Inclusive and integrated Mother, Newborn and Child Health programming: Beyond mortality

Prevention and Health Unit
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"Women are not dying of diseases we can't treat... They are dying because societies have yet to make the decision that their lives are worth saving."\(^1\)

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\(^1\) From the short animated film "Why Did Mrs X Die, Retold"
Foreword

The transition from the Millennium Development Goals (MDGs) to the Sustainable Development Goals (SDGs) marks a pivotal moment in the international panorama of maternal and child health. While some progress has been made in some regions and countries towards reducing maternal and children mortality, the impact on vulnerable populations is still all too disproportionate. Consequently, for the first time ever, reducing inequalities has been introduced onto the international agenda as one of the cornerstones of its strategy. Current strategic frameworks for the post-MDG era serve to highlight, not without reason, the unfulfilled agenda of the MDGs. Designed to reduce the maternal mortality ratio by 75%, the analysis of the root causes of this partial failure of un-met MDG 5 contributed to paving the way for the formulation of the core principle of “leaving no one behind”, thus acknowledging that the estimated 98% of maternal deaths are preventable, but only if marginalised and vulnerable women are actively included in the process. SDG3, the only unequivocal health goal out of a total of 17, states “Ensure healthy lives and promote well-being for all at all ages” before going on to emphasise the universal human right of every individual to health while acknowledging a social determinants framework built on the two-way relationship between health and development. SDG3 extends beyond mortality — recognised as the tip of the iceberg beneath which lies the true burden and the consequences of pregnancy-related and child health issues — to consider morbidity, disability and functionality, beyond physical health to include social and mental well-being and beyond individual episodes to a life-course perspective and inter-generational and intra-household impacts. Life-course approaches have emerged as unifying frameworks, bringing substantial temporal dimensions for women and their children. As the roadmap to achieve the highest attainable standard of health for all women, children and adolescents, The Global Strategy for Women’s, Children’s and Adolescents’ Health (2016-2030) builds on this vision, shifting from a mortality-centred to a broader and more comprehensive approach based on three principal pillars for intervention: Survive, Thrive and Transform. “Survive” focuses on further mortality reduction and reaching out to the invisible in society, as it clearly states that no impact can be possible without the inclusion of the most vulnerable. “Thrive” recognises the right to reach full potential as equally important as that of “Survive” at a time when, according to UNICEF, 7.6 million children under the age of 5 years die annually and over more than 200 million — 25 times this number — survive but do not reach full potential. One consequence of this is the loss suffered by countries of an estimated 20% in adult productivity. The strategy recognises that what happens during the first years of life is crucial to every child’s development, as this is not only a period of great opportunity but also one of vulnerability to negative influences. Many children do not reach their full human potential because of family income status, geographic location, ethnicity, disability, religion or sexual orientation, whereas good nutrition and health, consistent loving care as well as encouragement
to learn during the early years enable children to achieve more at school, enjoy better health, enhance their earning potential and participate more fully in society. The third and final pillar is “Transform”. The Global Strategy for Women’s, Children’s and Adolescents’ Health (2016-2030) is intended to serve as a guide to enable people and communities to drive change, claim their rights and hold leaders to account.

To quote Ban Ki-moon, “It is a grand vision. But it is achievable. By implementing the Global Strategy we can deliver a historic transformation that will improve the lives of generations to come”.

There has never been a better time to talk about mortality and beyond.

Davide Olchini
Head of Prevention and Health Unit
PRINCIPLES AND BENCHMARKS

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Definitions, importance and context

A. Definitions

Handicap International (HI) chooses to adopt a life-course approach as a strategic model of intervention for the health sector because it acknowledges the importance of considering the different stages of life as a continuum of biological, behavioural and psychosocial processes that operate across the lifespan. It recognises that there are critical periods of growth and development, in utero and early infancy but also during childhood and adolescence, when environmental exposures do more damage to health and long-term health potential than they would at other times. There is increasing evidence of sensitive developmental stages during childhood and adolescence when social and cognitive skills, habits, coping strategies, attitudes and values are more easily acquired than later on in life. These abilities and skills strongly influence life-course trajectories with implications for health in later life, thus making even more logical the evidence-based decision to adopt the life-cycle approach.

Whilst this policy paper focuses mainly on mother, newborn and child health (MNCH) related interventions, it encompasses them so as to provide a broader scope of activities as well as a comprehensive overview of MNCH as part of a bigger continuum.

Fig 1. The cycle of life
This figure shows the continuum of biological, behavioural and psychosocial processes that operate across the lifespan and their links with the various core intervention sectors of Handicap International’s Prevention and Health unit.

Mother, neonatal and child health

Mother, neonatal and child health (MNCH) extends from the first weeks of amenorrhea, or first positive pregnancy test, through to the age of five years, and includes the following principal stages:

- **Maternal health**: The health of mothers during pregnancy, childbirth and the postpartum period. Pregnancy is divided into first, second and third trimesters;
- **Child health**: The health of children from birth to adolescence, with particular focus on the health of children under the age of five years. Newborn (or neonatal) health covers the period from birth to the 28th day of life, infancy refers to the period from the 29th day of life until the first year of life and childhood from the first to the fifth year of life.

**Fig 2. Key periods for maternal, newborn and child health, and links between the periods**

Maternal and child mortality

According to the 2016 International Classification of Diseases-10 (ICD),\(^2\) maternal death is defined as “the death of a woman during pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental [e.g. traumatic injury] or incidental [e.g. cancer] causes”. Maternal death is also divided into two groups:

---

\(^2\) World Health Organization. [ICD-10 online versions](https://www.who.int/classifications/icd10)
• **Direct obstetric deaths** are those resulting from the obstetric state, arising during pregnancy or labour. Conditions are primarily preeclampsia, eclampsia, obstetric haemorrhage, puerperal sepsis and prolonged or obstructed labour. Unanticipated complications of management of other illnesses, such as suicide in pregnancy, postpartum depression, etc. are also included in this category.

• **Indirect obstetric deaths** include deaths from diseases existing before pregnancy or developing during pregnancy, but are not specific to pregnant women and are aggravated by pregnancy. These include chronic conditions, such as cardiac disease, diabetes and some psychiatric disorders as well as infectious diseases (malaria, hepatitis, tuberculosis, sexually transmitted infections, including HIV/AIDS).

Concerning **child mortality**, the main definitions to be considered are:

• **Stillbirth**: The definition recommended by WHO for stillbirth is “a baby born with no signs of life at or after 28 weeks gestation.”\(^3\) This is divided into antepartum (from the 28th week of pregnancy to the beginning of labour) and intrapartum (after the onset of labour and before birth), with the latter accounting for almost half of all cases of stillbirth.

• **Neonatal mortality**: When a baby dies during the first 28 days after birth, divided into early (1st to 7th day after birth) and late (8th to 28th day after birth) mortality.

• **Postnatal mortality**: From the 1st to the 59th month, divided into infant death (1st to 12th month) and child death (13th to 59th month).

**Maternal and child morbidity**

**Maternal morbidity**: There is no defined time period for maternal morbidity as the negative impact of a complication can extend well beyond 42 days. The definition of maternal morbidity is “any health condition attributed to and/or aggravated by pregnancy and childbirth that has a negative impact on the woman’s wellbeing.”\(^4\) Also important are “near-miss conditions”, defined as complications so severe that they kill mothers should they not receive timely medical care.\(^5\)

**Child morbidity**: “Any health condition attributed to and/or aggravated by pregnancy, childbirth and 0-5 year old period that has a negative impact on the child’s well-being or functioning.”\(^6\)

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\(^3\) World Health Organization. [Stillbirths](https://www.who.int/news-room/fact-sheets/detail/stillbirths)

\(^4\) World Health Organization. [Measuring maternal health: focus on maternal morbidity](https://www.who.int/maternal_child_adolescent/topics/maternal/mortality/factsheet/en/)


Focus - How to measure morbidity? YLL, YLD and DALYS

What does YLL mean? Years of Life Lost (YLLs) are years lost due to premature mortality. YLLs are calculated by subtracting the age at death from the longest possible life expectancy for a person at that age. For example, if the longest life expectancy for males in a given country is 75, but a man dies of cancer at 65, this would be 10 years of life lost due to cancer.

What does YLD mean? Years Lived with Disability (YLD) can also be described as years lived in less than ideal health. This includes conditions such as influenza, which may last for only a few days, and epilepsy, which can last a lifetime. YLD is measured by taking the prevalence of the condition multiplied by the disability weight for that condition. Disability weights reflect the severity of different conditions and are established based on surveys of the general public.

What is life expectancy? Life expectancy is the number of years a person can expect to live at any given age.

What does DALYS (Disability Adjusted Life Years) mean? The sum of years of life lost (YLLs) and years lived with disability (YLDs). One DALY is one lost year of "healthy" life. The sum of DALYs across a population can be viewed as a measurement of the gap between current health status and an ideal health situation where an entire population lives to an advanced age, free of disease and disability. The total number of years lost due to specific causes and risk factors at regional, country and global level are estimated on the basis of DALYs.

B. Current situation

Maternal mortality and morbidity

Despite progress in health services, societies continue to fail women.

This failure is most acute in less-developed countries and among the poorest women in all settings:

- 289,000 maternal deaths were registered in 2013. Hence, approximately 800 women died daily from preventable causes related to pregnancy and childbirth, mostly in poor and remote settings and often from vulnerable groups, such as ethnic minorities, people with disabilities or poor communities.

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7 World Health Organization. Metrics: Disability-Adjusted Life Year (DALY)
8 Namely, number of women who die or suffer complications.
99% of all maternal deaths occur in low- and middle-income countries, with 62% in Sub-Saharan Africa (179,000/year) and 24% in Southern Asia (69,000/year).

Around 80% of the global maternal mortality burden is preventable with basic public health measures.

52% of maternal deaths (in pregnancy, during or soon after childbirth) are attributable to three principal preventable causes — haemorrhage, sepsis and hypertensive disorders.

28% of maternal mortality results from non-obstetric causes, such as malaria, HIV, diabetes, cardiovascular disease and obesity.

Yet death is merely the tip of the iceberg. For every woman who dies from pregnancy and childbirth related causes, 20 others experience temporary or permanent impairments.\textsuperscript{10}

Around 1% (2 million) of pregnant women suffer a “near-miss” complication annually.

15% (29 million) of pregnant women develop serious complications requiring rapid and skilled intervention annually.

1 in 3 women between the ages of 15 and 49 years experience physical and/or sexual violence within or outside the home.

\textbf{Fig 3. Worldwide data on maternal mortality ratio}\textsuperscript{11}

\textsuperscript{10} Murray C. and Lopez A. Consequences of Unsafe Motherhood in Developing Countries in 2000. In Health Dimensions of Sex and Reproduction. 2008


\textsuperscript{11} World Health Organization. Global Health Observatory data: Maternal mortality country profiles
This figure shows that Chad, Somalia, Central African Republic, Sierra Leone and Burundi have the highest rates of maternal mortality rate (≥800/100,000), while India and Nigeria together account for one-third of the worldwide death toll. The stars represent HI intervention hubs: **West Africa**: Togo, Senegal, Sierra Leone, Liberia and Mali; **East and Austral Africa**: Kenya, Madagascar; **Great Lakes Regions**: Rwanda, Burundi and Democratic Republic of Congo; **South-East Asia**: Cambodia, Laos and Vietnam.

**Main causes of maternal mortality**

Mortality can be divided into direct and indirect causes.

Direct causes are:

**Haemorrhage (uncontrolled bleeding)**
- Accounting for approximately 25% of maternal deaths, this is the single most serious risk to maternal health.
- Blood loss during pregnancy, labour or postpartum.
- Without medical intervention, haemorrhage can rapidly result in death.

**Sepsis (infection)**
- Accounts for approximately 15% of maternal deaths.
- Associated with poor hygiene and infection control during labour or presence of untreated, sexually transmitted infections during pregnancy.

**Hypertensive Disorders**
- Account for approximately 12% of maternal deaths.
- **Pre-eclampsia** (also known as toxaemia of pregnancy) is characterised by **hypertension** (high blood pressure), **proteinuria** (protein in the urine), general **oedema** (swelling) and sudden weight gain. If left untreated, **pre-eclampsia** can lead to **eclampsia**.
- **Eclampsia** is characterised by kidney failure, seizures and coma during pregnancy or postpartum. It can lead to maternal and/or infant death.

**Prolonged or Obstructed Labour**
- Accounts for 8% of maternal deaths.
- Caused by **cephalopelvic disproportion**, a disproportion between the size of the foetal head and the maternal pelvis or the position of the foetus at time of delivery.
- Increased incidence among women with poor nutritional status and adolescents.
- Cephalopelvic disproportion is the primary cause of obstetric fistula.

---

Unsafe Abortion

- An estimated 22 million unsafe abortions continue to be performed annually, resulting in the deaths of an estimated 47,000 women and disabilities for a further 5 million.
- Almost all these deaths and disabilities could have been prevented with sex education, family planning and the provision of safe, legally induced abortion and medical care for complications resulting from abortion.
- In almost all developed countries, safe abortion is legally available either on request or on social and economic grounds and in general access is provided to abortion services. In countries where induced abortion is restricted and/or unavailable, safe abortion is often the privilege of the rich, leaving poor women little choice but to resort to unsafe providers, which can lead to death and morbidities that impact still further their social and financial situations.

Focus - Abortion

Abortion is a highly sensitive subject that often sparks fierce and passionate debate. The main issues concern the ethical questions it raises, its legal status and, last but not least, its therapeutic indications. The definition of the ethical grounds concerning abortion are far from the scope of this policy paper and Handicap International does not seek to define it as it is a matter of personal belief. Neither does Handicap International interfere with national legislations regarding the legal status of abortion, which vary substantially from one country to another, as do the grounds for permitting legal terminations and time limits. Handicap International complies with WHO guidelines and promotes the right of every woman, which includes vulnerable women and women with disability, to:

- be provided access to clear, understandable and adapted information, education and communication about abortion;
- take informed, autonomous decisions;
- be provided access to safe and legal abortion and post-abortion medical care delivered by skilled health workers using appropriate medical techniques and drugs in the necessary conditions of hygiene.

International therapeutic indications are:

1) When there is a threat to a woman’s life: an abortion can be performed to save a pregnant woman’s life. This is consistent with the human right to life, which requires legal protection, including when pregnancy is life threatening or a pregnant woman’s life is otherwise threatened.

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endangered. It implies that trained providers of abortion services are available, services known and treatment for complications resulting from unsafe abortion is widely available. Saving a woman's life can be required at any point during pregnancy and, when required, abortion should be performed as promptly as possible to minimise the risks to a woman's health.

2) When there is a threat to the woman’s health to preserve her physical and mental health: as all WHO member countries accept its constitutional description of health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”\textsuperscript{14}; this is implied in the interpretation of laws permitting abortion to protect women’s health.

3) When pregnancy is the result of rape or incest: protection of women from cruel, inhuman and degrading treatment requires that women who become pregnant as a result of coerced or forced sexual acts are afforded legal access safe abortion services.

4) For economic and social reasons: in countries that legally permit abortion on economic and social grounds, these are interpreted by reference to whether continued pregnancy would impact the woman’s actual or foreseeable circumstances, including her achievement of the highest attainable standard of health.

5) On request: allowing abortion on request has come about as countries have recognised that women seek abortions on one and frequently more than one of the above grounds and they accept all of these as legitimate, without requiring a specific reason. This recognises the conditions for women to exercise free choice and that the ultimate decision on whether to continue or terminate a pregnancy belongs solely to the woman concerned.

6) When there is foetal impairment: opposing this international recommendation and not in favour of prenatal screening for impairments for eugenic purposes, Handicap International states that it is the fundamental right of women, and this includes vulnerable women and women with disability, to have access to as much unbiased, clear, adapted and understandable information as possible on the outcomes of foetal impairments in order to be able to decide freely and according to their own beliefs whether or not to proceed with a termination.

