset of the signal functions had to be in place whereas now to be considered an EmOC site, all signal functions must be provided. Supporting the positive trend of WRLH data, India’s National Reproductive and Child Health Survey 2, independently reported an increase in EmOC coverage in WRLH project states. For instance, in Baran District there was a remarkable jump of more than 30 percent in coverage.  

While the numbers of EmOC sites is increasing in the intervention areas of the WRLH initiative, the journey to expanding access for all is still arduous. An entry point for establishing services was often at the district headquarters, in most countries centrally located and with the resources required for EmOC, like consistent supply of water and electricity, already in place. While the initiative has assisted EmOC setup in areas where EmOC services were incomplete or non-existent, there are still populations that live distant to the newly established EmOC sites and in many countries of the intervention, access to care remains limited.

Bangladesh is a good example that demonstrates, despite obstacles, how a commitment over the long term can prove successful. Bangladesh has made considerable progress with promoting CEmOC at the sub-district level to bring the service closer to villages. The following table is based on status of functioning of public sector facilities (Medical College Hospitals, District Hospitals, Maternal and Child Welfare Centres, and, Upazilla Health Complexes), showing a commendable increase in CEmOC sites by almost 4 times the number of sites functioning in 1994.
The CEmOC facilities have not reached the expected level of service for the population size as per UN Process Indicator standards, but it is gradually getting there.

Apart from Bangladesh and Bhutan who have implemented nation-wide, the coverage of the WRLH in the other countries has been intensive in its project areas, but only able to cover a small portion of much larger territories. The potential to scale up, applying the successful approaches thus far and extend partners of collaboration, is ideal to reach even further.

### 6.2 Utilization

Many would argue that in order to improve women's health and reduce MMR, first there must be services and facilities. Logical enough, but the underlying assumption is that communities will seek care and actually utilize the services that have been established. Clearly, health facilities depend on communities and vice versa, it's the principle of supply and demand. But in terms of emergency obstetric care, what should come first, hospital readiness or mobilized communities?

Through strengthening the cadre of skilled attendants, introducing innovative management strategies and providing sites with supplies and essential equipment, the WRLH initiative has boldly addressed the health system first. The improved facilities and quality of care are showing results. Utilization of EmOC services is on the increase, and albeit gradual it is nonetheless an achievement when before pregnant women were without an option to have a complication treated.

But the WRLH experience has also demonstrated that community participation and social mobilization efforts have to be an integral part of maternal mortality reduction efforts to increase utilization further. While much seems to proceed at a glacial pace when responding to the needs of women in South Asia, it is evident that responding to factors which have a major impact on women's right to life and health, such as violence, education and access to economic resources have to be dealt with more effectively - not the least because of their impact on low utilization rates.

### 6.3 Births in EmOC facilities

The third of the UN Process Indicators, looks at proportion of births taking place in EmOC facilities. While this indicator does not differentiate between normal or complicated deliveries, it is a good tool to look at overall utilization of services by pregnant women. The below table displays the low proportion of women delivering at EmOC sites compared with the minimum standard set at 15 percent. In the populous countries of the region, endline data does not appear to look much better than baseline, but in fact improvements are
visible. Bangladesh, for example, at baseline had recorded that 1.29 percent of births were taking place at EmOC sites and by the end of 2003 this proportion had increased to 2.09 percent of births.\textsuperscript{136} While the difference between the two proportions may appear negligible, it represents a jump from 34,907 EmOC facility births at baseline to 56,742 births recorded in 2003, an approximate improvement of 62 percent.\textsuperscript{137}

In Qatar Hospital of West Karachi, a district of the WRLH initiative in Pakistan, the increase in births at facilities shows numbers equally substantial. In 1999 institutional deliveries were 723 but by 2002 had climbed to 2,903.\textsuperscript{138} In Nepal, proportion of births in EmOC facilities increased by 70 percent above baseline while the target achievement was 7.2 percent against a baseline of 4.0 percent.\textsuperscript{139}

The Indian state of Rajasthan was the only intervention area that experienced a decrease in proportion of births at EmOC sites, albeit slight. A deviation such as this can be attributed to a variety of factors ranging from incomplete data to staff vacancies.

Despite evident progress, there is still a long way to go for countries like Bangladesh, Nepal and Pakistan in terms of meeting the minimum standard of 15 percent. In these countries, there is still a strong preference to deliver at home. But nonetheless the increasing trends are an achievement given the short time frame and reflect commitments are being progressively translated into action.

### 6.4 Met need

More births are taking place at EmOC facilities, but are lives being saved? Met Need for EmOC, the 4th UN Process Indicator, addresses this question by forming the link between utilization of services and saving women’s lives. Met Need describes the proportion of women with complications who receive emergency treatment out of the total number of pregnant women that are expected to have complications, that is 15 percent of all pregnant women.\textsuperscript{140} In other words, what percentage of those most in need are receiving life-saving emergency obstetric care.