\textsuperscript{14} \url{http://www.who.int/about/mission/en/}
Fig 4. Maternal mortality ratios by cause

Figure 4A. Comparison between 1990 (blue) and 2013 (red) of maternal mortality causes\textsuperscript{15}

Figure 4B. Impact of various conditions on causes of maternal mortality\textsuperscript{16}

\textsuperscript{15} Defined as deaths from known cause per 100,000 live births.
Maternal deaths have been described as the tip of the iceberg and maternal morbidity — defined by WHO as “any health condition attributed to and/or aggravated by pregnancy and childbirth that has a negative impact on the woman’s wellbeing” — its base.\textsuperscript{17} For every woman who dies from pregnancy-related causes, 20 others experience acute or chronic morbidity, often with permanent damage that undermines their functioning.\textsuperscript{18} These aftereffects can affect women’s physical, mental or sexual health, their ability to function in certain areas (e.g. cognition, mobility, participation in society), their body image and their social and economic status.\textsuperscript{19} The burden of maternal morbidity, like maternal mortality, is estimated to be highest in low- and middle-income countries and more particularly among poor women.

\begin{table}[!h]
\centering
\begin{tabular}{|l|l|}
\hline
\textbf{Complication} & \textbf{Associated Maternal impairments} \\
\hline
Severe bleeding (haemorrhage) & Severe anaemia \\
& Infertility \\
& Hormonal imbalance (pituitary gland failure) \\
\hline
Infection during or after labour (sepsis) & Pelvic inflammatory diseases \\
& Chronic pelvic pain \\
& Infertility \\
\hline
Obstructed or prolonged labour & Incontinence \\
& Genital prolapse \\
& Obstetric Fistula \\
& Uterine rupture \\
& Nerve damage (foot drop) \\
\hline
Pregnancy induced hypertension (pre-eclampsia and eclampsia) & Chronic hypertension \\
& Kidney failure \\
\hline
Unsafe abortion & Reproductive tract infection \\
& Pelvic inflammatory diseases \\
& Damage to uterus \\
& Chronic pelvic pain \\
& Infertility \\
\hline
\end{tabular}
\caption{Complications of pregnancy and childbirth: Most prevalent physical impairments\textsuperscript{20}}
\end{table}

\textsuperscript{17} Ashford L. \textit{Hidden suffering: Disabilities from pregnancy and childbirth in less developed countries}. Population Reference Bureau, 2002
\textsuperscript{18} Reichenheim M. E., Zylbersztajn F., Moraes C. L., Lobato G. \textit{Severe acute obstetric morbidity (near-miss): A review of the relative use of its diagnostic indicators}, in Arch Gynecol Obstet, 2009, 280, p. 337-343
\textsuperscript{20} Ashford L. \textit{Hidden suffering: Disabilities from pregnancy and childbirth in less developed countries}. Population Reference Bureau, 2002
For a graphical and interactive representation of MNCH-related burden of impairments, see http://vizhub.healthdata.org/gbd-compare/, the most scientifically sound and up-to-date meta-analytic source of information collated from pertinent global studies that are regularly updated.

**Wider impact and socioeconomic consequences of maternal mortality and morbidity**

A mother’s impairment can have profound consequences on her family and the wider community, due to changes in household responsibilities, earnings and expenses:

- Cost of a mother’s medical treatment can change household consumption patterns and reduce savings and investments.
- A mother’s diminished productivity can reduce family output and earnings, forcing children into the labour force.
- Children with ailing mothers may have inferior diets, hygiene and health.
- Older children may drop out of school to shoulder some of their mothers’ responsibilities.
- Family members may suffer from psychological problems, including depression and feelings of isolation.

**Under 5 mortality and morbidity**\(^{21}\)

**Key figures for neonatal and children mortality and morbidity in 2015:**\(^{22}\)

- Under-five mortality: approximately 5.9 million children aged under five years died in 2015, i.e. approximately 16,000 a day.
- Neonatal mortality: 45% of under-five deaths occurred during the first month of life.
- The primary causes of death during the neonatal period were prematurity, intrapartum-related complications, including birth asphyxia, neonatal sepsis and congenital anomalies.
- Infant mortality: 4.5 million (75% of all under-five deaths) occurred within the first year of life.
- Causes of child mortality: primary causes of death in under-five children were pneumonia, diarrhoea and malaria.
- Malnutrition is the underlying contributing factor in about 45% of deaths in under-five children, making them more vulnerable to severe diseases, reduced growth and acute neurocognitive disorders.\(^{23}\)

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\(^{21}\) Namely, number of children who die or suffer from a complication.

\(^{22}\) World Health Organization. Global Health Observatory (GHO) data: Child mortality and causes of death
More than half of these early child deaths were due to conditions that are preventable or treatable with basic and affordable interventions.

Increasingly concentrated in Sub-Saharan Africa and Southern Asia, the proportion of under-five deaths in the rest of the world decreased from 32% in 1990 to 18% in 2013. About half of all under-five deaths occur in just five countries: China, Democratic Republic of Congo, India, Nigeria and Pakistan. India (21%) and Nigeria (13%) together account for more than one-third of all under-five deaths.

**Fig 5. Causes of death in children under the age of five years, 2015**

This figure shows that the primary causes of death during the neonatal period are preterm birth, intrapartum-related complications and sepsis and during the postnatal period, pneumonia, diarrhoea and malaria.

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24 World Health Organization. Global Health Observatory (GHO) data: *Causes of child mortality*
Often overlooked and seldom recorded, morbidity in 0-5 year-olds represents the hidden counterpart of mortality. The Global Burden of Disease Study on the age range 0-5 years estimates that almost one in ten of all disability-adjusted life years (DALYS) in 2013 were due to neonatal disorders. While a complete list of the medical conditions that can result in impairments is beyond the scope of this policy paper, figure 5 summarises the most common, with a focus on those related to micronutrient deficiencies, preterm birth complications, severe infections and postpartum-related disorders. In spite of its significance, there is little mention in global health agendas of the burden associated with conditions in newborns.

**Fig 6. Ratio of unimpaired-impaired newborn and neonatal death in various settings**

<table>
<thead>
<tr>
<th>NMR group</th>
<th>NMR&lt;5</th>
<th>NMR 5 to &lt;15</th>
<th>NMR 15 to &lt;30</th>
<th>NMR&gt;30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of neonates affected</td>
<td>2.2 million</td>
<td>3.8 million</td>
<td>3.2 million</td>
<td>8.4 million</td>
</tr>
</tbody>
</table>

This figure shows the link between mortality and morbidity in newborns and underlines the impact of availability and skills in newborn care on health outcomes. In countries where resuscitation skills are not widely available or are substandard, newborn mortality is fairly high and approximately double the impairment ratio (chart on the right). As the quality and availability of services improve, mortality gradually decreases and the ratio to morbidity reaches 1:1 (chart centre-left). The chart on the left shows the situation in high-income countries where mortality is extremely low and morbidity more prevalent.²⁵

From left to right, mortality increases, with morbidity reflecting the availability and skills of neonatal resuscitation services. Principally related to prematurity where the neonatal mortality rate is lowest, it increases during the transition from moderate to low mortality and then decreases in settings where mortality predominates.

<table>
<thead>
<tr>
<th>Period</th>
<th>Associated impairments in children aged 0-5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-pregnancy</strong></td>
<td></td>
</tr>
<tr>
<td>Micronutrient deficiencies:</td>
<td>Neural tube defects</td>
</tr>
<tr>
<td>folic acid</td>
<td></td>
</tr>
<tr>
<td>During pregnancy</td>
<td>Each infection is associated with a particular set of impairments:</td>
</tr>
<tr>
<td>Maternal infections:</td>
<td>Sensorial, cognitive and osteoarticular impairments</td>
</tr>
<tr>
<td>Syphilis</td>
<td>Sensorial (eye) and cognitive impairments</td>
</tr>
<tr>
<td>Cytomegalovirus</td>
<td>Sensorial (eye) and cognitive impairments</td>
</tr>
<tr>
<td>Toxoplasmosis</td>
<td>Sensorial (ear) and cardiac impairments</td>
</tr>
<tr>
<td>Rubella</td>
<td>Microcephaly, neurological and ocular involvement</td>
</tr>
<tr>
<td>Zika</td>
<td>Cardiac defects in correlation with zidovudine therapy</td>
</tr>
<tr>
<td>HIV/ART (antiretroviral therapy)</td>
<td>Impaired neuronal development and cognitive delay</td>
</tr>
<tr>
<td>Exposure to pollutants/toxins</td>
<td>Alcohol foetal syndrome</td>
</tr>
<tr>
<td>Exposure to alcohol</td>
<td>Varying degrees and combinations of sensorial, cognitive and motor impairments</td>
</tr>
<tr>
<td>Exposure to drugs/traditional medicines</td>
<td>Congenital disorders(^{26})</td>
</tr>
<tr>
<td>Chronic conditions</td>
<td>Cognitive and cardiac impairments, macrosomia</td>
</tr>
<tr>
<td>(Gestational Diabetes Mellitus)</td>
<td></td>
</tr>
<tr>
<td>Preterm birth</td>
<td>Linked to prematurity of organ systems:</td>
</tr>
<tr>
<td></td>
<td>Eyes: retinopathy of prematurity</td>
</tr>
<tr>
<td></td>
<td>Lungs: hyaline membrane disease</td>
</tr>
<tr>
<td></td>
<td>Central nervous system: cerebral palsy after an intracranial haemorrhage</td>
</tr>
<tr>
<td></td>
<td>Gastrointestinal system: necrotising enterocolitis</td>
</tr>
</tbody>
</table>

\(^{26}\) International Clearinghouse for Birth Defects Surveillance and Research, 2013 edition
<table>
<thead>
<tr>
<th><strong>Childbirth</strong></th>
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<tr>
<td>Negligence during childbirth</td>
<td>Plexus brachialis lesions</td>
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<tr>
<td>Birth asphyxia</td>
<td>Cerebral palsy</td>
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<tr>
<td>Jaundice not recognised or untreated</td>
<td>Cognitive and motor impairments</td>
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<tr>
<th><strong>Children aged 0-5 years</strong></th>
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<tr>
<td><strong>After-effects of infections:</strong></td>
<td>Varying degrees and combinations of sensorial, cognitive and motor impairments</td>
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<tr>
<td>Meningitis</td>
<td>Sensorial impairment (ears)</td>
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<tr>
<td>Encephalitis</td>
<td>Sensorial Impairment (eyes)</td>
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<tr>
<td>Cerebral malaria</td>
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<td>Recurrent otitis</td>
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<td>Eye infections, trachoma</td>
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<tr>
<td><strong>Epilepsy</strong></td>
<td>Cognitive impairments</td>
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<tr>
<td><strong>Malnutrition</strong></td>
<td>Cognitive and motor delays</td>
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<tr>
<td><strong>Micronutrient deficiency:</strong></td>
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<tr>
<td>Iodine</td>
<td>Cognitive Impairments</td>
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<tr>
<td>Vitamin A</td>
<td>Sensorial (eye) impairments</td>
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<tr>
<td>Thiamine</td>
<td>Language disorders</td>
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<tr>
<td><strong>Pollutant:</strong></td>
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<tr>
<td>Lead intoxication</td>
<td>Cognitive and motor impairments</td>
</tr>
<tr>
<td><strong>Trauma</strong></td>
<td>Varying degrees and combinations of sensorial, cognitive and motor impairments</td>
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</table>
Fig 7. From stillbirth mortality\textsuperscript{27} to immediate and long-term complications: The example of preterm birth outcomes\textsuperscript{28}

This figure shows possible immediate preterm birth complications, such as hyaline membrane disease, intracranial haemorrhage, necrotising enterocolitis and retinopathy of prematurity and their potential evolution to long-term complications that include sensorial, cognitive and motor impairments and mental health disorders. These impairments have severe repercussions on each stage of the life course and can be prevented by improved preterm baby care.

\textsuperscript{27} The definition recommended by WHO for international comparison is a baby born with no signs of life at or after 28 weeks’ gestation.

\textsuperscript{28} Blencowe Hannah, Lee Anne CC., et al. \textit{Preterm birth–associated neurodevelopmental impairment estimates at regional and global levels for 2010}, in Pediatric Research, Volume 74, Number s1, December 2013
Focus - Saving lives = a greater prevalence of impairments?

Improved newborn resuscitation capacities have been accompanied by an increasingly common myth that saving newborn lives is at the expense of a generation of disabled survivors. Thanks to basic newborn care, those who now survive are not badly affected and surviving with severe impairments is seen primarily in those receiving neonatal intensive care, and more particularly sustained ventilation in less than optimal settings. But even these post-intensive care impairments are not inevitable: the risk of severe impairment is greater in sub-standard or during the start-up phase of intensive care. This can and must be reduced over time.29

Fig 8. Overview of the concepts presented in this section30

29 Lawn Joy E., Blencowe Hannah, Darmstadt Gary L., Bhutta Zulfiqar A. Beyond newborn survival: The world you are born into determines your risk of disability-free survival, in Pediatr Res. 2013 Dec; 74(Suppl 1): 1–3

30 Lawn Joy E., Blencowe Hannah, MRCPCH for The Lancet Every Newborn Study Group. Every Newborn: progress, priorities, and potential beyond survival, in The Lancet, Volume 384, No. 9938, p189–205, 12 July 2014
This figure provides a graphical representation of the continuum of care in the spectrum of reproductive, maternal, newborn and children and adolescent health (RMNCAH), the links between mortality or disability for mothers, newborns and children aged 0-5 years and their repercussions on adult outcomes associated to societal effects in terms of loss of socio-economic development and social capital.

C. International context

At the time of writing this policy paper, the Sustainable Development Goals and the obstetric transition are the two main factors contributing to shaping international MNCH.

The Sustainable Development Goals

The Sustainable Development Goals (SDGs) follow on from the eight Millennium Development Goals (MDGs) instituted in 2000 as a means to drive international policy and develop accountability in improving the lives of the poor. The SDGs are a universal set of goals, targets and indicators UN member states will be expected to use to frame their agendas and political policies over the next 15 years up until 2030. After an extensive UN-led consultation, 17 SDGs were established, all with their own sub-set of targets to be achieved. Within these 17 goals, a total of 169 targets were put forward, each with a set of measurable indicators to monitor progress. As expected, obtaining consensus on the indicators proved challenging, and some which HI considered important were not accepted on the officially approved list.

Via the 17 SDGs, the SDG framework addresses the key systemic barriers to sustainable development. These include inequality, unsustainable consumption patterns, weak institutional capacity and environmental degradation not taken into account in the MDGs. The focus is gradually shifted from mortality only to include morbidity and social determinants of health in the bigger picture. Proposed as a subset of SDG 3: “to ensure healthy lives and promote well-being for all at all ages”, maternal health aims to reduce the global maternal mortality ratio to less than 70 per 100,000 live births by 2030; indicators related to Reproductive, Maternal, Newborn and Child Health are provided in SDGs 2, 4, 5 and 16.
Focus - MNCH-related SDGs

While MNCH is mainly addressed in SGD 3, many other significant aspects are provided in a wider range of indicators, namely SDGs 2, 4, 5 and 16. The following list presents the main headings in the SGD indicator table.  

Survive: End preventable mortality

Primarily SDG 3

- Maternal mortality ratio (SDG 3.1.1).
- Under-5 mortality rate (SDG 3.2.1).
- Neonatal mortality rate (SDG 3.2.2).
- Not directly included in the principal indicators: stillbirth and adolescent mortality rate.

Thrive: Promote health and well-being

SDGs 2: Prevalence of stunting among children aged under 5 years (SDG 2.2.1).

SDG 3:

- Adolescent birth rate (10-14, 15-19) per 1,000 women in the age group (SDG 3.7.2).
- Coverage index of essential health services (index based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access) (SDG 3.8.1) (including RMNCAH: family planning [need met], antenatal care, skilled birth attendance, breastfeeding, immunisation, childhood illnesses treatment) (SDG 3.1.2, 3.7.1, 3.8.1).

SDGs 5:

- Number of countries with laws and regulations guaranteeing women aged 15-49 access to sexual and reproductive health care, information and education (SDG 5.6.2).
- Not directly included in the main indicators: out-of-pocket health expenditure as a percentage of total health expenditure and current country health expenditure per capita (including RMNCAH).

Transform: Expand enabling environments

SDG 4:

Proportion of children and young people (in education): (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by gender (SDG 4.1.1).

SDG 16:

Proportion of children under the age of 5 years whose births have been registered with a civil authority (SDG 16.9.1).

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Proportion of ever-partnered women and girls aged 15 and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months (SDG 5.2.1) and proportion of young women and men aged 18-29 experiencing sexual violence by age 18 (SDG 16.2.3).

The obstetric transition\textsuperscript{32}

The obstetric transition model was adapted from classic models of epidemiologic transitions, namely demographic, epidemiologic and nutritional,\textsuperscript{33} experienced as countries progress towards development. Applied to maternal and newborn health care, countries proceed through a series of stages that reflect health system status and the shift in primary causes of death as reductions in maternal mortality are achieved. In theory, as development progresses, bringing with it declines in fertility and overall maternal mortality, causes of death shift from direct causes and communicable diseases (such as malaria and sepsis) and life threatening obstetrical conditions (such as postpartum haemorrhage and obstructed labour) to a greater proportion of deaths from indirect causes and chronic diseases (such as obesity, diabetes and cardiovascular-related conditions). This shift can be observed in recent estimates of global causes of maternal death.