Analysis of the data collected for the Met Need indicator, portrays that WRLH is making headway with its goal to reduce maternal mortality and morbidity, reaching women with obstetric complications and saving lives. Met need in Nepal’s project sites rose from 2.2 percent in 2000 to 17.2 percent in 2003, a remarkable change spanning all four programme districts that is backed by strong leadership.\textsuperscript{141} In Pakistan, met need in the project areas of Sindh Province impressively doubled from 16.6 percent in 2001 to 34

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**TABLE 10: Proportion of Births at EmOC Facilities**

<table>
<thead>
<tr>
<th>Country</th>
<th>Proportion of Births</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Base line</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>1.29</td>
</tr>
<tr>
<td>Bhutan</td>
<td>11.0</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>28.4</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>18.0</td>
</tr>
<tr>
<td>Nepal</td>
<td>4.0</td>
</tr>
<tr>
<td>Pakistan</td>
<td>6.83</td>
</tr>
<tr>
<td>Sri Lanka**</td>
<td>86.3</td>
</tr>
</tbody>
</table>

*Proportion of births in identified institutions. In the year 2001 inputs were focused in district hospitals so the data is from district hospital only. ** Sri Lanka’s focus was improving quality of care in facilities. Source: UNICEF ROSA (2004) Regional Annual Report, Women’s Right to Life and Health Initiative, Nepal.
percent in 2003.\textsuperscript{142} Similarly dramatic, in Rajasthan met need went from 4.4 percent in 2001 to 27 percent in 2003.\textsuperscript{143} Bangladesh’s performance although not as steep in terms of increase, is still a remarkable achievement, doubling met need since baseline.\textsuperscript{144} Met need in Bhutan fluctuated over the last two years, but nonetheless it maintained an overall increase and still leads the other countries.\textsuperscript{145} As Bhutan starts with an already above average baseline indicator, improvement is occurring only incrementally and the slow progress may reflect poor health seeking behavior in communities.

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|c|c|c|}
\hline
\textbf{Country} & \textbf{Baseline} & \textbf{2001} & \textbf{2003} \\
\hline
Bangladesh & 6.5 & 10 & 20 \\
Bhutan & 30 & 40 & 50 \\
India (Maharastra) & 15 & 20 & 30 \\
India (Rajasthan) & 25 & 30 & 40 \\
Nepal & 5 & 10 & 20 \\
Pakistan & 10 & 20 & 30 \\
\hline
\end{tabular}
\caption{Proportion of women who have obstetric complications treated at EmOC facilities}
\end{table}

\textbf{6.5 Caesarean Section}

As with the Met Need, UN Process Indicator 5: Caesarean Section as a percentage of all births, also provides a means of measuring whether women who really need EmOC services are receiving care. A mere 15-minute surgery is all that is necessary in the case of obstructed labor to pull both mother and child from the brink of death. Accepted international guidelines state that not less than 5 percent and not more than 15 percent of all births should be delivered through C-section. It is believed that less than 5 percent indicates that women are dying or suffering because of a lack of treatment, whereas over 15 percent may indicate that women are receiving C-sections for reasons other than those required by their medical condition.\textsuperscript{146}

This indicator is perhaps the most sensitive of all process indicators. If an anesthetist or surgeon is not present, whether temporarily or in the long term, caesarean section is simply not possible. Likewise, the life of a woman with an obstetric complication requiring surgery will be in jeopardy if blood supply or the technicians to perform the transfusions are inadequate. Hospital readiness for obstetric emergencies is therefore also being measured by this indicator. Not only do these specialists need to be in place, they must also be available 24 hours a day, 7 days a week.

At the time that baseline data was collected, all of the WRLH country project areas were experiencing challenges with recruiting anesthetists and surgeons to the rural health facilities. The performance of C-Sections was far below the minimum standard of 5 percent with rates ranging from 0.25 to 2.5.\textsuperscript{147, 148}
In India, changes in human resource and blood supply policies have contributed to an increase in the number of deliveries conducted by C-Section. As per the new human resource policies, more anesthesia posts have been created to complete EmOC site teams which lack an anesthetist. In Latur Division, Maharashtra, India, where previously there had been no anesthetists, there are now nine anesthetists filling 69 percent of the total approved posts. Overall Maharashtra State has experienced an increase from 2.5 to 2.7 percent deliveries with C-Section. The decreasing trend for proportion of C-Section deliveries in the state of Rajasthan is a reflection of high staff turnover of anesthetists and surgeons.

WRLH Nepal which fully lacked the capacity for surgery in three of the four project districts at the onset of the intervention, could provide C-Section services in three districts by the end of 2003. The third CEmOC site was added during 2004. Comparison with baseline data taken in 1999 shows the proportion of district births by C-Section increased from 0.31 to 0.41 in the last 4 years, a 32 percent improvement.

In Bangladesh, the number of C-Sections reached over 11,000 which almost doubled the amount that was occurring at baseline. This is marked from the proportion of births by C-Section indicator increasing from 0.25 to 0.42, paralleling the achievement of met need. Pakistan as well, mirrors the positive trend that its met need indicator had shown.

The sensitivity of this indicator makes it quickly apparent when a CEmOC site is not fully functional. It points towards the challenges of human resources and makes a strong statement that frequent staff transfers have major impact on the capacity to provide comprehensive emergency obstetric care. Strong leadership as well team work are key and these elements must be coupled with government commitment, otherwise collaborative efforts are hindered and progress has high potential to stagnate.

The perceived quality of care in communities, whether accurate or not, has great potential to influence the extent to which a facility is utilized. The death of one woman in an EmOC facility can change the reputation of good care to bad, overnight. Similarly, those in waiting rooms or in a shared medical ward, are observing and noting the things they like or dislike. Based on the manners of treatment a decision will be made to return or how to recommend.

![Bangladesh: Mother and newborn are well after a life-saving c-section](image-url)
such a health facility. A poor perception of quality of care, sets in motion a cycle of low patient flow with consequent decrease in opportunities for health workers to practice and maintain their skills.

### 6.6 Case Fatality Rate

With respect to EmOC, Case Fatality Rate (CFR), the last of the UN Process Indicators, attempts to measure the quality of care at facilities. CFR represents the number of women who could not be saved with emergency obstetric treatment. Usually this indicator is only measured at CEmOC facilities, as these are the sites of care that receive the most complicated referrals. In situations where there is a high volume of complications, this indicator can provide an idea of the performance of the facility. The indicator should be analyzed cautiously as in many situations, such as arriving at the EmOC facility in a late stage of the complication, CFR will remain high despite good quality of care. A maximum acceptable level for CFR has been set at 1 percent and to achieve lower is generally associated with quality service provision.

\[
\text{Case Fatality Rate (CFR)} = \frac{\text{# of maternal deaths due to direct causes}}{\text{# of obstetric complications treated}}
\]

Bangladesh, India (State of Rajasthan), Nepal and Pakistan all had incredibly high CFR at the onset of the initiative. Problems such as lack of equipment, drugs or skilled staff are likely reasons why women with pregnancy complications, despite reaching the facility, died after admission. A major focus of WRLH has been to strengthen health facility management and foster improved team work amongst staff. To bring about positive changes with respect to quality EmOC services, every staff member has a valuable role to play. While this indicator is still one that needs to be interpreted cautiously based on the number of emergencies that are treated and data reporting, the graph shows unwavering improvement in CFR for all countries. All countries, with the exception of Bangladesh, managed to lower their CFR to below the accepted standard of 1 percent, some are even approaching 0 percent, like that of Bhutan. Bangladesh, however, did show improvement in 2003 the CFR was at 1.80 percent compared with the baseline at 2.80. It is important to note that Bangladesh data reflects the trend happening for all major public health facilities, as WRLH was implemented countrywide. Again while the decrease may appear small in comparison to the other countries, the populous size of Bangladesh is significant that the impact is actually quite substantial. Taking an average of all CFR data for the region shows a commendable achievement. CFR has dropped from a high CFR of 2.74 percent to just 0.55 percent in the timeframe of four years.
The country initiatives have shown achievements in all indicators. These positive developments are the direct result of collective efforts and inputs from the intervention as well as supportive policies and partnership with government, donors, academic institutions, medical associations and professional bodies. The investments in competency based training, innovative management practices and policy advocacy are contributing towards a visible improvement in quality of care.
Way forward: Increasing momentum for action

Demonstrating impact takes time, especially if it aims at being sustainable. In just four years, however, the WRLH initiative has not only shown its ability to make a difference in the selected areas of programme implementation but also at national policy levels. The potential that the Initiative harbors to be scaled up for country-wide and regional impact is apparent.

But increasing the priority level of maternal deaths and disability in health systems and among communities and decision makers alike is still required so that the momentum that has developed thus far can keep building, can keep ensuring that more women are able to embrace the right to a safe and healthy journey through childbirth and pregnancy. There is more work still to be done and WRLH has shown that a systematic and comprehensive approach to improvements in women’s health is an effective way forward.

7.1 Build on skills that save

Every pregnant woman should be assisted by a skilled birth attendant; the evidence shows it saves lives. A skilled attendant at delivery in a supportive environment is able to actively manage labor and carry out basic EmOC functions for the mother, as well as neonatal resuscitation and the prevention of hypothermia in the newborn. Skilled attendants also bring EmOC services closer to home, and when linked to a functioning referral system and a higher EmOC facility, play a crucial role in reducing the deaths of mothers and newborns. In South Asia, each year over 37,000 babies are born but only 35 percent of births have a skilled attendant. The need to increase the number of skilled health workers for provision of care at deliveries and treatment of obstetric emergencies is striking. It is imperative that efforts to build on skills that save continue.

Competency based training (CBT) has been an effective way of ensuring the transfer of appropriate skills and knowledge for skilled attendants and other clinicians involved in EmOC. It has implemented and operationalized standard protocols for EmOC, positively affecting clinical performance and accountability. The “hands-on” practical approach of CBT has improved technical skills and confidence. And this, in times of obstetric emergencies, is what is required for a life-saving response.
A growing body of skilled EmOC and anesthesia service providers and competent trainers to match in all seven countries of WRLH implementation has resulted from CBT. The challenge has been to keep trainers in place while at the same time expand the number of trainings. Staff transfers or low incentives for rural postings, jeopardize training investments, placing women again at risk. Government commitment to human resource development is essential, backed by progressive policies.