Acknowledging that the root causes of maternal mortality and morbidity vary according to the different stages countries have reached, the obstetric transition model can be used to justify tailoring solutions for maternal mortality reduction by aligning to a country's stage in the obstetric transition.

The concept of obstetric transition is useful in understanding the dynamic process of maternal mortality reduction and can function as a conceptual framework to explain the co-existence of various strategies for reducing maternal mortality and inform policies and programmes at the country as well as the global level. Promoting social development and equality, together with strengthening health systems and improving quality of care, is necessary to avoid maternal deaths and can be applied more effectively and efficiently when a country’s stage in the transition process is known.

An extensive WHO-led multi-country study\textsuperscript{34} assessed this model in 2014 and confirmed its validity.

\textsuperscript{32} Souza JP., et al. Obstetric transition: The pathway towards ending preventable maternal deaths, in Bjo, Volume 121, Issue s1, March 2014, Pages 1–4
\textsuperscript{34} Ibid.
Why is Handicap International involved in MNCH?

The rationale upon which Handicap International’s MNCH interventions are built is based on two main considerations:

- Implementing MNCH-inclusive activities falls under Handicap International mandate as articulated in its scope of activities and principles of intervention because they target people with disabilities and vulnerable populations in order to respond to their essential needs, improve their living conditions and promote respect for their dignity and fundamental rights. Given that the right to sexuality and maternity is systematically overlooked for people with disability and that their access to MNCH-related services is problematic, this is essential. Women, children and adolescent health is recognised as a fundamental human right in several international treaties, such as the International Covenant on Economic, Social and Cultural Rights, the Convention on the Elimination of All Forms of Discrimination against Women and the Convention on the Rights of the Child. It also builds on global-level consensus, including the International Conference on Population and Development Programme of Action, the Beijing Declaration and Platform for Action agreed at the Fourth World Conference on Women, the United Nations Economic and Social Council Ministerial Review on Global Health and the agreements of the Commission on the Status of Women.

- After more than ten years of implementing MNCH projects, HI has acquired vast experience in the field and has the necessary skills to implement effective, inclusive, transversal and non-discriminatory projects encompassing reduction of mortality to include prevention, detection and management of MNCH-related morbidity in its fields of intervention. Ensuring integration of impairments into existing health services is particularly relevant as it decreases the impact of biological factors on the disability creation process.

The general MNCH principles of intervention are:

<table>
<thead>
<tr>
<th>Life-course perspective</th>
<th>Address the risk factors and determinants of health in a holistic and comprehensive manner.</th>
</tr>
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<tbody>
<tr>
<td>Evidence-based approach</td>
<td>Be informed by the best-available evidence when tailoring interventions to each context.</td>
</tr>
<tr>
<td>Human rights</td>
<td>Respect, protect and fulfil human rights, including those of women, girls and children, in accordance with international human rights norms and standards, including the right to highest attainable standards of health.</td>
</tr>
<tr>
<td>Gender equality</td>
<td>Advocate for addressing gender inequality and gender-based discrimination as key underlying determinants in health by: (a) challenging unequal power relationships between women and men and sociocultural norms emphasising male dominance and female subordination; (b) strengthening engagement of men and boys in prevention along with efforts to empower women and girls.</td>
</tr>
<tr>
<td>Ecological approach</td>
<td>Address the risk factors and determinants occurring at multiple levels in the ecological framework (individual, relationship, community and societal).</td>
</tr>
<tr>
<td>Universal health coverage</td>
<td>Ensure that all people and all communities receive the quality services they need and are protected from health risks without suffering financial hardship.</td>
</tr>
<tr>
<td>Health equity</td>
<td>In addition to universal health coverage, focus on the needs of groups of people who are disabled or marginalised, face multiple forms of discrimination and are more vulnerable to violence and barriers in access to services.</td>
</tr>
<tr>
<td>People-centred care</td>
<td>Provide care and services that respect people in their autonomy to make full, free and informed decisions about the care they receive; respect their dignity by reinforcing their value as people and not blaming, discriminating or stigmatising them; empower them by providing information and counselling to enable them to make informed decisions; promote their safety by ensuring privacy and confidentiality in provision of care.</td>
</tr>
<tr>
<td>Community participation</td>
<td>Listen to the needs of communities, and in particular give a voice to women and adolescents; support and ensure full and equal participation; use participatory approaches to build community ownership; form partnerships with civil society, particularly women and youth organisations; strengthen capacities for identifying sustainable solutions.</td>
</tr>
<tr>
<td>Comprehensive multi-sectorial response</td>
<td>Build and strengthen partnerships and coordination between health and other sectors and between the public and private sector, including for profit and non-profit service providers, civil society, professional associations and other relevant stakeholders, as appropriate to each country’s situation.</td>
</tr>
</tbody>
</table>

The principles of intervention and scope of activity are described in detail in HI’s methodological guide\(^35\) and include disability issues in MNCH.

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\(^35\) Gilbos V. [Inclusion of disability issues in mother and child health projects](http://example.com), Lyon: Handicap International, 2014
A. Legal frameworks and networks

United Nations Human Rights Council

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

However, a human rights approach to maternal and newborn health extends beyond the provision of services to embrace a broader application of rights-based principles to the fundamentally social enterprise of protecting and supporting the health of populations.

Commissioner on Human Rights (OHCHR) includes empowerment, participation, non-discrimination, transparency, sustainability, accountability and international assistance as fundamental principles based on a rights-based approach to address maternal mortality and morbidity. Furthermore, OHCHR guidance specifically highlights enhancing the status of women, ensuring sexual and reproductive health rights (which includes addressing unsafe abortion), strengthening health systems and improving monitoring and evaluation as necessary elements of a rights-based strategic framework for reducing maternal mortality and morbidity.

Moreover, as it becomes possible to envision an end to preventable maternal and newborn deaths, the scope of strategic planning must progress beyond focusing solely on prevention of the worst outcomes for women at greatest risk toward supporting and encouraging optimal outcomes for all women.

Thus, the top-line priorities of a health agenda for a sustainable future must necessarily include educating and empowering women, gender equality, poverty reduction, universal coverage and access and equity within the overall context of a rights-based approach to health and health care.

United Nations Convention on the Rights of Persons with Disabilities

The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) is the essential frame of reference for HI’s implementation of MNCH.

The foundations of HI’s work in MNCH are provided in:

- Article 6, concerning women and girls.
- Article 7, concerning children with disability.
- Article 9, which sets out accessibility as one of the pillars to live independently and participate fully in all aspects of life.
- Article 25, health. States Parties recognise that people with disabilities have the right to the enjoyment of the highest attainable standard of health without discrimination on the basis of disability. States Parties shall take all appropriate measures to ensure access for persons with disabilities to health services that are gender-sensitive, including health-related rehabilitation.
- Article 26, habilitation and rehabilitation.

WHO disability action plan

The WHO disability action plan\(^{37}\) is also highly relevant. Its objectives are threefold:

- Remove barriers and improve access to health services and programmes;
- Strengthen and extend rehabilitation, habilitation, assistive technology, assistance and support services and community-based rehabilitation;
- Enhance collection of pertinent, internationally-comparable data on disability and support research into disability and related services.

Global Strategy for Women’s, Children’s and Adolescent’s Health

Actively involved in advocating for the inclusion of disabilities at different levels within MNCH programmes, HI refers to several international MNCH movements.

**Every Woman Every Child**\(^{38}\) is an unprecedented global movement that seeks to mobilise and boost international and national action by governments, multilateral organisations, the private sector and civil society to address the major health challenges facing women and children. The

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\(^{38}\) [Every Woman Every Child: For healthy and empowered women, children and adolescents](https://www.everywomaneverychild.org/)
movement implements the **Global Strategy for Women’s, Children’s and Adolescent’s Health (2016-2030)**, a roadmap for enhancing funding, strengthening policy and improving services for the most vulnerable women and children.

**Ending preventable maternal mortality (EPMM)**\(^{39}\) is a global coordinated effort to accomplish the un-met MDG agenda and ensure that simple, low cost measures are put in place to end preventable mortality. Rooted in a human rights approach to maternal and newborn health, EPMM targets and strategies focus on eliminating the significant inequalities that persist within and between countries and result in disparities in access, quality and outcomes of care. Tangible political commitments and financial investments by governments and development stakeholders are necessary to meet the targets and implement strategies required to end preventable maternal mortality — a human rights imperative.

### B. Cross-cutting approaches

**Access to services**

The model adopted by Handicap International to understand and improve access to services is based on the triangle of services that analyses the role and responsibilities of the three principal stakeholders tasked with its regulation:

1. **Decision-makers**: responsible for drawing up the political frame of reference for legislation, its enforcement, budget and human resources allocation, how services are organised, etc. In the case of MNCH, this is the Ministry of Health.

2. **Service providers**: responsible for implementing the policy frame and service delivery. We include in this category all health-related services, from basic primary and tertiary to more specialist and community-based ones.

3. **Service users**: people in general, the vulnerable and those with disability and their families requiring preventive, curative or rehabilitative services.

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Disability

The Disability Creation Process

The Disability Creation Process is the reference framework HI uses to understand the underlying elements of a disabling situation. In 1996, HI based its thinking on the "Human Development Model", developed by the International Network on the Disability Production Process (Réseau International sur le Processus du Production de Handicap), which analyses human development as an interaction between personal factors (intrinsic) and environmental factors (extrinsic) that influence the degree of social participation.

According to the Disability Creation Process Model, a disabling situation corresponds to the lack of, or reduced, realisation of life habits, i.e. of daily activities or of a social role valued by the person or his/her socio-cultural context according to his/her characteristics (age, sex, socio-cultural identity, etc.) and which ensures his/her survival and well-being in his/her society.

Disability is not a definitive status but one that evolves. It is relative because it varies over time and according to gender, age, cultural context and the social and political environment.

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It is a situation that can be modified by reducing barriers or developing aptitudes (acting on personal factors) as well as by adapting the environment (acting on environmental factors).

By taking action on such factors, it is therefore possible to transform a disabling situation into one of social participation.

**The International Classification of Functioning, Disability and Health**

The International Classification of Functioning is another model that can be used to understand disability. ICF, as it is more commonly known, is a classification of health and health-related domains. As the functioning and disability of an individual occurs within a given context, the ICF also provides a list of environmental factors.

The ICF is the framework WHO uses to measure health and disability, at the level of the individual and of the population as a whole. At the Fifty-fourth World Health Assembly held on 22 May 2001, all 191 WHO Member States officially endorsed the ICF as the international standard to describe and measure health and disability.42

**Gender**

Reflecting power imbalances between men and women, within the household as well as in the wider societal context, gender inequality is defined and perpetuated by sociocultural norms. Documented to varying degrees by all countries, gender disparities impact women and maternal health directly (early marriage and childbearing, decision-making about care-seeking, cost and types of care sought, etc.) and indirectly (education and availability of food, etc.). Gender-based violence, one of the most extreme forms of discrimination against women, increases during pregnancy and directly affects maternal and perinatal health. Gender inequality can also affect health care providers, many of whom are women.

Unequal gender norms and stereotypes also create biases in policies, institutions and programming, with grave consequences for the effectiveness of health services. Women and individuals who face discrimination because of their gender identity or sexual orientation often have unequal access to and uptake of basic health services and resources.

It is essential to remove discrimination in health care settings and ensure women and adolescent girls are aware of their rights and afforded access to gender-sensitive, stigma- and discrimination-free services.

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42 World Health Organization. *International Classification of Functioning, Disability and Health (ICF)*
Furthermore, gender-disaggregated data and gender-sensitive indicators are essential to monitor and evaluate outcomes of health policies and programmes. Gender-responsive health policies and interventions require in-depth analysis of barriers to the achievement of women’s health, as well as other inequalities based on ethnicity, class, geographic location, sexual orientation and gender identity.

Enabling environments for gender equality are inextricably linked to positive health and broader societal outcomes. This requires working directly, not only with girls and women, but also with boys and men, family members, community leaders and those with power and influence in economic, political and social spheres. Equally important, however, is that gender discrimination and inequitable gender norms prevalent in societies across much of the world are much more likely to limit girls’ ability to attend school, live free from violence, self-direct their life-course and enjoy a level of social status and value equal to that enjoyed by their brothers and male peers. In a wide range of circumstances, gendered power structures favour boys and men, affording them greater access to resources and personal freedom while making them less vulnerable to violation of rights than women and girls. A cursory glance at key indicators of well-being and freedom — birth ratios, child marriage, sexual violence, the global HIV burden — clearly shows that a disproportionate share of gender disadvantage is borne by girls and women.

C. Linkages with other sectors

MNCH and Sexual & Reproductive Health (SRH)

The circle of life figure (Figure 1) shows the extent to which MNCH and reproductive health are closely interlinked and that interventions aimed at reducing mortality and morbidity in MNCH have roots in reproductive health practices. The Global Strategy for Women’s, Children’s and Adolescents’ Health (2016-2030), developed across all women and children initiatives, clearly acknowledges this and promotes the continuum of interventions between MNCH and SRH, abandoning the conventional, silo-like presentation in favour of a more logical set-up. Furthermore, interventions to improve RMNCH are connected and, when combined with a continuum approach, are far more effective. Continuum of care includes integrated service delivery for adolescents, pregnant women, mothers and children — from raising awareness to sexual and reproductive health and providing access to family planning, antenatal, childbirth and postnatal health care services through to the early days and years of a child’s life. Other considerations support strengthening the links between MNCH and SRH because a substantial percentage of preventable MNCH mortality and morbidity stems from lack of access to easily accessible, integrated and quality SRH services. The examples of increased mortality caused by
lack of access to family planning services — and consequently unsafe abortion and lack of birth spacing for the most vulnerable women —, provided in the Global Strategy for Women’s, Children’s and Adolescents’ Health (2016-2030) are striking. Moreover, pregnant women with impairments are more likely to have less access to SRH-related awareness materials and health services, exposing them to unnecessary risk factors that have a negative impact on MNCH outcomes.

**MNCH and HIV**

MNCH and HIV are also closely interlinked: prevention of mother-to-child transmission is routinely included in MNCH programmes as implementation of basic therapeutic measures can significantly reduce the incidence of new cases. Although a standard set of interventions is available for the prevention, detection and management of HIV in mainstream MNCH programmes, very little is available to pregnant women with disabilities and their children or to children with disabilities. Such a gap is unacceptable and poses a serious threat to the achievement of the SDGs in that it undermines international community efforts to eliminate substantial inequalities in access to and quality and outcomes of care.

**MNCH and non-communicable diseases: diabetes and mental health**

Whereas the links between MNCH and chronic conditions are well-documented and analysed, cross-cutting interventions are seldom included in service offers. This is mainly due to the fragmentation in the organisation of health systems and lack of skilled human resources. Gestational diabetes mellitus (GDM) and postnatal depression are conditions that require far more in-depth analyses as they represent a substantial burden of preventable morbidity.

**Gestational diabetes mellitus**

GDM is defined as any degree of glucose intolerance with onset or first recognition during pregnancy. GDM commonly develops when maternal glucose metabolism is unable to compensate for the progressive development of insulin resistance, arising primarily from consistently increasing diabetogenic placental hormones. Sharing the same clinical presentation as diabetes type II, it typically develops during the second or third trimester and, left untreated, can progress to diabetes type II in later life. Until recently, the only therapy available to pregnant

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43 See also Inclusive and integrated HIV and AIDS programming Policy paper, 2012
44 See also Diabetes and other cardiovascular risk factors Policy paper, 2012
45 See also Mental health in post-crisis and development contexts Policy paper, 2011
women was insulin, but an increasingly large body of evidence shows that oral glucose-lowering agents (OGLAs), e.g. metformin, have the same safety profile as insulin and can be used as alternative emergency treatment.46

**Fig 10. Key GDM figures**

1 in 6 live births occur to women with some form of hyperglycaemia
84% of which are due to GDM

This figure shows that, with an estimated prevalence of 13% during pregnancy, GDM is the main cause of hyperglycaemia during this period. HI must integrate highly prevalent gestational diabetes mellitus (GDM) into its MNCH programme (currently, 15 to 20% of all pregnancies have GDM as a complication48) as it is one of the leading causes of maternal mortality, with higher incidence of maternal morbidity, perinatal and neonatal morbidity and subsequent long-term consequences for both mother and child.