The integration of CBT methodologies into health department pre-service training or clinical education curriculum would ensure that evidence-based practices become the norm for practitioners. At the same time, a systematic means of strengthening cadres of health workers skilled in EmOC would be in place, contributing to reaching more rural women by filling posts of peripheral health facilities. But because the training of specialists takes time, of equal importance is the recognition of non-specialist doctors and nurses/midwives' role in conducting life saving procedures, and that they can receive competency-based training to carry out emergency obstetric tasks. This practice is being increasingly accepted in the region given the dearth of human resources, including midwives, who are trained to handle emergency cases. And more governments are coming on board to endorse - through policy and certification - the delegation of EmOC responsibility to other cadres of staff to meet the growing demand for these services.

Scaling up of CBT does though require strengthened advocacy at many levels. The CBT concept and its added value to trainings already in place must be well understood amongst policy makers, professionals and educators if CBT methodologies are to be integrated into national health training methodologies for EmOC. Aligning with key stakeholders such as governments, medical and midwifery professionals and medical colleges is important to obtain their support and commitment to practice CBT in their work.

With additional investments in CBT, the learning has potential to exponentially grow as more health workers are competent in providing EmOC services. The skills and knowledge shared with other staff furthermore sets a standard of good care and they bring their expertise back to their posts. As word spreads through communities about improved quality care, utilization of health services increases which in turn provides more opportunities for refining competencies - more practice at saving lives.

**7.2 Manage with innovation**

A vital part of improving quality 24-hour EmOC service provision is promoting effective management. Just investing in EmOC technology alone (in terms of equipment, technical skills and supplies) will not result in the level of care required to consistently save the lives of women who visit facilities. However, technical inputs combined with effective management makes remarkable progress possible.

Effective management is the main support to ensuring health facility readiness, especially with respect to making best use of resources. The entire hospital must be engaged - from clinicians to housekeeping, each has an essential role to play. Innovative methods like that of Appreciative Inquiry and Health Action Planning which were introduced as part of
WRLH, promoted a whole-site, whole-system approach which facilitated a transformation in attitude and fostered a stronger sense of community within the hospital. Staff were encouraged to examine what strengths already existed individually and collectively, and in doing so, there came a realization that together they could sustainably provide 24-hour emergency obstetric care services, together a difference could be made.

Management is inextricably linked to quality improvement. A core principle of effective management, strategic planning, is key to ensuring staff, drugs and supplies required for EmOC service provision are in place. Amongst the most involved processes that must be managed well, is that of blood. A coordinated effort amongst many is essential to not only ensure its availability but also its safety. Adherence to blood testing protocols is of utmost importance, but is unfortunately not widely practiced. It is not enough that standards and protocols are in place, effective management must ensure their appropriate and consistent implementation. Reaching acceptable levels of quality takes time but effective and supportive management will lead the way.

Quality of care can further be promoted through creating a women friendly atmosphere. Conducting on-site gender training fosters a better understanding of gender inequities and how as staff, a more sensitive approach to providing care is possible. A simple change in provider attitudes can lead to greater health access, especially since many barriers to seeking care are often rooted in gender issues. Gender training also has good potential to lessen the rigid hierarchy in the health facility which at times prevents team work.

Participation in decision making, teamwork and regular review of progress have demonstrated positive results. These processes combined with leadership and encouraging supervision, doing things innovatively to produce better outcomes for women's health sustains.

**7.3 Coordinate and collaborate: New partners and old**

While the majority of maternal disability and deaths occur alone, the causes surrounding the tragedy are not however isolated. These varied causes warrant that a comprehensive approach to addressing women's health is taken, going beyond the outdated purely medical means of intervening. Such an approach requires that programmes aimed at reducing maternal mortality and morbidity are designed for inter-sectoral collaboration and coordination. Women's health is increasingly being linked to economic, political and social status and this must be taken into consideration when sustainable improvements are sought. Sectors for collaboration that should be linked to women's health initiatives are education, food security and law to name a few. Much of what can result from such an inter-sectoral collaboration is a raised level of empowerment through more knowledge, income and awareness of rights.

Expanding the approach to reducing maternal deaths and disability necessitates that old partnerships and new be strengthened. Concerning partnerships that have long been established, better coordination needs to be in place. It's an issue of collectively supporting evidence-based approaches to increasing efficiency and to avoid duplication of efforts and to aid reaching out to areas where there is limited coverage. It is also an
opportunity to share and learn from best practices in programming and review evidence from operational research and other scientific studies.

Participation from the private sector must also be more actively sought as their role in improving women's health is significant, but too often neglected. Likewise, other groups such as traditional healers or religious leaders, must increasingly be engaged as their influence in communities and involvement are critical in working towards behaviour and social changes to tackle maternal deaths and disability more efficiently. Synergistic efforts, such as linking with organizations that specialize in HIV and AIDS and gender based violence, add much needed value to interventions and make them more comprehensive.

7.4 Access to care

In South Asia, inequity with respect to health service access abounds. In the case of pregnancy complications, distance to a nearby functional facility is of utmost importance. But the issue of access is manifold with respect to how barriers to reaching care can be reduced, and physical distance is just a small part of it.

One of the major lessons emerging from WRLH implementation is that community participation in EmOC significantly contributes to the availability, quality and utilization of services. With EmOC sites established, the time is ripe to increase efforts in creating a stronger demand amongst communities for such health services. An increased demand will in turn ensure that EmOC investments are not lost as without steady service utilization, staff may lose the skills they recently acquired.