- Simmons D. Prevention of gestational diabetes mellitus: Where are we now? in Diabetes Obes Metab, 2015, 17(9):824-34
47 International Federation of Gynecology and Obstetrics initiative on gestational diabetes, 2015
This figure shows the double burden of GDM-related morbidity. Women are at greater risk of developing stable diabetes type II in later life if no access to therapy is provided and of experiencing a complicated delivery. Children of women with untreated GDM are more at risk of congenital defects, lesions during delivery and developing a diabetes-related impairment and chronic conditions in adulthood, with an earlier onset than the rest of the population.49

A pregnant woman with diabetes is at increased risk of:

- **pregnancy complications**, such as pre-eclampsia, infections, obstructed labour, postpartum haemorrhage and preterm birth;
- **long-term diabetes complications**, including retinopathy, nephropathy, neuropathy and type II diabetes after pregnancy.

There is a 13.2% increased risk of GDM during a second pregnancy for women developing GDM during their first pregnancy. The risk of GDM recurring in a third pregnancy is greater in women who developed GDM in both previous pregnancies (up 25.9%). The cumulative percentage of women developing diabetes was 1.7% at 1 year postpartum, 17% at 10 years and 25% at 15 years.

Children of women who develop GDM in pregnancy are at increased risk of foetal, neonatal and long-term morbidities as well as congenital heart defects and macrosomia. There is also a risk of stillbirth. Macrosomia, the most common morbidity occurring in 15 to 45% of infants, can lead to shoulder dystocia and brachial plexus injury and trauma during delivery. A range of morbidity disorders, such as hyperbilirubinemia (closely associated to neuro-developmental delay), respiratory distress syndrome and hypertrophic cardiomyopathy, can be expected in the immediate postnatal period. Such children are also at increased risk of developing diabetes, obesity and metabolic syndrome in adulthood. The extent of foetal and neonatal risks is proportional to the severity of maternal hyperglycaemia.50

Mental health

Systematic reviews have shown that in high-income countries approximately 10% of pregnant women and 13% of those who have given birth experience some type of mental disorder, most commonly depression or anxiety. Pregnancy and the postpartum period are associated with profound physical and emotional changes with mental symptoms and disorders ranging in severity from very mild to psychotic. Postpartum depression (PPD) is of concern to primary and mental health care professionals because it can severely affect the health of the mother as well as the health and development of her baby. It has been reported that depressed mothers are prone to behaviours that impact negatively on their children. These include being intrusive or withdrawn, disengaged, not interacting with and being less sensitively attuned to their babies. Since children are particularly dependent on caregivers during the critical imprinting period, young infants can be vulnerable to the unresponsive or rejecting care associated with PPD. Infants can have adverse cognitive, behavioural and emotional outcomes as well as long-term developmental disturbances as a result of limited interactions between mother and child.

Furthermore, evidence from less developed countries suggests that poor maternal mental health is associated with malnutrition and poor physical health in infants. Furthermore, a new mother’s depression influences the entire family, since it has been demonstrated that partners of depressed postnatal women are more likely to become clinically depressed, which can lead to strained relationships. PPD also has a negative long-term effect on mental health since it can increase the risk of continuing or recurrent depression. Postpartum depression is often undetected and under-diagnosed and women at risk are rarely identified during pregnancy or on the delivery ward. This is particularly the case in less developed countries where little attention is paid to mental health. It has been suggested that up to 80% of women with PPD do not report it and are not diagnosed by their physicians.

50 For additional information on how to prevent, detect and manage GDM, we refer you to the International Federation of Gynecology and Obstetrics: International Federation of Gynecology and Obstetrics.
Depression and MNCH: What are we talking about?

Diagnostic and Statistical Manual V51 specifies that postpartum disorders are distinguished, not by their manifestations, but rather by when they occur, i.e. within the first four weeks postpartum. There are several forms of postpartum disorders, ranging from transient “postpartum blues” to severe postpartum psychosis.

“Postpartum blues”, or “maternity blues”, typically occurs for a short period — from just a few hours or days —, four to seven days after delivery. Symptoms include irritability, restlessness, despondency, mild confusion and/or hypochondriasis.

Postpartum depression (PPD), a more prolonged and serious condition, generally occurs somewhat later, within four to six weeks after childbirth and includes symptoms such as low spirits, anhedonia, forgetfulness, irritability, anxiety and sleep disturbance. The description, symptoms, clinical course and outcome of PPD are similar to clinically significant major depressive disorder, which occurs within the same timeframe. Postpartum psychosis, which occurs in 1 to 2 per 1,000 deliveries, is the most serious but also the most rare disorder. It is characterised by an acute psychotic state of confusion, delirium, delusions, hallucinations and insomnia.

MNCH and protection52

Women and girls’ vulnerability to violence is deeply rooted in the greater power and value societies afford men and boys in access to material, symbolic and relational resources than women. To be born female in a patriarchal society is a fundamental risk factor for various types of gender-based violence. This risk is often compounded by other forms of discrimination and inequality based on race, class, ethnicity, caste, religion, disability, HIV status, migration status, sexual orientation and gender identity, which affect both exposure to violence and access to case management. Violence against women and girls is not only a major development challenge but also a human rights violation that affects women worldwide and crosses cultural and economic boundaries. WHO estimates that more than 30% of women in the world have experienced physical or sexual partner violence and 7% non-partner sexual assault. 100 to 140 million girls and women in the world have undergone female genital mutilation and, in Africa alone, more than 3 million girls are at risk of female genital mutilation annually. Globally, nearly 70 million women were married before the age of 18 years, many of them against their will. The impact of violence against women and girls on their health, welfare, families and communities is

52 See also Protection against violence based on gender, age and disability in emergency and development settings Guidance note, 2013
considerable and the cost of direct and indirect violence against women and girls represents a staggering burden for households and economies. The situation for women and children with disabilities is even more alarming, reaching an astounding 13%.

Women and girls in all societies and all countries experience gender-based violence. The sheer scale of such violence and its negative effect on women and girls’ health, well-being, economic and political participation makes effective prevention imperative. Its adverse physical, mental, sexual and reproductive health outcomes oblige women who are abused to make extensive use of health care resources as this violence contributes to the burden of women’s ill health in multiple ways. Women with a history of intimate partner violence (IPV) are more likely to seek health care than non-abused women. For example, Bonomi and colleagues53 have shown that women who were physically abused used more mental health, emergency and outpatient departments, primary care, pharmacy and specialist services than the rest of the population. Irrespective of demographics, women the world over are subjected to IPV, making it a major public health issue because of its adverse consequences on their and their babies’ physical, mental and reproductive health. Physical abuse by a partner at some point in their lives was reported by 13 to 61% of women aged 49 years and sexual violence by a partner by 6 to 59%. Violence during pregnancy has been associated with poor health outcomes, including increased risk of preterm labour, antepartum haemorrhage, low birth weight, foetal loss, sexually transmitted infections and postpartum depression.

**MNCH and rehabilitation**54

Rehabilitation is one of Handicap International’s core competencies and an essential component of MNCH programmes as it provides tertiary prevention that is often overlooked in the international panorama of interventions more focused on mortality than morbidity. One of the HI strategic axes of intervention is strengthening the care continuum, from prevention through to detection and management of MNCH-related impairments. With this in mind, rehabilitation has a central role in ensuring screened conditions receive adequate and timely care in terms of access to the full range of rehabilitation services, such as physiotherapy, kinesiotherapy, ergo physiotherapy, occupational therapy and provision of assistive devices to enhance mobility and functional rehabilitation. These can be supplied, in cooperation with family and community members, by physical rehabilitation centres, community-based rehabilitation programmes and outreach services delivered by professionals such as physiotherapists, occupational therapists,

54 See also *Physical and functional rehabilitation* Policy paper, 2013
prosthetic and orthotic technicians and community-based rehabilitation workers. Improving access to quality rehabilitation services entails recognising and addressing all the rehabilitation needs of mothers and children with MNCH-related impairments. For example, in addition to physical rehabilitation, there may be a need for cognitive rehabilitation and speech therapy services for children with sensorial impairments. Developing such services requires an in-depth assessment of the local situation in terms of technical expertise and provision of existing services. In general, a comprehensive understanding and knowledge of all body function impairments related to MNCH conditions should be ensured by training all rehabilitation staff and providers. The availability of rehabilitation services, or lack thereof, is one of the limiting factors when selecting the range of potential impairments for inclusion in a screening program. Indeed, screening and detection are unethical and irrelevant if no management of the screened conditions is available, if they are not geographically and financially affordable and if they do not comply with international standards of care.

**MNCH and education**

Education is pivotal to improving the outcomes of a MNCH programme because better-educated girls and women have an increased chance of surviving pregnancy and childbirth. For example, girls benefitting from secondary schooling are up to six times less likely to marry as children, making education one of the best strategies to protect girls and put an end to child marriage. Due to the difference in age and maturity with their typically adult partners, child brides are less able to negotiate sexual relationships than older women and therefore at greater risk of unwanted and frequent pregnancies and acquiring sexually transmitted infections such as HIV. Adolescent girls and women with some secondary education have greater understanding of HIV and are more likely to negotiate condom use with their partners and, if married, have greater bargaining power and sway regarding sexual relations. Education allows women to make informed choices and seek appropriate health care. A World Health Organization report shows that female literacy rates are a strong predictor of maternal mortality rates: the more literate the female population, the lower the maternal mortality rate. Concerning the situation of children, children with impairments are often excluded from education because of stigma, lack of understanding and parental support. Handicap International has a strong core of technical skills in inclusive education, and access to education is one of the most important factors to enable children to achieve full potential.

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55 See also Inclusive education Policy paper, 2012  
**MNCH and economic inclusion**

Pregnant women with disability or families with children living with impairments can experience episodes of financial difficulties at various periods of their lives due to temporary/permanent absence from employment, loss of livelihood, decreased productivity, health care costs and sale of household assets and land to support families. Stigma and exclusion from mainstream economic activities are also major factors in determining changes in patterns of household expenditures as they increase the medical, psychological and economic burden of care and time devoted to caring for children with impairments, thereby reducing that available for paid employment. Social and cultural determinants, such as stigma, fear, prioritising other basic needs over health, changes in the structure and composition of the household and lack of decision-making power of women and children, can also affect families’ economic status.

To enhance the economic status of families and households, targeted support can offer:

- Access to funding via initiatives such as microfinance services and grants for vulnerable people;
- Development of business and entrepreneurship skills;
- Coaching for salaried workers and the self-employed.

Ensuring these activities/services are of the requisite quality necessitates conducting prior to their launch an appropriate needs and market assessment, drawing up a documented plan and qualified staff able to deliver appropriate training. MNCH projects have their own priorities and constraints and are thus usually unable to embark on independent livelihood initiatives. Their managers must therefore establish partnerships with other organisations/stakeholders and/or refer to local service providers able to cater to the economic requirements of their users.

**MNCH and accessibility**

Since its creation, HI has contributed to reducing barriers that prevent full participation of people with disabilities. The organisation has thus developed, not only one-time initiatives aimed at improving accessibility of the physical environment (adapting public buildings, etc.), but also full-scale projects tackling accessibility as a cross-cutting issue, taking account of all its components such as access to public transport, information and means of communication.

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57 See also [Inclusive employment Policy paper, 2011](#)

58 See also [Accessibility: How to design and promote an environment accessible to all? Policy paper, 2009](#)
As mentioned in the introduction to the policy paper on Accessibility, “Reducing and removing the physical obstacles and obstacles to understanding information which people in disabling situations find in their way every single day is key to ensuring their autonomy. It is one of the necessary conditions, which must be met in order to create a facilitating and more inclusive environment, but it cannot in itself ensure genuine inclusion.” For example, it is extremely important that health centres are made accessible. However, this alone does not ensure full inclusion of people with disabilities, as it requires training health workers, raising awareness of parents and family members and changing the way the sexuality of women with disabilities is represented, etc. More details on these aspects are provided in the section on inclusive health (Transform).
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Introduction

In this chapter we analyse three different methodologies for MNCH interventions that broadly reflect the Global Strategy for Women’s, Children’s and Adolescents’ Health (2016-2030) and provide an adapted yet flexible framework for the implementation of MNCH interventions.

Focusing first on activities to reduce mortality (Survive), we will go on to describe the interventions required to achieve full development potential for children (Thrive) and end with an overview of the best practices required to make MNCH inclusive (Transform). While the first two correspond to a basic (Survive) and deluxe (Thrive) package of interventions linked to the stages of obstetric transition, the third (Transform), which concerns inclusive MNCH, applies throughout.

This policy paper provides no detailed explanations concerning the physiology, epidemiology and “clinical how-to” of the following recommendations to ensure that it is both practical and usable. Supplementary information is presented in an e-learning module available online since the end of 2016 on HI Learn’Go.
Survive: Ending preventable death

Introduction

The activities presented in this section are mainstream MNCH indicators aligned with SDG 3: “Ensure healthy lives and promote well-being for all at all ages”\(^59\). Their aim is to:

- Reduce global maternal mortality to less than 70 per 100,000 live births;
- Reduce newborn mortality to at least as low as 12 per 1,000 live births in all countries;
- Reduce under-five mortality to at least as low as 25 per 1,000 live births in all countries.

Based on evidence syntheses produced for various reports,\(^60\) the purpose of the list of proposed interventions is to build on the remarkable achievements of the MDG era in order to reduce preventable MNCH-related mortality.

Whenever available, the relevant SDG is provided in brackets.

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\(^{59}\) United Nations. Sustainable development goals, Goal 3

**Fig 12. Overview of possible interventions to increase maternal survival**

Maternal survival strategies

<table>
<thead>
<tr>
<th>Strategies aimed at all women</th>
<th>Strategies aimed to subsets of women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women 15-49 years old</td>
<td>All PW, IPW, PPW with complications</td>
</tr>
<tr>
<td>Intrapartum woman (IPW)</td>
<td>Women not wanting a child</td>
</tr>
<tr>
<td>Pregnant woman (PW) and postpartum woman (PPW)</td>
<td></td>
</tr>
</tbody>
</table>

![Diagram showing maternal survival strategies with various interventions and services for different groups of women.](#)

- **Facilities services**
- **Home services**
- **Facilities/Outreach services**
- **Home services**

**Maternal survival strategies**

- **Facilities services**
- **Home services**
- **Facilities/Outreach services**
- **Home services**

**EmOC = BEmOC + CEmOC**

- **Safe abortion and post abortion care**
- **Family planning**

**Strategies aimed at all women**

- Various specific services: Health education, health education, uptake of contraceptives, prevention of chronic conditions, prevention of violence.
- Facilities: Health care facilities, access to BEmOC.
- Home services: Skilled attendant at home, CHW at home, Trained TBA at home, Untrained TBA/relative/alone.
- Outreach services: Postnatal care, CHW postpartum, Skilled attendant.

**Strategies aimed to subsets of women**

- **Pregnant**
  - Facilities services
  - Home services
  - Facilities/Outreach services
  - Home services

- **Not pregnant**
  - Facilities services
  - Home services
  - Facilities/Outreach services
  - Home services

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61 - *Every Newborn*, Series from the Lancet journals, 2014; 384
A. Women of reproductive age, from 15 to 49 years

Objective

Increase access to quality sexual and reproductive services.

Examples of activities

Authorities

- Allocate sufficient financial resources in national policies to implement quality SRH services.
- Provide legal framework for the implementation of comprehensive sexual and reproductive health, including:
  - Counselling, information, education, communication and clinical services in family planning;
  - Safe motherhood, including antenatal, safe delivery (skilled assistance during delivery with an appropriate referral system for women with obstetric complications), postnatal care, breastfeeding and health care for infants and women;
  - Gynaecological care, including preventing recourse to abortion as a contraceptive method, treating abortion-related complications and safe termination of pregnancy, if and when legally permitted;
  - Prevention and treatment of sexually transmitted diseases (including HIV/AIDS), through condom distribution, universal precautions against transmission of blood-borne infections, voluntary testing and counselling;
  - Prevention and management of sexual violence;
  - Active discouragement of harmful traditional practices, such as female genital mutilation.
- Collect disaggregated data on adolescent use of family planning services.

Service Providers

Ensure universal access to sexual and reproductive health care services (including family planning) and rights (SDG 3.7 and 5.6):

---

• Produce information materials and provide counselling on comprehensive sexual and reproductive health, including contraception services.
• Provide prevention, detection and treatment of non- and communicable diseases (malaria, tuberculosis) and sexually transmitted/reproductive tract infections, including HIV and syphilis.
• Provide iron/folic acid supplements to combat anaemia.
• Ensure availability of safe abortion (when legally permitted) and post-abortion care.
• Provide prevention, detection of and response to sexual and other forms of gender-based violence.

Users and Families
• Raise awareness to the importance of accessing services prior to first pregnancy.
• Raise awareness to availability of services, choosing the most appropriate method of contraception, health education.
• Reduce stigma related to use of SRH services.

Indicators

Authorities
• Number of national policies allocating sufficient financial resources for the implementation of integrated, quality SRH services.
• Number of frameworks in place for implementing comprehensive sexual and reproductive health.
• Number of laws and regulations guaranteeing women aged 15 to 49 years access to sexual and reproductive health care, information and education (5.6.2).
• Availability of consolidated, disaggregated data on SRH and adolescent SRH.

Service Providers
• Adolescent birth rate (10 to 14 years, 15 to 19 years) per 1,000 women in this age group (3.7.2).
• Number of information materials produced and disseminated, counselling and comprehensive sexual and reproductive health services, including contraception, made available.
• Number of family planning service delivery points (with the necessary supplies and trained staff) able to offer at least three different contraceptive methods.
• Percentage of family planning delivery points providing STI/HIV counselling/testing.
• Percentage of women of reproductive age (15 to 49 years) with access to up-to-date family planning methods (3.7.1).
• Number of women aged 15 to 49 years making their own informed decisions regarding sexual relations, contraceptive use and reproductive health care (5.6.1).
• Number of facilities offering comprehensive prevention, detection and treatment of non-and communicable diseases (malaria, tuberculosis) and sexually transmitted/reproductive tract infections, including HIV and syphilis.
• Number of women of reproductive age receiving iron/folic acid supplementation to combat anaemia.
• Number of centres offering safe abortion (when legally permitted) and post-abortion care.
• Number of persons assessed, referred and counselled for violence.

Users and Families

• Number of people trained on the importance of accessing services before a first pregnancy.
• Number of men and women aged 15 to 24 years with basic knowledge of sexual and reproductive health services and rights.
• Number of sessions held on availability of services, how to choose the most appropriate method of contraception and health education — with particular focus on SRH.

B. Pregnancy (antenatal care)

Objective

Prevent, detect and manage complications during pregnancy.

Examples of activities

Authorities

• Adapt to the local context and integrate WHO recommendations on the reduction of preventable mortality\textsuperscript{63} and the Global Strategy for Women's, Children's and Adolescent's Health (2016-2030) into the national health plan for healthy pregnancies.\textsuperscript{64}
• Collect disaggregated data on use by adolescents of antenatal services.

\textsuperscript{64} Every Woman Every Child. Global Strategy for Women’s, Children’s and Adolescents Health 2016-2030. Every Woman Every Child, 2015
Service Providers

- Access to early and appropriate antenatal care (ideally four visits), including identification and management of gender-based violence.
- Prevention, detection and management of maternal illness, including:
  - Pre-eclampsia prevention with low dose aspirin;
  - Eclampsia prevention with magnesium sulphate;
  - Prevention of mother-to-child transmission of HIV, from voluntary HIV testing to anti-retroviral (ARV) therapy. HIV testing must be accompanied by counselling to optimise the effectiveness of interventions.
- Prevention and treatment of malaria, including insecticide-treated bed nets and intermittent preventive treatment during pregnancy.
- Screen pregnant women for hypertensive disorders.
- Prevent anaemia with iron and folic acid supplementation.
- Dietary counselling to promote healthy weight gain and adequate nutrition.
- Provide tetanus immunisation.
- Counselling on family planning, birth and emergency preparedness.
- Management of mal-presentation at term (external manual correction of cephalic presentation).
- Screening, prevention and management of sexually transmitted infections (syphilis and hepatitis B).
- Identification of intimate partner violence and response.

Users and Families

Promote timely health-seeking behaviours:

- Raise awareness to the importance of regularly accessing Antenatal Care (ANC) services.
- Raise awareness to warning signs and risk factors for pregnant women.
- Reduce delay in accessing care.

Promote healthy pregnancy:

- Nutrition counselling.
- Healthy and safe pregnancy.
- Promote preventive health interventions (vaccination, prevention of anaemia, hypertension and infectious diseases, such as malaria and HIV).
**Indicators**

**Authorities**

- Number of international policies adapted to the local context and integrated into the national health plan for healthy pregnancies and preventable mortality reduction.
- Monitoring and evaluation system in place to collect disaggregated data on use of antenatal services by adolescents.

**Service Providers**

- Number of pregnant women attending at least 4 ANC consultations during pregnancy.
- Number of health centres able to provide prevention, detection and management of maternal illness, including pre-eclampsia, eclampsia and prevention of mother-to-child transmission of HIV.
- Number of pregnant women having access to prevention and treatment of malaria, including insecticide-treated bed nets and intermittent preventive treatment during pregnancy.
- Number of pregnant women screened for hypertensive disorders.
- Number of pregnant women receiving iron and folic acid supplementation.
- Number of sessions on dietary counselling for healthy weight gain and proper nutrition provided to pregnant woman.
- Tetanus immunisation coverage rate.
- Number of counselling sessions provided on family planning, birth and emergency preparedness.
- Number of health staff able to manage mal-presentation at term (external manual correction of cephalic presentation).
- Number of pregnant women screened for sexually transmitted infections (syphilis and hepatitis B).
- Number of health centres able to identify and provide adequate response to intimate partner violence.

**Users and Families**

- Number of awareness sessions provided on importance of accessing ANC services.
- Number of awareness sessions provided to pregnant women on warning signs and risk factors.
- Number of training sessions provided on reducing delays in accessing care.
- Number of empowerment sessions provided to pregnant woman and family members on healthy pregnancy.
• Number of awareness sessions provided on preventive health interventions (vaccination, prevention of anaemia, hypertension and infectious diseases, such as malaria and HIV).

C. Childbirth

Objective

Reduce global maternal mortality to less than 70 per 100,000 live births (3.1).

Examples of activities

Authorities

• Incorporate into national policies prevention, detection and management of obstetric and neonatal emergency care, including at least:
  - Pre-eclampsia and eclampsia;
  - Prolonged and obstructed labour;
  - Active management of third stage of labour;
  - Caesarean section;
  - Emergency obstetric and newborn care.
• Provide legal framework for enhancing the referral and counter-referral mechanism, including protocols and guidelines on basic and comprehensive emergency obstetric and neonatal services (BEmONC and CEmONC).65
• Facilitate timely access to services via a social insurance scheme/system with reimbursement of expenses/care provided free of charge.
• Produce, regularly update and integrate courses on BEmONC and CEmONC into existing training modules at university level.

Service Providers

• Promote childbirth in a medical facility with a skilled birth attendant.
• Provide routine monitoring with a partograph and timely and appropriate care.
• Active management of third stage of labour.

- Management of prolonged or obstructed labour, including assisted vaginal delivery and caesarean section.
- Caesarean section for maternal/foetal indications.
- Induction of labour when clinically necessary.
- Management of postpartum haemorrhage.
- Prevention and management of eclampsia (including with magnesium sulphate).
- Detection and management of women with or at risk of infection (including prophylactic use of antibiotics for caesarean sections).
- HIV screening (if not already tested) and prevention of mother-to-child transmission.
- Hygienic management of umbilical cord at birth, including use of chlorhexidine when appropriate.

**Users and Families**

- Raise awareness of pregnant women and family members to healthy pregnancy.
- Raise awareness to importance of delivery in a facility with skilled birth attendants.
- Raise awareness to warning signs and risk factors during delivery.
- Raise awareness to birth preparedness, including transportation and logistics.

**Indicators**

**Authorities**

- Number of national policies with a particular focus on prevention, detection and management of obstetric and neonatal emergency care.
- Number of existing protocols and guidelines on basic and complete emergency obstetric and neonatal services (BEmONC and CEmONC).
- Number of referral and counter-referral mechanisms supported by a legal framework.
- Number of birth-related services with social insurance scheme/system with reimbursement of expenses/care provided free of charge.
- Number of training modules on BEmONC and CEmONC at university level.

**Service Providers**

- Maternal mortality ratio (3.1.1).
- Number of health personnel trained in assisting childbirth.
- Number of births attended by skilled health personnel (3.1.2).
- Number of women who have postpartum contact with a health provider within 2 days of delivery.
- Number of health centres filling in partograms.
- Number of deliveries in a facility with a skilled birth attendant.
• Number of health staff trained on active management of third stage of labour.
• Number of centres able to provide management of prolonged or obstructed labour, including instrument-assisted delivery and caesarean section.
• Number of health staff able to provide caesarean section for maternal/foetal indications.
• Number of centres able to induce labour when clinically necessary.
• Number of centres implementing national guidelines on prevention and management of eclampsia (including with magnesium sulphate).
• Number of health staff applying national protocols on hygienic management of umbilical cord at birth, including use of chlorhexidine when appropriate.
• Number of women with or at risk of infections (including prophylactic use of antibiotics for caesarean sections).
• Number of pregnant women voluntarily screened for HIV (if not already tested).
• Number of centres providing mother-to-child HIV transmission prevention.

Users and Families

• Number of awareness sessions provided on importance of facility-based delivery with skilled birth attendants.
• Number of awareness sessions provided on warning signs and risk factors during delivery.
• Number of training sessions provided on birth preparedness.

D. Preterm birth

Objective

Ensure implementation of WHO recommendations on interventions to improve preterm birth outcomes.66

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FOR MOTHERS

Examples of activities

Authorities

- Incorporate into national policies prevention, detection and management of preterm birth, including at least:
  - Management of obstetric complications (preterm premature rupture of membranes, macrosomia, etc.);
  - Administration from 24 to 34 weeks of antenatal corticosteroids to eligible women (see conditions below).
  - Active management of third stage of labour;
  - Administration of antibiotics for preterm pre-labour rupture of membranes;
  - Administration of magnesium sulphate ($\text{MgSO}_4$) for foetal neuroprotection of the preterm infant.

Service Providers

- Management of obstetric complications (preterm premature rupture of membranes, macrosomia, etc.).
- Administration of antenatal corticosteroids from 24 to 34 weeks to eligible women, provided certain conditions are met, such as:
  - An accurate gestational age assessment can be performed;
  - Preterm birth is considered imminent;
  - Absence of clinical evidence of maternal infection;
  - Adequate childbirth care is available (including the capacity to recognise and safely manage preterm labour and birth);
  - Preterm newborn can receive adequate care if required (including resuscitation, thermal care, feeding support, infection treatment and safe oxygen use).
- Administration of antibiotics for preterm pre-labour rupture of membranes.
- Administration of magnesium sulphate ($\text{MgSO}_4$) for foetal neuroprotection <32 weeks if preterm birth is likely within 24 hours to prevent cerebral palsy.

Users and Families

- Raise awareness of pregnant woman and family members to preterm birth risks factors.
- Raise awareness to importance of timely access to health services for preterm birth management.
Indicators

Authorities

- Number of national policies with a particular focus on prevention, detection and management of preterm birth.
- Number of international guidelines adapted to the local context and integrated into existing services.

Service Providers

- Number of women with preterm pre-labour rupture of membranes who received prophylactic antibiotics.
- Number of training sessions provided to health staff on management of obstetric complications (preterm premature rupture of membranes, macrosomia, etc.).
- Number of training sessions provided to health staff on how to safely manage preterm labour and birth.
- Number of centres able to provide management of obstetric complications (preterm premature rupture of membranes, macrosomia, etc.).
- Number of health centres offering antenatal corticosteroids from 24 to 34 weeks to eligible women, provided certain conditions are met, such as:
  - Gestational age assessment can be accurately undertaken;
  - Preterm birth is considered imminent;
  - There is no clinical evidence of maternal infection;
  - Adequate childbirth care is available (including the capacity to recognise and safely manage preterm labour and birth);
  - Preterm newborn can receive adequate care if needed (including resuscitation, thermal care, feeding support, infection treatment and safe oxygen use).
- Number of centres administering antibiotics to treat preterm pre-labour rupture of membranes.
- Number of centres administering magnesium sulphate for foetal neuroprotection <32 weeks if preterm birth is likely within 24 hours in order to prevent cerebral palsy.

Users and Families

- Number of awareness sessions provided on preterm birth risks factors to pregnant women and family members.
- Number of awareness sessions to importance of timely access to health services for preterm birth management.
FOR NEWBORNS

Examples of activities

Authorities

- Incorporate into national policies preterm baby care, including at least:
  - Kangaroo mother care methods;\(^\text{67}\)
  - Continuous positive airway pressure for preterm infants with respiratory distress syndrome (RDS);
  - Surfactant therapy for preterm infants with RDS in facilities meeting minimum criteria (see below);
  - Oxygen therapy for preterm birth.

Service Providers

- Kangaroo mother care when infant weighs 2,000 g or less and he/she is clinically stable.
- Continuous positive airway pressure for preterm infants with RDS.
- Surfactant therapy for preterm infants with RDS in facilities meeting minimum criteria (intubation, ventilator care, blood gas analysis, newborn nursing care and monitoring).
- Start oxygen therapy with 30% oxygen or air (if blended oxygen is not available) during ventilation of preterm infants born ≤32 weeks.
- Progressively higher concentrations of oxygen for neonates undergoing oxygen therapy according to defined criteria.

Users and Families

- Raise awareness of pregnant women and family members to kangaroo mother care.
- Raise awareness to the importance of timely follow-up of preterm babies.

Indicators

Authorities

- Number of national policies with a particular focus on preterm baby care.

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Service Providers

- Number of babies at risk of being born from 24 to < 34 weeks of gestation exposed to antenatal corticosteroids.
- Number of babies at risk of being born at ≥ 34 weeks of gestation exposed to antenatal corticosteroids (inappropriate use).
- Number of babies born at <32 weeks of gestation exposed in utero to magnesium sulphate for foetal neuroprotection.
- Number of neonates weighing ≤2000 g at birth who received kangaroo mother care.

Users and Families

- Number of awareness sessions provided on kangaroo mother care to pregnant women and family members.
- Number of awareness sessions provided on importance of timely follow-up of preterm babies.

E. Postnatal (mothers)

Objective

Prevent, detect and manage postpartum complications.

Examples of activities

Authorities

- Incorporate into national policies postpartum complications, including at least:
  - Care in a facility for at least 24 hours after an uncomplicated vaginal birth;
  - Prevention and management of postpartum haemorrhage;
  - Detection and management of postpartum sepsis;
  - Promotion, protection and support of exclusive breastfeeding for 6 months;
  - Screening for HIV and initiation or continuation of antiretroviral therapy;
  - Identification of and response to intimate partner violence.

Service Providers

- Care in a facility for at least 24 hours after an uncomplicated vaginal birth.
- Prevention and management of eclampsia.
• Management of postpartum haemorrhage.
• Detection and management of postpartum sepsis.
• Screening for HIV and initiation or continuation of antiretroviral therapy.
• Protect, promote and support exclusive breastfeeding for 6 months.
• Family planning advice and contraception.
• Prevention and treatment of maternal anaemia.
• Nutrition and lifestyle counselling, management of weight during pregnancy.
• Postnatal contact with an appropriately skilled health care provider, at home or in a health facility, on day 3, day 7 and 6 weeks after birth.
• Identification of and response to intimate partner violence.

Users and Families

• Raise awareness to dangers signs of postpartum complications.
• Raise awareness to importance of timely breastfeeding initiation.
• Nutrition training.
• Family planning and contraceptive training.

Indicators

Authorities

• Number of national policies with a particular focus on postpartum complications.
• Funding allocated to implementation of postpartum-related services.

Service Providers

• Number of postpartum complications registered.
• Number of mothers practicing exclusive breastfeeding in accordance with WHO recommendations.
• Number of pregnant women counselled and screened for HIV and who received their test results.
• Number of women attending 3 postpartum consultations, in accordance with national protocols.
• Number of women receiving family planning advice during the postpartum period.

Users and Families

• Number of awareness sessions provided on dangers signs of postpartum complications.
• Number of awareness sessions provided on importance of timely breastfeeding initiation.
• Number of training sessions provided on nutrition to postpartum women.
• Number of training sessions provided on family planning and contraception to postpartum women and family members.

F. Postnatal (newborns)

Objective

Prevent, detect and manage postpartum complications.

Examples of activities

Authorities

• Draw up national policies focused on prevention, detection and management of postpartum complications in newborns.
• Draw up protocols and guidelines on management of postpartum care.
• Provide legal framework to support referral and counter-referral mechanism.
• Integrate postpartum-related services into social insurance scheme/system with reimbursement of expenses/care provided free of charge.