Community mobilization is a means of fostering more demand for quality services, it promotes health seeking behavior. Raising awareness about danger signs of pregnancy, birth preparedness and where the nearest EmOC facility exists are first steps as in many parts of South Asia poverty and large rural populations are challenges to disseminating health information. Activities that aim at raising awareness like health education, street dramas or radio programmes, need to address a wide audience through targeted messages, as many persons are involved in ensuring that women seek and receive quality care in time. Strengthening transportation options, involving traditional birth attendants in referral networks and prominently including men and mother-in-laws in safe motherhood activities, are all vital elements to increasing demand, boosting service utilization and averting maternal deaths.
Increasing demand for services is important in its own right, but there is still more that can be done from the service provision side to reach even further into communities and attempt to remedy the inequities that exist with respect to health facility distribution. Basic EmOC facilities is a means of expanding coverage that is worthy of more investments. Equipping BEmOC sites is not as intensive as that as CEmOC and furthermore the services provided are able to treat the majority of complications and if not, they are able to stabilize women until they are able to reach more advanced care. In order to equip additional BEmOC sites, the role of nurses and other non-specialists needs to be promoted and backed by relevant policy change that authorizes them to provide midwifery, EmOC and anesthesia services.

7.5 Make numbers count

Maternal death is already a tragedy in itself, yet the inexcusable extent to which it is under-reported worsens the situation even further. Without an accurate account of the actual numbers of women who die from pregnancy and childbirth complications, the issue does not seem to get the attention it deserves. Similarly, with each maternal death that is not reported, valuable information to help understand what went wrong will be lost and as a consequence effectiveness of programmes aimed at averting maternal deaths suffer.

It is critical that more resources be invested in Health Management Information System (HMIS) to create stronger links between the health needs of populations, health facility performance, and decision makers at national levels. Data collected at the community level up through to the compilation and analysis of national statistics influences resource allocation. Therefore all maternal deaths must count.

Current indicators should be evaluated on the criteria of whether they are able to provide meaningful information. It is an involved process to modify national indicators, but nonetheless having in place standard and reliable indicators leads to more consistency in data and analysis. WRLH found that the use of UN Process Indicators provided information from which the initiative could assess the effectiveness of the approach and furthermore guide programmatic shifts to increase effectiveness. Specifically the indicators provided information on access, utilization and quality of care all of which the intervention aimed at improving. It is critical that both the tools and the human resource capacity to collect and analyze data are given priority.

More precise indicators do not, however, fully address the issue of under-reporting nor do they provide the full story of why maternal deaths are happening. Far too often, maternal deaths that occur at home are not documented and as a result valuable information is lost. There is a dire need to record these deaths in the community, and verbal autopsy has been a widely validated means of doing so. Beyond what HMIS can provide, this method gives a more complete recount of the circumstances surrounding the death and provides insight into why the death occurred. It is only through going into communities with questions that the current data collection system will be refined and that data will more accurately reflect the reality outside of health facilities.
7.6 Keep moving forward

Women's health, especially maternal mortality, figures prominently in the Millennium Development Goals, spurring all stakeholders to accelerate actions toward the drastic reduction of maternal death by 2015. The WRLH Initiative has made some headway with investments in health systems and emergency obstetric care, but the journey is still long. The realities of the South Asia region pose a host of challenges to making progress towards international set goals - the largest of these is how to increase the momentum and keep moving forward with the complexity of saving women's lives.

Maternal death from pregnancy and birth complications is avoidable, yet it is allowed to happen time after time. Scientific researches have established that approximately 15 percent of all pregnancies will result in obstetric complications, and when untreated, they are certain to lead to a woman's death. Investment in emergency obstetric care services thus makes good economic sense. For the cost of facilities and personnel is minuscule when weighed against losses of huge numbers of innocent lives. Meeting the needs of the hour of these 15 percent of cases will have a direct bearing on reducing maternal mortality as a whole.

A woman dying unjustly during one of the most natural processes, despite the advent of technologies, is not an outcome of poverty but the absence of priority. Furthermore maternal death and disability is not an issue that occurs in isolation, its consequences whether directly or indirectly, affect us all, yet not all are taking action. While the issue is complex in many ways, it is a collective and shared responsibility amongst all citizens. Everyone has an important role to play, something vital to contribute.

At the community level, those who are most affected by maternal death and disability have a potential untapped. There exist countless individuals, either survivors of obstetric complications or families who have lost a wife or mother, that have something to say. Their stories that recount the experiences that changed their lives forever are laced with the hope to inspire its listeners to rethink why a woman's health during pregnancy should be prioritized. This is a group of individuals that need to be mobilized so that their strong voices about why it is more important to prevent such tragedies as opposed to coping with the loss are heard.