Service Providers

• Care in a facility for at least 24 hours after an uncomplicated vaginal birth.
• Neonatal resuscitation with bag and mask.
• Continuous positive airway pressure for babies with RDS.
• Presumptive antibiotic therapy for newborns at risk of bacterial infection.
• Detection and case management of potential severe bacterial infection.
• Hygienic umbilical cord and skin care (use of chlorhexidine in accordance with WHO guidelines).
• Immediate drying and thermal care.
• Initiation of prophylactic antiretroviral therapy for babies exposed to HIV.
• Early initiation of breastfeeding (within the first hour).
• Kangaroo mother care for small babies.
• Additional support with feeding breast milk to small and preterm babies.
• Management of newborns with jaundice.
• Postnatal contact with a skilled health-care provider, at home or in a health facility, on day 3, day 7 and 6 weeks after birth.
Users and Families

- Raise awareness to importance of postpartum care for newborns.
- Raise awareness to danger signs of complications in postpartum babies.
- Importance of timely follow-up of preterm babies.

Indicators

Authorities

- Number of national policies with a particular focus on prevention, detection and management of postpartum care for newborn.
- Number of existing protocols and guidelines on management of postpartum care.
- Number of referral and counter-referral mechanisms supported by a legal framework.
- Number of postpartum-related services with social insurance scheme/system with reimbursement of expenses/care provided free of charge.

Service Providers

- Number of centres providing immediate drying and thermal care after birth.
- Number of health centres providing BEmONC and CEmONC.
- Implementation of protocol for hygienic umbilical cord and skin care (use of chlorhexidine in accordance with WHO guidelines).
- Number of babies exposed to HIV put on prophylactic antiretroviral therapy.
- Number of babies starting early initiation of breastfeeding (within the first hour).
- Number of intrapartum deaths in health facilities.

Users and Families

- Number of awareness sessions provided on importance of early initiation of breastfeeding.
- Number of training sessions provided on importance of timely follow-up of preterm babies.
- Number of awareness sessions provided on importance of postpartum care for newborns with complications.
G. Child health

Objective

Reduce under-5 mortality to at least as low as 25 per 1,000 live births in all countries (SDG 3.2).

Examples of activities

Authorities

- Draw up national policies focused on under-5 mortality reduction.
- Draw up protocols and guidelines for management of malnutrition, excess weight and obesity.
- Provide legal framework to support referral and counter-referral mechanisms for childhood illnesses, including malaria, pneumonia, meningitis and diarrhoea.
- Integrate under-5 related services into social insurance scheme/system with reimbursement of expenses/care provided free of charge.

Service Providers

- Exclusive breastfeeding for 6 months; breastfeeding and complementary feeding from 6 months.
- Case management of severe acute malnutrition and treatment for wasting.
- Dietary counselling for prevention of under-nutrition, excess weight and obesity.
- Management of moderate acute malnutrition (appropriate breastfeeding, complementary and supplementary feeding when necessary).
- Periodic vitamin A supplementation when appropriate.
- Iron supplementation when appropriate.
- Responsive caregiving and stimulation.
- Routine immunisation (including haemophilus influenzae, pneumococcal, meningococcal and rotavirus vaccines).
- Prevention and management of childhood illnesses, including malaria, pneumonia, meningitis and diarrhoea.
- Accurate case management of meningitis.
- Comprehensive care of children infected with, or exposed to, HIV.
- Prevention and response to child maltreatment.
- Prevention of harmful practices, including female genital mutilation.
Users and Families

- Raise awareness to adapted nutrition for 0-5 children.
- Raise awareness to danger signs of meningitis, malaria and diarrhoea.
- Raise awareness to importance of sustained breastfeeding.
- Raise awareness to child maltreatment prevention.
- Raise awareness to child vaccination.
- Behavioural change interventions on timely health-seeking behaviours.

Indicators

Authorities

- Number of national policies focused on under-5 mortality reduction.
- Number of protocols and guidelines produced on management of malnutrition, excess weight and obesity.
- Existence of legal framework to support referral and counter-referral mechanisms for childhood illnesses, including malaria, pneumonia, meningitis and diarrhoea.
- Number of services for under-5s integrated into social insurance scheme/system with reimbursement of expenses /care provided free of charge.

Service Providers

- Under-5 mortality rate (3.2.1).
- Number of children with diarrhoea receiving oral rehydration salts (ORS).
- Number of children with suspected pneumonia treated by an appropriate health provider.
- Number of infants <6 months exclusively breastfed.
- Number of fully immunised children.
- Insecticide-treated nets for children under 5 (% of children).
- Existence of a protocol to manage severe acute malnutrition and treat wasting.
- Existence of a factsheet on dietary counselling for prevention of under-nutrition, excess weight and obesity.
- Number of children with moderate acute malnutrition receiving appropriate care.
- Number of periodic vitamin A supplementations administered.
- Number of children receiving iron supplementation when appropriate.
- Existence of a protocol on responsive caregiving and stimulation.
- Number of children with malaria, pneumonia, meningitis and diarrhoea receiving adequate care, including referral to rehabilitation services.
• Number of children infected with, or exposed, to HIV with access to comprehensive care.
• Number of health staff trained on prevention and response to child maltreatment.
• Number of health services providing counselling to prevent harmful practices, including female genital mutilation.

Users and Families
• Number of awareness sessions provided on adapted nutrition for 0-5 children.
• Number of awareness sessions provided on dangers signs of meningitis, malaria and diarrhoea.
• Number of awareness sessions provided on importance of sustained breastfeeding.
• Number of awareness sessions provided on child maltreatment prevention.
• Number of awareness sessions provided on child vaccination.

H. Adolescent health and development

Objective

Improve access to healthy lifestyle to reduce mortality.

Examples of activities

Authorities
• Draw up national policies focused on continuum of care for adolescents, including access to healthy lifestyle, sexual and reproductive health and gender-based violence services.
• Draw up protocols and guidelines on management of aforementioned topics.
• Provide legal framework to support referral and counter-referral mechanisms for adolescent health.

Service Providers
• Routine vaccination coverage (e.g. human papillomavirus, hepatitis B, diphtheria-tetanus, rubella, measles).
• Promotion of healthy behaviours (e.g. nutrition, physical activity, tobacco, alcohol and drug abstinence).
• Prevention, detection and management of anaemia, particularly for adolescent girls.
• Increase access to comprehensive sex education.
• Information, counselling and comprehensive sex and reproductive health services, including contraception.
• Prevention and response to sexual and other forms of gender-based violence.
• Prevention and response to harmful practices, such as female genital mutilation and early and forced marriage.
• Prevention, detection and treatment of communicable and sexually transmitted/reproductive tract infections, including HIV, TB and syphilis.
• Voluntary medical male circumcision in countries with a generalised HIV epidemic.

Users and Families

• Raise awareness to response to sexual and other forms of gender-based violence.
• Raise awareness to harmful practices, such as female genital mutilation and early and forced marriage.
• Raise awareness to healthy behaviours.
• Raise awareness to availability and importance of routine vaccinations for adolescents.

Indicators

Authorities

• Number of national policies focused on continuum of care for adolescents, including access to healthy lifestyle, sexual and reproductive health and gender-based violence services.
• Number of protocols and guidelines on management of the aforementioned topics.
• Availability of legal framework to support referral and counter-referral mechanisms for adolescent health.

Service Providers

• Percentage of women aged 20 to 24 years married or cohabiting before the age of 15 and before the age of 18 (5.3.1).
• Number of young women and men aged 18 to 29 years who have experienced sexual violence before the age of 18 (16.2.3).
• Number of ever-partnered women and girls aged 15 and older who have been subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by type of violence and by age (5.2.1).
• Number of rape survivors who have received HIV post-exposure prophylaxis (PEP) within 72 hours.
• Number of women and girls aged 15 to 49 years who have undergone female genital mutilation/cutting, according to age (5.3.2).

Users and Families

• Number of awareness sessions provided on response to sexual and other forms of gender-based violence.
• Number of awareness sessions provided on harmful practices, such as female genital mutilation and early and forced marriage.
• Number of awareness sessions provided on healthy behaviours, including nutrition, prevention of sexually transmitted diseases and access to sexual and reproductive health.
• Number of awareness sessions provided on availability and importance of routine vaccination for adolescents.
Thrive: Integrating morbidities and optimal development into MNCH

Introduction

The activities described in this section of the policy paper are at the core of HI’s competencies and intervention skills in MNCH. They focus on establishing the most enabling environment to achieve the highest attainable development for mothers, newborns, children and adolescents and the integration of prevention, early detection and early intervention, including referral and management of MNCH-related impairments, into existing health service offerings. Afforded scant consideration during the MDG era, international donors are more and more attentive to interventions that extend the scope of mortality reduction activities to include morbidity, as this becomes increasingly acknowledged as essential to the achievement of SDG3 “health for all”.

A. Women of reproductive age, from 15 to 49 years

Objective

Contribute to the prevention of MNCH-related morbidities in women aged 15 to 49 years.

Examples of activities

This section provides recommendations for women of reproductive age (aged 15-49 years).

Authorities

- Incorporate into national policies prevention, detection and management of non-communicable diseases:
  - Screening for and management of cervical and breast cancer;
  - Diabetes mellitus type II;
  - Cardiovascular diseases;
  - Neurological conditions, including epilepsy.
• Provide legal framework to enhance referral and counter-referral mechanisms, including protocols and guidelines on prevention, screening, detection and case management of the aforementioned conditions:
  - Include rehabilitation services in the list of available services for these conditions;
  - Produce, regularly update and disseminate directories of available services for each condition;
  - Produce, regularly update and disseminate training manuals on the prevention, detection and management of these conditions.

Service Providers
• Implement national policies on prevention, detection and management of pre-existing chronic conditions.
• Comprehensive promotion of healthy lifestyle: pre-pregnancy detection and management of risk factors (nutrition, obesity, tobacco, alcohol, drug addiction, mental health issues, exposure to environmental toxins).
• Counselling on available services and referral options as provided in a shared directory of services.

Users and Families
• Awareness sessions on mental health-related impairments and chronic conditions after childbirth.
• Counselling on prevention, detection and management of mental health-related impairments and chronic conditions after childbirth.

Indicators

Authorities
• Number of national policies including the prevention, detection and case management of non-communicable diseases:
  - Screening for and management of cervical and breast cancer;
  - Diabetes mellitus type II;
  - Cardiovascular diseases;
  - Neurological conditions, including epilepsy.
• Number of protocols and guidelines on prevention, screening, detection and management of the aforementioned conditions:
  - Include rehabilitation services in the list of freely available services for these conditions;
  - Number of directories of services disseminated for each condition;
- Number of training manuals on prevention, detection and management of the aforementioned conditions.

**Service Providers**

- Number of centres integrating prevention and detection of the aforementioned conditions into existing health services.
- Number of health staff trained on comprehensive promotion of healthy lifestyle: pre-pregnancy detection and management of risk factors (nutrition, obesity, tobacco, alcohol, drug addiction, mental health issues and exposure to environmental toxins).
- Number of health centres providing counselling on service availability and referral options as provided in a shared directory of services.

**Users and Families**

- Number of families aware of chronic conditions that can occur during pregnancy.
- Number of women screened for chronic conditions with access to adequate case management.
- Number of women with access to comprehensive SRH services.

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**B. Preconception care**

**Objective**

Ensure optimal pregnancy preparation for mother to be.

**Examples of activities**

**Authorities**

- Draw up adequate national policies on folic acid fortification of common food staples. If this is not possible, include adequately dosed folic acid in the services and supplies provided by sexual and reproductive health services.
- Provide legal framework for integration of preconception care into existing SRH services.
- Enhance referral and counter-referral mechanisms, including protocols and guidelines on prevention, screening, detection and case management of the following conditions:
  - Hypertension;
  - Diabetes Mellitus type II;
- Lifestyle and nutritional issues;
- Neurological conditions.

- Produce, regularly update and disseminate training manuals on prevention, detection and management of the aforementioned conditions.

Service Providers

- Implement national policies on folic acid fortification/supplementation.
- Implement comprehensive care for pre-existing chronic conditions.
- Implement preconception care policy in SRH services.

Users and Families

- Awareness sessions on benefits of preconception care.
- Counselling on folic acid fortification for the prevention of neural tube defects.
- Counselling on prevention, detection and management of pre-existing chronic conditions for mothers-to-be.

Indicators

Authorities

- Availability and enforcement of national policies on folic acid fortification of common food staples. If this is not possible, include adequately dosed folic acid in the services and supplies provided by sexual and reproductive health services.
- Availability of legal framework for the integration of preconception care into existing SRH services.
- Availability of a functional and enforced referral and counter-referral mechanism, including protocols and guidelines on prevention, screening, detection, case management of the following conditions:
  - Hypertension;
  - Diabetes Mellitus type II;
  - Lifestyle and nutritional issues;
  - Neurological conditions.
- Number of training tools produced, regularly updated and disseminated on prevention, detection and management of the aforementioned conditions.

Service Providers

- Number of mothers-to-be starting acid folic fortification at least 3 months prior to stopping contraception.
- Number of women accessing screening services for pre-existing chronic conditions.
• Number of couples receiving healthy lifestyle counselling.
• Number of families adopting healthy lifestyle practices.
• Number of women screened and with access to management of chronic conditions.

Users and Families

• Number of awareness sessions provided on benefits of preconception care.
• Number of couples receiving basic counselling on folic acid fortification for the prevention of neural tube defects.
• Number of couples aware of and with access to services for the prevention, detection and management of pre-existing chronic conditions.
• Number of couples receiving basic counselling on prevention, detection and management of pre-existing chronic conditions for mothers-to-be.

C. Pregnancy (antenatal care)

While there are no specific interventions to reduce morbidity during this period, the link between morbidity reduction and mortality must be highlighted. The focus should be on strengthening activities related to prevention (vaccination, prevention of STIs, healthy pregnancy), detection (detection of STIs, accurate and timely identification of at-risk pregnancy and preterm birth) and management (referral and timely access to quality and appropriate services) of potentially disabling complications. The same interventions as those set out in the Survive section should be implemented during pregnancy.

Objective

Reduce preventable mortality and morbidity during pregnancy.

Examples of activities

Authorities

• Draw up national policies to strengthen preventive health services for pregnant women, such as integration of nutrition, vaccination and healthy lifestyle into pregnancy-related services.
Service Providers

- Implement national policies on preventive health services during ANC, with a particular focus on counselling, social behavioural changes and access to quality and affordable care.

Users and Families

- Awareness sessions on benefits of extended, preventive ANC.
- Behavioural changes in health seeking patterns during pregnancy.

Indicators

Authorities

- Availability and enforcement of national policies on strengthening implementation of preventive health services during pregnancy.

Service Providers

- Number of mothers receiving preventive health counselling during ANC.
- Number of health centres integrating preventive health counselling into their routine services.

Users and Families

- Number of awareness sessions provided on importance of accessing extended ANC.
- Number of family members provided with healthy lifestyle training.

D. Childbirth

As stated above, interventions implemented to reduce mortality also have a synergistic and positive impact on morbidity reduction, making this the strongest advocacy and lobbying argument that HI can call on when proposing to ministries of health that they include MNCH-related impairments prevention in their health services. Rather than representing an additional workload, they provide a more refined panel of health-related interventions that have a broader impact while generating a high return on investment. Activities are the same as those in the Survive section.
Objective

Reduce preventable mortality and morbidity during childbirth.

Examples of activities

Authorities

- Draw up national policies for timely detection, appropriate referral, registration and follow-up of complicated childbirth.

Service Providers

- Strengthen services for the detection, referral, registration and follow-up of complicated childbirth, with a particular focus on near-miss mothers\(^{68}\) and newborns with low APGAR scores\(^{69}\).
- Strengthen links with community-based health services to ensure timely detection, referral and close follow-up of complicated cases.

Users and Families

- Awareness sessions on the importance of planning ahead for childbirth.
- Awareness sessions on risk factors and warning signs of complicated childbirth.

Indicators

Authorities

- Number of national policies on timely detection, appropriate referral, registration and follow-up of complicated childbirth.

Service Providers

- Number of health staff able to provide detection, referral, registration and follow-up of complicated childbirth, with a particular focus on near miss-mothers\(^{70}\) and newborns with low APGAR scores\(^{71}\).

\(^{68}\) World Health Organization. The WHO near-miss approach
\(^{69}\) The Apgar Score, in Pediatrics, April 2006, Volume 117, Issue 4
\(^{70}\) World Health Organization. The WHO near-miss approach
\(^{71}\) The Apgar Score, in Pediatrics, April 2006, Volume 117, Issue 4
- Number of community health workers trained on timely detection, referral and close follow-up of complicated cases.

**Users and Families**

- Number of awareness sessions provided on the importance of planning ahead for childbirth.
- Number of awareness sessions provided on risk factors and warning signs of complicated childbirth.

**E. Postnatal (mothers)**

**Objective**

Prevent, detect and manage MNCH-related impairments, with a particular focus on chronic conditions.

**Examples of activities**

**Authorities**

- Incorporate into national policies prevention, detection and management of maternal health-related impairments, with a particular focus on obstetric fistula and chronic conditions.
- Provide legal framework for the strengthening of referral and counter-referral mechanisms, including protocols and guidelines on prevention, screening, detection and case management of the following conditions:
  - Obstetric fistula;
  - Postpartum depression (PPD);
  - Gestational diabetes mellitus (GDM);
  - Cervical cancer.
- Include rehabilitation services for the aforementioned conditions in the list of freely available services.
- Produce, regularly update and disseminate directories of available services for each condition.
- Produce, regularly update and disseminate a training manual on prevention, detection and management of the aforementioned conditions.
Service Providers

- Implement national policies on prevention, detection and management of maternal health-related impairments.
- Implement comprehensive care for obstetric fistula, including at least surgical treatment, adapted pelvic kinesiotherapy, psychosocial support, livelihood activities and community reinsertion.
- Prevention, screening and management of PPD.
- Follow-up of GDM, with a particular focus on adapted counselling on healthy lifestyle, nutrition, physical activities and access to therapy, as and when needed.
- Routine postpartum examination and screening for cervical cancer in relevant age groups.
- Referral for case management of women testing positive for cervical cancer.
- Provide access to quality, affordable and integrated treatment, with a particular focus on rehabilitation for the aforementioned conditions.
- Counselling on service availability and referral options as provided in a shared directory of services.
- Enhance referral system and set up referral circuit for each impairment.

Users and Families

- Awareness sessions on mental health-related impairments and chronic conditions during postnatal period.
- Basic counselling on prevention, detection and management of mental health-related impairments and chronic conditions during postnatal period.

Indicators

Authorities

- Number of national policies integrating prevention, detection and management of maternal health-related impairments into existing health services.
- Availability and enforcement of legal framework for the strengthening of referral and counter- referral mechanisms, including protocols and guidelines on prevention, screening, detection and case management of the following conditions:
  - Obstetric fistula;
  - Postpartum depression;
  - Gestational diabetes mellitus;
  - Cervical cancer.
- Number of directories of services produced and disseminated for each condition.
• Number of training manuals on prevention, detection and management of the aforementioned conditions.

Service Providers

• Number of national policies on the prevention, detection and management of mental health-related impairments implemented.
• Number of health centres providing comprehensive care for obstetric fistula, including at least surgical treatment, adapted pelvic kinesiotherapy, psychosocial support, livelihood activities and community reinsertion.
• Number of women screened for fistula after obstructed labour receiving appropriate care.
• Number of women screened for PPD with access to adequate therapy.
• Number of women treated for GDM with regular access to therapy, nutritional and healthy lifestyle counselling.
• Number of women screened for PPD receiving appropriate care.
• Number of women screened for cervical cancer in the relevant age group.
• Number of women tested positive for cervical cancer referred for case management.

Users and Families

• Number of awareness sessions provided on mental health-related impairments and chronic conditions during postnatal period.
• Number of women receiving basic counselling on prevention, detection and management of mental health-related impairments and chronic conditions during postnatal period.

F. Postnatal (newborn)

Objective

Integration of detection and management of newborn impairments into existing health services.

Examples of activities

Authorities

• Incorporate into national policies mandatory physical examination of newborns at all levels of the health system, including recording and reporting of screened newborns.
- Provide legal framework for the strengthening of referral and counter-referral mechanisms, including protocols and guidelines on screening, detection and case management of the following conditions:
  - Congenital birth defects;
  - Sensorial impairments;
  - Congenital heart conditions;
  - Iodine deficiency;
  - Brachial plexus lesions.
- Include rehabilitation services in the list of freely available services for the aforementioned conditions.
- Produce, regularly update and disseminate directories of services available for each condition.
- Produce, regularly update and disseminate training manuals on the integration of physical examinations of newborns at all levels of the health system, including diagnosis, case management and referral options for the aforementioned conditions.

Service Providers

- Implement national policy on physical examination of newborns.
- Train health staff on physical examination of newborns, including support with regulated shifting of tasks in health centres.
- Provide access to quality, affordable and integrated treatment, with a particular focus on rehabilitation services for newborns with congenital birth defects.
- Counsel families on service availability and referral options as provided in a shared directory of services.
- Strengthen referral system and set up a referral circuit for each impairment.

Users and Families

- Basic training for parents on physical examination of newborns.
- Raise awareness of family members to the importance of physical examinations, including what to look for and what action to take.
- Training on how to improve quality of life for children with congenital birth defects and/or sensorial impairments.
- Raise awareness to existing specialist services.
Indicators

Authorities

- Number of national policies on mandatory physical examination of newborns drawn up and implemented.
- Number of protocols and guidelines on physical examination of newborns.
- Number of regularly updated and disseminated directories on services available for each condition.
- Number of training manuals produced on integrating a physical examination of newborns at all levels of the health system.

Service Providers

- Number of health staff implementing the national policy on physical examination of newborns.
- Number of health staff trained on physical examination of newborns.
- Number of health staff able to provide adequate referral for management of newborns with:
  - Congenital birth defects;
  - Sensorial impairments;
  - Congenital heart conditions;
  - Iodine deficiency;
  - Brachial plexus lesions.
- Number of newborns assessed during physical examination of newborns.
- Number of newborns identified with one of the aforementioned conditions receiving appropriate referral and care.

Users and Families

- Number of families provided with counselling on service availability and referral options provided in a shared directory of services.
- Number of families trained on basic newborn screening examination.
G. Child health

Objective

Ensure all girls and boys have access to good-quality early childhood development (SDG 4.2).

Examples of activities

Authorities

- Incorporate into national policies mandatory screening for psychomotor developmental milestones at all levels of the health system.
- Provide legal framework for the strengthening of referral and counter-referral mechanisms, including protocols and guidelines on screening, detection and case management of psychomotor delay.
- Produce, regularly update and disseminate directories of services available for each condition.
- Produce, regularly update and disseminate training manual on the integration of psychomotor developmental milestone assessments at all levels of the health system.

Service Providers

- Implement national policies on screening for psychomotor developmental milestones.
- Provide access to quality, affordable and integrated treatment, with a particular focus on rehabilitation for children with psychomotor delay.
- Implement UNICEF’s early detection-early stimulation kit\textsuperscript{72} for children with psychomotor delay.
- Counsel families on service availability and referral options as provided in a shared directory of services.
- Strengthen referral system and create referral circuit for each impairment.

Users and Families

- Basic training on screening for psychomotor delay.
- Training on early stimulation activities for children.
- Raise awareness to psychomotor delay, how to recognise it and the role family members can play.

\textsuperscript{72} UNICEF. Early Childhood Resource Pack
• Training on day-to-day activities to improve quality of life of children with psychomotor delay.

**Indicators**

**Authorities**

• Number of national policies on mandatory screening for psychomotor developmental milestones produced and enforced.
• Number of protocols and guidelines on screening, detection and case management of psychomotor delays.
• Number of regularly updated and disseminated directories of services available for each condition.
• Number of training manuals produced on the integration of psychomotor milestone assessments at all levels of the health system.

**Service Providers**

• Percentage of children under 5 years who are developmentally on track in health, learning and psychosocial well-being, by gender (4.2.1).
• Number of health staff implementing national policies on screening for psychomotor developmental milestones.
• Number of health staff trained on detecting psychomotor delay.
• Number of health staff able to provide adequate referral for the management of psychomotor delay.
• Number of health centres using UNICEF’s early detection-early stimulation kit for children with psychomotor delay and providing malnutrition management.
• Number of children assessed for psychomotor milestones.
• Number of children identified with a delay provided with UNICEF’s early stimulation kit.

**Users and Families**

• Number of families counselled on service availability and referral options as provided in a shared directory of services.
• Number of families trained on basic detection of psychomotor delay.
H. Adolescent health and development

Objective

Improve access to healthy lifestyle to reduce mortality, with a particular focus on mental health, chronic diseases and road safety issues.

Adolescent health is key in the life-course approach as, even if young people between the ages of 10 and 19 years are often viewed as a healthy group, many die prematurely due to accidents, suicide, violence, pregnancy-related complications and other illnesses that are either preventable or treatable. Many others suffer chronic ill health and disability. Furthermore, numerous serious diseases in adulthood date back to adolescence. For example, tobacco, sexually transmitted infections (including HIV), poor dietary and exercise habits can result in illness or premature death in later life. In addition, the principal Reproductive, Maternal, Newborn and Child Health (RMNCH) donors, more interested in financing interventions for 0-5 children, did not until recently take account of this age group. Thanks to the SDGs, the situation is gradually changing and more initiatives targeting 10-19 young people are becoming available.

Examples of activities

Authorities

- Draw up national policies with a particular focus on continuum of care for adolescents, including access to psychosocial support and related services for adolescent mental health and well-being, prevention of non-communicable diseases and road accidents.
- Produce protocols and guidelines on management of these issues.
- Providing legal framework to support referral and counter-referral mechanisms for adolescent health.

Service Providers

- Promote healthy behaviours (e.g. nutrition, physical activity, tobacco, alcohol and drug abstinence).
- Prevention, detection and management of adolescent mental health issues.
- Prevention, detection and management of non-communicable diseases in adolescents.

73 World Health Organization. Adolescent health
- Assessment and management of adolescents presenting with unintentional injuries, including alcohol-related.
- Detection and management of hazardous and harmful substance use.

**Users and Families**

- Provide parents with skill training on managing behavioural disorders in adolescents.
- Provide parents with skill training on preventing obesity in adolescents.
- Provide parents with training on prevention of hazardous and harmful substance use in adolescents.
- Raise awareness to social behavioural change interventions for healthy behaviours.

**Indicators**

**Authorities**

- Number of national policies with a particular focus on the continuum of care for adolescents, including access to psychosocial support and related services for adolescent mental health and well-being, prevention of non-communicable diseases and road accidents.
- Availability and implementation of protocols and guidelines on management of these issues.
- Availability of legal framework to support referral, counter-referral and follow-up mechanisms for these issues.

**Service Providers**

- Number of training sessions provided to health staff on prevention, detection and management of mental health issues in adolescents.
- Number of training sessions provided to health staff on prevention, detection and management of non-communicable diseases in adolescents.
- Number of health centres providing promotion of healthy behaviours (e.g. nutrition, physical activity, tobacco, alcohol and drug abstinence).
- Number of centres providing assessment and management of adolescents presenting with unintentional injuries, including alcohol-related.
- Number of centres integrating detection and management of hazardous and harmful substance use into routine activities.
Users and Families

- Number of parents provided with skill training on managing behavioural disorders in adolescents.
- Number of parents provided with skill training on prevention of obesity in adolescents.
- Number of parents provided with training on prevention of hazardous and harmful substance use in adolescents.
- Number of awareness and social behavioural change interventions for healthy behaviour implemented.
Transform: Inclusive SRMNCH

Improving access to SRMNCH services for people with disabilities

HI’s interventions in Sexual, Reproductive, Maternal, Neonatal and child Health (SRMNCH) aim to ensure that vulnerable persons and persons with disabilities have full access to the range of services described in the Survive and Thrive sections.

Seeking to ensure that the strategy’s principle of “no one left behind” is implemented, HI adopts a holistic approach in targeting the barriers that hinder access to services of vulnerable persons to ensure that the needs of persons with disability are catered to. This includes increased physical and financial accessibility, stigma reduction, management of impairments through the provision of specialist support services and improvement of socioeconomic conditions.

The following paragraph provides a summary of the methodologies and activities implemented to meet this ambitious goal.

Objective

Improve access for vulnerable persons and persons with disability to inclusive, quality and affordable SRMNCH services.

A. Intervention model 1: Centred on disability

To improve access to SRMNCH services, the first step is to conduct a disability audit of key informants so as to gain a better understanding of the barriers preventing access and propose appropriate solutions to drive change.

According to the access to services scheme:

- **Authorities**: the principal aspects to address are the availability and implementation of legal frameworks to ensure equitable access to services in terms of application of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), including but not limited to organisation of services, physical accessibility and social protection schemes.

- **Service providers**: should implement a comprehensive analysis of the extent of knowledge of disability, which requires conducting an anthropological study on the perception of disability, a knowledge, attitude and practices (KAP) survey for better visibility of the explicative model of disability referred to by charitable, medical and social service providers and of the alignment of their specific competences and skills to the
needs and priorities of persons with disabilities, and lastly, focus groups to evaluate attitudes toward persons with disability. These should be concluded with an in-depth assessment of health centres, with a particular focus on data concerning persons with disability, enforcement and respect of legal frameworks on physical accessibility and availability of adapted information, education, communication materials and fixtures and fittings.

- Adopting the same logical process, the audit then looks at users and families based on an anthropological study, KAP survey and focus groups to gain a more comprehensive view of disability knowledge and perceived outcomes. When possible, an on-site visit should be conducted to verify the physical accessibility and adaptation of the building(s) to the needs of the person with disability.

The second step is to create a disability focal point to ensure follow-up and sustainability of the actions determined during the audit and a joint action plan to bridge any identified gaps. During this phase, principal activities include an extensive training of trainers course to provide the basis for a better understanding of the disability creation process, legal approach and compliance with the UNCRPD as well as what is required to increase physical accessibility and adapt services to the specific needs of women with disability.74

A session of this training course can be devoted to how to improve communication with persons with sensorial impairment, starting with, for example, a sign language course to reach out to persons with hearing impairment, how to produce inclusive IEC materials in braille/audio for persons with visual impairments or that are predominantly graphical for persons with low literacy levels or cognitive impairment.

The third step concerns awareness-raising activities to be implemented in cooperation with local media so as to afford visibility to the approach and foster momentum in inclusive SRMNCH services as well as advocacy and lobbying of key stakeholders by HI staff to monitor and coach them during the process.

The fourth and final step involves setting up a project steering committee to provide a forum where DPO, NGO, service provider and government agency representatives can review and monitor implementation of the joint action plan.

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**Fig 13.** Summary of proposed interventions to ensure inclusive SRMNCH services

### Examples of activities

**Authorities**

- Assessment of status of implementation of the UNCRPD, including evaluation of barriers to implementation and proposed solutions.
- Development, funding allocation, implementation and monitoring system of national policies focused on increased inclusiveness of SRMNCH services, including improvement of physical accessibility, production of targeted, inclusive IEC materials, etc.

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Service Providers

- Conduct a disability accessibility audit to assess the degree of inclusiveness or lack thereof of SRMNCH services, including at least:
  - An anthropological study to understand the perception of disability;
  - A KAP survey to evaluate the knowledge, attitudes and practices of service providers with a view to creating more inclusive SRMNCH services;
  - Focus groups to verify attitudes toward disability;
  - Visit health facility to determine its physical accessibility and availability of adapted and inclusive IEC and SRMNCH materials and tools.
- Train trainers on the essential theoretical basis and practical skills required to facilitate more inclusive SRMNCH services, including the UNCRPD, disability creation process/ICF model, stigma reduction, basic health care for persons with disability and how to set up health services so as to make them more inclusive.
- Create a disability focal point to monitor implementation of the audit’s recommendations.
- Set up a steering committee comprised of DPO, NGO, service provider and government representatives to ensure dialogue and implementation of the recommendations.

Users and Families

- Conduct a disability accessibility audit of households to assess their degree of inclusiveness or lack thereof, including at least:
  - An anthropological study to understand the perception of disability;
  - A KAP survey to evaluate the knowledge, attitudes and practices of users and families regarding disability;
  - Focus groups to verify attitudes toward disability.
- Train parents to increase their skills in an inclusive environment at the household level, including training on basic life skills for day-to-day management of impairments, presentation of the causes of impairments and evolutions, outcomes and availability of specialist services.

Indicators

Authorities

- Number of assessments conducted on status of implementation of the UNCRPD.
- Availability and implementation of national policies with a particular focus on increased inclusiveness of SRMNCH services, including sufficient allocation of funding.
Service Providers

- Number of disability accessibility audits conducted.
- Number of training of trainers sessions provided on disability and inclusive SRMNCH.
- Number of disability focal points created.
- Number of functioning inclusive health steering committees.