Governments have committed to reducing maternal deaths and disabilities, but the gap between promise and action needs to narrow even further. Major constraints with expanding emergency obstetric care countrywide mainly pertain to human resources, especially with respect to staff training, recruitment, deployment, transfers and incentives as well as restrictions placed on health workers with respect to what procedures they can provide. Some countries in the region have made progress with at least acknowledging the issue, but it is not enough to draft strategies, agendas and policies. It is imperative that they are implemented comprehensively and systematically and that their effectiveness is continuously evaluated.
With respect to national and international development agencies and donors as well as national governments, the potential ways of continuing contributions are many. Through transferring knowledge and skills, the prevalent inequity/disparity amongst developed and developing countries lessens. Blame for maternal deaths should no longer be placed on not having the appropriate and latest technology to save lives. Through sharing experiences, there is something to be learned as throughout the world, many parallels with respect to maternal death and disability can be drawn. Combining the goal of making pregnancy and delivery safe with the continuing financial support can transform the hope for reduced maternal mortality into a reality. The investment is both necessary and justified. The deaths of countless women who did not live to see such a commitment and investment will not be in vain after all; their lives’ last message will have been heard.
### ANNEX 1: “Midwives” in South Asia

<table>
<thead>
<tr>
<th>Country</th>
<th>Who is officially a government trained ‘midwife’?</th>
<th>What is the length of the basic training for midwifery skills?</th>
<th>What is a ‘midwife’ allowed to do in case of EmOC?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Afghanistan</strong></td>
<td>Midwives and community based midwives Graduation programme at government midwifery schools</td>
<td>Nurses who receive basic midwifery training Programme launched to train Female Health Assistants and Family Welfare Assistants to become ‘SBAs’</td>
<td>In relation to EmOC midwifery trained personnel allowed to administer IV fluids on their own, prescribe antibiotics on their own, manage anaemia in In relation to EmOC midwifery trained personnel allowed to administer IV fluids on their own, prescribe antibiotics on their own, manage anaemia in</td>
</tr>
<tr>
<td><strong>Bangladesh</strong></td>
<td>Nurses who receive basic midwifery training</td>
<td><strong>GNM</strong>: 3 years training of which 6 months are on midwifery <strong>ANMs</strong>: 2 years training of which 6 months are midwifery</td>
<td>Under medical supervision, nurses can administer antibiotics, anticonvulsants, oxytocics. Allowed to do digital evacuation of retained products until the cervix is</td>
</tr>
<tr>
<td><strong>Bhutan</strong></td>
<td>Midwifery trained personnel are: GNM, ANM, Health Assistant</td>
<td><strong>GNMs</strong>: 3.5 years, of which 9 months are spent on midwifery <strong>ANMs</strong>: 24 months training, of which 9 months are spent on midwifery</td>
<td>Under medical supervision, nurses can administer antibiotics, anticonvulsants, oxytocics. Allowed to do digital evacuation of retained products until the cervix is</td>
</tr>
<tr>
<td><strong>India</strong></td>
<td>All level of nurses - Female GNM, ANM - these two cadres are certification courses. BSc nurses are graduate degree holders, MSc nurses are trained in midwifery</td>
<td>BSc nursing - 4-year degree course - of this 9 months spent in midwifery - slightly advanced level of studies</td>
<td>Under medical supervision, nurses can administer antibiotics, anticonvulsants, oxytocics. Allowed to do digital evacuation of retained products until the cervix is</td>
</tr>
<tr>
<td><strong>Nepal</strong></td>
<td>Nurses and ANM No separate Midwifery School or Council, but discussions have been initiated about starting a midwifery training school</td>
<td>MSc Nursing - 2 years after BSc</td>
<td>Under medical supervision, nurses can administer antibiotics, anticonvulsants, oxytocics. Allowed to do digital evacuation of retained products until the cervix is</td>
</tr>
<tr>
<td><strong>Pakistan</strong></td>
<td>Nurse midwives, Lady Health Visitors (LHV) and pupil midwives</td>
<td>Nurse midwife training: four years (PCL); certified by Colleges of Nursing/Pakistan Nursing Council</td>
<td>Midwife allowed to do normal deliveries, but cannot do any of the 6 basic EmOC functions</td>
</tr>
<tr>
<td><strong>Sri Lanka</strong></td>
<td>Midwives are those who have GCE advanced level and are certified by the Sri Lankan medical council after completion of 18 month training</td>
<td>Nurse Midwife training: four years (PCL); certified by Colleges of Nursing/Pakistan Nursing Council</td>
<td>Midwife allowed to do normal deliveries, but cannot do any of the 6 basic EmOC functions</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>Bangladesh</td>
<td>Bhutan</td>
<td>India</td>
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<tr>
<td><strong>oxytocics</strong> (only for active management of 3rd stage of labour) and anticonvulsants. But not allowed to do evacuation or D&amp;C, manual removal of placenta and assisted vaginal delivery</td>
<td>pregnancy. Administer drugs - oral action hydralazine for control of severe hypertension and Inj. Diazepam to control fits. Conduct delivery on their own. Perform and suture an episiotomy and repair perineal and vaginal tears. Administer oxytocic drugs for prevention and management of post partum haemorrhage. Perform controlled cord traction routinely for third stage of labour. Perform manual removal of placenta where controlled cord traction fails. Perform bimanual compression of the uterus and aortic compression for life saving management of primary post partum haemorrhage in the absence of medical assistance. Assist the doctor in conducting forceps or vacuum extraction delivery. Take immediate action to resuscitate a new born with dilated. Cannot do manual removal of placenta and assisted vaginal delivery.</td>
<td>For ANMs the practice varies, in some places allowed to give intramuscular drugs under medical supervision while at other places they are not allowed even under supervision. Curriculum is presently undergoing revision, details of which are not available yet</td>
<td>perform obstetric first aid</td>
</tr>
</tbody>
</table>

| Where is she posted? | No information | No information | GNMs are posted at hospitals; ANMs and Health Assistant are posted at hospitals and basic health units | ANMs are posted at Subcenter and PHC level; GNMs are posted at hospitals and PHC/CHC/DH level | Nurses are posted at hospitals and PHC centres; ANMs are posted at hospitals, PHC centres and Health Posts | Nurse midwives are posted at District and Tehsil hospitals. LHVs are posted at RHCs and BHUs. Pupil midwives have positions at RHC and BHUs which are all presently occupied by trained birth attendants called “dai” | Posted at sub-district level |

**Explanation of abbreviations:**
- ANM Auxiliary Nurse Midwife
- BHUs Basic Health Units
- GNM General Nurse Midwife
- CTEVT Council for Technical Education and Vocational Training (Nepal)
- LHV Lady Health Visitor (Pakistan)
- PCL Proficiency Certificate Level (two-year study of sciences before a Bachelor programme can be started in Nepal)
- RHC Rural Health Centres
### ANNEX 2: Who is allowed to do what regarding the six signal functions for BEmoC in South Asia

<table>
<thead>
<tr>
<th>Basic EmOC signal functions performed by different skilled birth attendants</th>
<th>Afghanistan</th>
<th>Bangladesh</th>
<th>Bhutan</th>
<th>India</th>
<th>Nepal</th>
<th>Pakistan</th>
<th>Sri Lanka</th>
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<tbody>
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<td>1. Administer parenteral (intravenous or by injection) antibiotics</td>
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<tr>
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<td>X</td>
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<tr>
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<td>2. Administer parenteral oxytocic drugs</td>
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<td>Basic EmOC signal functions performed by different skilled birth attendants</td>
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<td>India</td>
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<td>4. Perform manual removal of placenta</td>
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<td>X</td>
<td>X</td>
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<td>Senior ANM with additional training</td>
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<td>Only with specialized training</td>
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<td>5. Perform removal of retained products</td>
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<td>X</td>
<td>X</td>
<td></td>
<td>Qualified MBBS or specialist OBGYN</td>
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<td>Nurse</td>
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<td>6. Perform assisted vaginal delivery (vacuum extraction, forceps delivery)</td>
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<td>X</td>
<td>X</td>
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<td>Qualified MBBS or specialist OBGYN</td>
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<td>Nurse</td>
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# List of Acronyms

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<th>Acronym</th>
<th>Description</th>
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<tr>
<td>AI</td>
<td>Appreciative Inquiry</td>
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<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>ANC</td>
<td>Antenatal Care</td>
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<tr>
<td>ANM</td>
<td>Auxiliary Nurse Midwife</td>
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<tr>
<td>AMDD</td>
<td>Averting Maternal Death and Disability Programme</td>
</tr>
<tr>
<td>APH</td>
<td>Ante-partum hemorrhage</td>
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<tr>
<td>BEmoC</td>
<td>Basic Emergency Obstetric Care</td>
</tr>
<tr>
<td>CBT</td>
<td>Competency Based Training</td>
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<td>CEmOC</td>
<td>Comprehensive Emergency Obstetric Care</td>
</tr>
<tr>
<td>CEDAW</td>
<td>Convention on the Elimination of All Forms of Discrimination Against Women</td>
</tr>
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<td>CFR</td>
<td>Case Fatality Rate</td>
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<td>CHC</td>
<td>Community Health Center</td>
</tr>
<tr>
<td>CPSP</td>
<td>College of Physicians and Surgeons (Pakistan)</td>
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<tr>
<td>CRC</td>
<td>Convention on the Rights of the Child</td>
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<td>CTEVT</td>
<td>Centre for Technical Education and Vocational Training (Nepal)</td>
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<td>DH</td>
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<td>EmOC</td>
<td>Emergency Obstetric Care</td>
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<td>FIGO</td>
<td>International Federation of Gynecologists and Obstetricians</td>
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<tr>
<td>FOGSI</td>
<td>Federation of Obstetrics and Gynecological Society of India</td>
</tr>
<tr>
<td>FRU</td>
<td>First Referral Unit</td>
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<td>GNM</td>
<td>General Nurse Midwife</td>
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<td>HAP</td>
<td>Hospital Action Plan</td>
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<td>HMIS</td>
<td>Health Management Information System</td>
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<tr>
<td>IP</td>
<td>Infection Prevention</td>
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<td>JHPIEGO</td>
<td>Johns Hopkins Program for International Education in Gynecology and Obstetrics</td>
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<tr>
<td>LHV</td>
<td>Lady Health Visitor</td>
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<tr>
<td>MBBS</td>
<td>Bachelor of Medicine and Bachelor of Surgery</td>
</tr>
<tr>
<td>MCI</td>
<td>Medical Council of India</td>
</tr>
<tr>
<td>MIS</td>
<td>Management Information System</td>
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<td>MMR</td>
<td>Maternal Mortality Ratio</td>
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<tr>
<td>NSMP</td>
<td>Nepal Safe Motherhood Project</td>
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<tr>
<td>PCL</td>
<td>Proficiency Certificate Level (Nepal)</td>
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<td>Pakistan Medical Council</td>
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<td>PPH</td>
<td>Post-partum hemorrhage</td>
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<tr>
<td>RCH</td>
<td>Reproductive and Child Health</td>
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<td>RTI</td>
<td>Reproductive Tract Infection</td>
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<td>SAFOG</td>
<td>South Asia Federation of Obstetrics and Gynecology</td>
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<td>SBA</td>
<td>Skilled Birth Attendant</td>
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<td>SGOP</td>
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<td>Sexually Transmitted Infections</td>
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<td>TBA</td>
<td>Traditional Birth Attendant</td>
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<td>TOT</td>
<td>Training of Trainers</td>
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<td>UHC</td>
<td>Upazilla Health Complex</td>
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<td>UNICEF ROSA</td>
<td>United Nations Children's Fund Regional Office for South Asia</td>
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<td>WRLH</td>
<td>Women's Right to Life and Health</td>
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</tbody>
</table>
1 Name of the nearest community health center from the Gujars village, located some 60 km away where emergency obstetric care facilities were available.


10 Perhaps with the only exception of Sri Lanka.


15 Ibid


22 Source: http://www.developmentgoals.org


41 http://www.safemotherhood.org
43 See Annex 1 for more information
44 See Annex 1 for more information
45 The proportion of births attended by skilled health personnel is the percentage of deliveries attended by personnel trained to give the necessary supervision, care and advice to women during pregnancy, labor and the post-partum period; to conduct deliveries on their own; and to care for newborns.
51 UNICEF India (no date) Strategy Paper for Safe Motherhood. India
56 WHO. Fact Sheet No 245, June 2000.
58 Columbia University (2003) Using the UN Process Indicators of Emergency Obstetric Services, Questions and Answers. Mailman School of Public Health, AMDD Workbook. USA.
59 In Bhutan these are referred to as facilities rather than as hospitals.
63 The guide has been reviewed and endorsed by the International Confederation of Midwives and the International Federation of Gynecology and Obstetrics and USAID’s supported Maternal and Neonatal Health Programme.
65 Ibid
66 Ibid
68 Partograph is a tool that can be used by midwifery personnel to assess the progress of labor and to identify when intervention is necessary. Studies have shown that using the partograph can be highly effective in reducing complications from prolonged labor for the mother (postpartum hemorrhage, sepsis, uterine rupture and its sequelae) and for the newborn (death, anoxia, infections, etc.).


Medical Council of India (1997) Regulations on Graduate Medical Education, 19 October, New Delhi.

MCI is an autonomous body that sets standards of medical education and practice. It registers all of the doctors in India and gives them license to practice.


Ibid


Ibid


Ibid


Ibid


Ibid


Ibid


Personal interview, Dr Shershah, Associate Professor at the Department of Obstetrics and Gynecology, Qatar General Hospital in Orangi Town, Karachi. February 2004. However, an encouraging step to improve and protect women's rights is that the National Assembly passed in October 2004 a bill to sentence honour killings with capital punishment in Pakistan.

Personal interview with Imtiaz Khan, NCMH member, Karachi, February 2004.

Ante-partum hemorrhage and post-partum hemorrhage.

Personal interview with stakeholder committee member, Karachi, February 2004.


Information provided by UNICEF India (2004)

The Aga Khan University in Karachi is a not-for-profit private teaching university.

Personal interview, Dr Shershah, Associate Professor at the Department of Obstetrics and Gynecology, Qatar General Hospital in Orangi Town, Karachi. February 2004


Bhutan is the only country in South Asia with no obstetric and nursing/midwifery association.
FIGO is a worldwide organisation of 102 national societies of obstetricians and gynecologists. The mission of FIGO is to promote the well-being of women and to raise the standard of practice in obstetrics and gynecology.


Columbia University (2003) Using the UN Process Indicators of Emergency Obstetric Services, Questions and Answers. Mailman School of Public Health, AMDD Workbook. USA
Ibid
Ibid
Columbia University (2003) Using the UN Process Indicators of Emergency Obstetric Services, Questions and Answers, Mailman School of Public Health, AMDD Workbook. USA.
Columbia University (2003) Using the UN Process Indicators of Emergency Obstetric Services, Questions and Answers, Mailman School of Public Health, AMDD Workbook. USA.
Ibid
Ibid
Ibid
Ibid
Information drawn from rapid assessment conducted by UNICEF ROSA with UNICEF country offices in South Asia, May/June 2004.
SBAs in Bangladesh are government field workers (female health assistants and family welfare assistants) who receive additional training in basic midwifery skills. This term must not be confused with the UNFPA/UNICEF/WHO definition for skilled birth attendants, which includes doctors and nurses. It is a new initiative which the government has launched with support from WHO and UNFPA.
Information drawn from rapid assessment conducted by UNICEF ROSA with UNICEF country offices in South Asia, May/June 2004.
“SBAs” in Bangladesh are government field workers (female health assistants and family welfare assistants), trained for six months at district hospitals with field placements; registered with the Bangladesh Nursing Council.

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