Users and Families

- Number of disability accessibility audits conducted.
- Number of parents trained on inclusive environment at the household level.
- Number of parents aware of available specialist services.
- Number of women and children with disability who have access to mainstream MNCH services.

B. Intervention model 2: Revised inclusive three delays model

The main causes of MNCH mortality and morbidity were generally considered to be limited to just a few issues, largely centred on infections, preterm births, pregnancy and childbirth-related complications. However, tackling these causes of morbidity and mortality effectively requires a broad-based approach that includes vulnerable women and women with disability. In order to address some of the core challenges involved in reducing inequality in access to services and ensure inclusiveness, an extended version of the standard three delays model is worthy of consideration. This model has two pillars for primary and tertiary prevention activities, which focus on:

- **Pillar 1**: Prevention of vertically transmitted infections, intrapartum-related adverse events and broad primary prevention strategies;
- **Pillar 2-3**: Health care seeking behaviours in general and delays therein;
- **Pillar 4**: Quality of care at point of service delivery;
- **Pillar 5**: Treatment of medical conditions and rehabilitation.

Pillar 1 - Prevention

Prevention of vertically transmitted infections, intrapartum-related adverse events and broad primary prevention strategies, including family planning and economic and education empowerment.

While proposed interventions are relatively straightforward when applied to the general population, their implementation can be challenging with women who are marginalised,
especially regarding primary prevention strategies, access to family planning and economic and educational empowerment, as the lack of an enabling environment amplifies the effects of impairments on exclusion.

**Examples of activities**

**Authorities**

- Bridge the gap in application of research results and institute specific policies to tackle preventable mortality and morbidity linked to vertically transmitted infections and intrapartum-related adverse events, with a particular focus on assuring timely access to services for women with disability.
- Progressively shift the focus from the previous Three Delays Model to a broader one that is inclusive of primary prevention strategies, such as integration of nutrition, vaccination, anaemia prevention activities, etc.

**Service Providers**

- Organise outreach events to increase awareness to primary prevention interventions, with a particular focus on adapted messages for women with disability.
- Provide women with disability with adequate internal referrals to family planning services and set up external referrals to social services for women who are marginalised to improve their access to education and economic empowerment.
- Increase measures, such as inclusive information, antibiotic prophylaxis and timely management of at-risk pregnancy, to reduce intrapartum complications.

**Users and Families**

- Organise awareness sessions for pregnant women with disability and family members on availability of services, relevance of primary prevention and timely access to care in order to create an enabling environment.
- Organise inclusive IEC sessions on importance of access to family planning.
- Provide women with disability opportunities to be economically and educationally empowered so as to increase their autonomy and decisional power.

**Indicators**

**Authorities**

- Availability of inclusive policies on addressing preventable mortality and morbidity linked to vertically transmitted infections and intrapartum-related adverse events.
- Number of policies integrating inclusive preventive health care for pregnant women.
Service Providers

- Number of mobile clinics providing outreach services to increase awareness to primary prevention interventions, with a particular focus on adapted messages for women with disability.
- Number of women with disability referred to family planning services receiving adequate care.
- Number of women who are marginalised with access to education and economic empowerment.
- Number of health centres offering comprehensive and inclusive care to reduce intrapartum complications.

Users and Families

- Number of awareness sessions provided to pregnant women with disability and family members on service availability and relevance of primary prevention and timely access to care.
- Number of inclusive IEC sessions provided on importance of access to family planning.
- Number of women with disability benefiting from economic and educational empowerment.

Pillar 2 – Delay to seek care

Delay in decision to seek care:

This pillar is of utmost importance to vulnerable women and women with disability, as it mainly relates to:

- Low socio-economic educational status of women, either perceived or real.
- Inadequate knowledge of complications and risk factors in pregnancy and when to seek medical care.
- Previous bad experience with health care.
- Acceptance of maternal death.
- Financial implications.

These issues obviously have a greater impact on the vulnerable and marginalised, particularly the lack of information on warning signs and timely health seeking behaviours as these are additional risk factors for women with disability. The implementation of interventions, such as promoting focused antenatal care, teaching pregnant women about warning signs to look out for during pregnancy and the puerperium period, signs of ill health in newborns and encouraging delivery in a health facility, is hampered by the lack of access of women with disabilities to basic health information and services.
Examples of activities

Authorities

- Draw up policies to actively promote enforcement, funding and monitoring of inclusive antenatal care with a particular focus on birth preparedness, warning signs during pregnancy and delivery in a health facility.
- Draw up policies to actively promote enforcement, funding and monitoring of the creation of geographically evenly distributed, well-equipped and adequately staffed health facilities, including waiting homes close to health facilities for pregnant women.
- Institute cash incentive system for pregnant women and health facilities to increase accessibility.

Service Providers

- Provide inclusive outreach activities to train women with disability or who are marginalised on antenatal care, warning signs during pregnancy and the puerperium period, and signs of ill health in newborns to enhance health-seeking behaviours.
- Implement community-based health literacy initiatives for women with disability.
- Set up a cash incentive system to promote use of waiting homes.
- Strengthen linkages between Traditional Birth Attendants (TBAs) and health facilities. Given the vital role of TBAs during delivery, finding ways to incorporate TBAs while promoting skilled attendance can facilitate referral to health centres for women and their families.
- Focus education messages on key warning signs. While it is important for women and their families to be made aware of all potential problems, particular attention should be paid to key warning signs.
- Expand key message base. Emphasise during training sessions that complications can incur during any pregnancy and previous experience is no gauge of subsequent experiences.
- Enhance efforts to promote birth preparedness and complication readiness. Emphasise preparation and planning ahead to reduce delays in taking decisions during an emergency.

Users and Families

- Incentive creation and/or strengthening of DPOs to provide peer-to-peer support to pregnant women with disability.
- Identify community “champions” to advocate for birth preparedness (BP). Call on recognised community leaders to promote BP/CR encourages uptake.
• Focus on culturally appropriate oral and visual educational messages, as written materials are of limited use to those without reading skills. Use other communication methods to accommodate persons with limited literacy skills or sensorial impairments.
• Help people to process the information they are given. Along with providing health education, it is important to help men and women evaluate and apply the information most relevant to their particular situation.
• Use preferred information sources. Men and women have indicated they like to receive educational information from a range of sources. By using preferred and trusted channels, programmes reach out more effectively to their intended audience.
• Systematically include family members in awareness-raising activities on at-risk pregnancy and antepartum warning signs for women with disability during ANC consultations.

**Indicators**

**Authorities**
- Availability of legal framework for the promotion of inclusive antenatal care and health facility delivery for all.
- Availability of legal framework for setting up of proximity health service organisations, including waiting homes near health facilities for pregnant mothers.
- Availability of cash incentive system to increase accessibility.

**Service Providers**
- Number of inclusive outreach activities implemented.
- Number of community-based interventions implemented on health literacy for women with disability.
- Occupancy rate of waiting home.
- Number of TBAs referring regularly to health centres.
- Number of adapted and inclusive campaigns organised by health centres.

**Users and Families**
- Number of active DPOs providing peer-to-peer support to pregnant women with disability.
- Number of training sessions organised for family members on awareness-raising activities during ANC consultations.
Pillar 3 – Delay to access care

Delay in accessing care due to:

- Availability and cost of transportation;
- Distance to health centres and hospitals;
- Poor roads and infrastructure;
- Geography, e.g. mountainous terrain, rivers.

Linked to geographic and financial accessibility of services, delays in accessing care are exacerbated significantly by disability and vulnerability. Proposed activities can be implemented as much for the population in general as for the marginalised and vulnerable.

Examples of activities

Authorities

- Provide the legal framework to organise alternative MoH-managed transportation.

Service Providers

- Consider organising alternative community-based MoH-managed transportation. Setting up MoH-managed transport (such as motorcycle ambulances) in communities can serve as an alternative to ambulance vehicles and reduce transportation barriers.
- Systematically address barriers to accessing care and regularly implement plans to facilitate transport from community to health facility.

Users and Families

- Involve more families and community members in the transport planning process. Involving others in decision-making acknowledges traditional practices while emphasising the importance of forward planning.
- To reduce transport delays, rather than an ad hoc approach, encourage families to save money prior to childbirth.
- Support community-based funding for transportation and other costs. Various types of funding can be established to provide support with transportation in cases of emergency and care of women and their families during their stay in a facility.
- Support other community-based initiatives. In-kind support systems, such as a roster of volunteers to care for children, livestock and crops, can be instituted during a mother’s absence. This support can be reciprocated on a needs basis with similar voluntary actions.
Indicators

Authorities

- Availability of legal framework on organising alternative MoH-managed transportation initiatives.

Service Providers

- Number of alternative community-based MoH-managed transportation initiatives.
- Number of plans for facilitating transportation from community to facility.

Users and Families

- Number of family and community members involved in the transportation planning process.
- Number of families putting money aside to ensure timely transportation.
- Number of community-based funds set up to support transportation and other costs.
- Availability of in-kind support systems at community level.

Pillar 4 – Delay to receive care

Delay in receiving adequate health care due to:

- Inadequately trained and poorly motivated medical staff;
- Inadequate facilities and lack of medical supplies;
- Inadequate referral systems.

This delay, i.e. the interaction between health care provider and client, is the most complex in the health care system. To ensure quality care, several requirements must be complied with during each and every interaction and health care workers must:

- Be accessible;
- Have the necessary knowledge and skills to diagnose and treat the presenting illness;
- Have access to appropriate resources to address the problem;
- Adopt appropriate behaviours to provide care in an empathetic and culturally appropriate manner.

Clearly, without specific training for health staff on disability inclusion in MNCH, these factors are barriers to access to care.

However, quality of care cannot be addressed comprehensively by focusing merely on individual health care workers and their interaction with clients, but must also consider the issues underlying these interactions — improving quality of care requires strengthening broad-based health systems.
Examples of activities

Authorities

- Establish a health structure organisation chart, with clearly defined equipment specifications.
- Ensure facilities meet basic standards. Regularly evaluating essential elements and integrating plans for improvement into budget and planning processes can help ensure availability of quality standards and equipment.
- Enhance procurement system. Regular evaluation of the logistics process helps ensure drugs are available as and when needed.

Service Providers

- Regularly assess and support quality and content of ANC consultations. Simple planning checklists can help ensure that key Birth Preparedness (BP) topics are covered and planned for during ANC consultations. The quality of ANC content must be regularly monitored and supported with tools, such as reviews of records and client exit interviews.
- Set up links between health facilities and community-based workers, e.g. TBAs, to identify all pregnancies in the community, with a particular focus on women with reduced mobility, sensorial impairment or cognitive delays. Keeping a record of pregnant women at local level facilitates targeted educational efforts and enables health facilities to identify high-risk pregnancies.
- Develop and/or integrate BP educational and planning materials supported by culturally appropriate education materials and tools during community outreach initiatives, ANC consultations and other facility-based initiatives.
- Incorporate sensitivity training on appropriate conduct to adopt during consultations calling for an empathetic approach. Whereas sensitivity and interpersonal skills are just as important as knowing how to treat patients, these are not necessarily innate and are not always included in health staff training curricula.

Users and Families

- Train women with disability and family members on basic principles of quality care, including courteous MNCH consultations.
- Awareness raising activities on minimum requirements for sensitive consultations.


**Indicators**

**Authorities**
- Health structure organisation chart drawn up, with clearly defined equipment specifications.
- Facilities meet basic standards. Regular evaluations of the essential elements and plans for improvement integrated into budget and planning processes to ensure quality standards and equipment are available.
- Procurement system enhanced. Logistics system regularly evaluated to ensure drugs are available as and when needed.

**Service Providers**
- Availability of technical support, regular supervision of ANC consultations to evaluate quality and content.
- Availability of linkage mechanism between health facilities and community-based workers, e.g. TBAs, to identify all pregnancies.
- Number of BP educational or planning materials supported by culturally appropriate materials and tools.
- Number of sensitivity training sessions provided on appropriate conduct to adopt during sensitive consultations.

**Users and Families**
- Number of training sessions provided to women with disability and family members on basic principles of quality care, including courteous MNCH consultations.
- Number of awareness raising activities provided on minimum requirements for sensitive consultations.

**Pillar 5 - Tertiary prevention**

**Tertiary prevention**
Improved access and initial care may reduce early neonatal mortality, but, if no follow-up and quality rehabilitation services are available, a substantial proportion of infants may be more likely to die at a later stage. It is possible that rudimentary post-discharge follow-up and a lack of functional rehabilitation systems may contribute to some post-discharge morbidity, which significantly hampers efforts to reduce maternal and neonatal mortality. An also important aspect of tertiary prevention is the lack of detection and care of impairments, MNCH-related or not, during visits to health facilities for associated medical issues. Persons with disability often
have access to health services for a medical condition, e.g. fever or pneumonia, but, reflecting the silo-organised system, pre-existing or concomitant impairments are simply overlooked due to a lack of awareness of therapeutic options, specialist management services, health staff detection skills or diagnostic tools.

The consequences are very poor outcomes for impairments that could have been manageable if they had been addressed at an early stage. This can have a profound impact on a wide range of non-health services, such as access to education and economic empowerment.

Examples of activities

Authorities

• Draw up national policies focused on the continuum of care between health and rehabilitation, including referral and counter-referral systems and ensure availability of adequate curricula and consistent human resource allocation.
• Provide legal framework for follow-up of complicated births/near-miss women.
• Draw up protocols and guidelines on management of disabling complications of common infectious diseases, such as meningitis, cerebral malaria, etc.

Service Providers

• Train health staff on follow-up of the most common MNCH-related medical conditions linked to impairments.
• Train health staff on availability of therapeutic options linked to rehabilitation.
• Assure timely follow-up of potentially disabling MNCH-related complications.
• Integrate detection and care of concomitant or pre-existing impairments into routine medical checks for common conditions, such as fever.

Users and Families

• Implement awareness sessions on most common warning signs of potential impairment after a communicable disease or near-miss complications.

Indicators

Authorities

• Number of national policies focused on the continuum of care between health and rehabilitation, including referral and counter-referral systems and availability of adequate curricula and consistent human resource allocation.
• Legal framework provided for follow-up of complicated births/near-miss women.
Number of protocols and guidelines on management of disabling complications of common infectious diseases, such as meningitis, cerebral malaria, etc.

Service Providers

- Number of training sessions provided to health staff on follow-up of the most common MNCH-related medical conditions linked to impairments.
- Number of health staff who have made at least one appropriate referral to rehabilitation services.
- Number of mothers and children monitored for potentially disabling MNCH-related complications.
- Number of centres offering integrated detection of concomitant or pre-existing impairments and care during routine medical checks for common conditions, such as fever.

Users and Families

- Implement awareness sessions on most common warning signs of potential impairment after a communicable disease or near-miss complications.
### Table 3. Extended Three Delays Model

<table>
<thead>
<tr>
<th>Foetal-Maternal Strategies</th>
<th>Three Delays Model</th>
<th>Post-Care, follow-Up and rehabilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary prevention</strong></td>
<td><strong>Secondary prevention</strong></td>
<td><strong>Tertiary prevention</strong></td>
</tr>
<tr>
<td><strong>Pillar 1</strong></td>
<td><strong>Pillar 2</strong></td>
<td><strong>Pillar 3</strong></td>
</tr>
<tr>
<td>Health promotion for prediction and prevention of intrapartum-related neonatal morbidity and mortality</td>
<td>Address delays in decision to seek care</td>
<td>Use financial incentives to address delays in accessing point of care once decision is made e.g. refund of transportation costs</td>
</tr>
<tr>
<td>Prevention of early neonatal sepsis and other diseases, including HIV/AIDS</td>
<td>Raise awareness to danger signs during pregnancy and in newborns</td>
<td>Facility output-based funding approaches; Referral systems to help minimise delays which contribute to maternal (obstetric fistula) and neonatal morbidity (hypoxic ischemic encephalopathy)</td>
</tr>
<tr>
<td>Effective prevention of mother-to-child transmission of congenital infections, including HIV</td>
<td>Engage communities by using behavioural change and communication strategies</td>
<td>Health services seek to promote behaviour changes</td>
</tr>
<tr>
<td>Prevention of malaria with long-lasting insecticide-treated bed nets</td>
<td></td>
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</tr>
<tr>
<td>Family planning, health literacy and life skill empowerment for women aged 15-49 years, with a particular focus on adolescent girls, nutrition, anaemia and healthy lifestyle for pregnant women</td>
<td></td>
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</tr>
</tbody>
</table>

Using the original 1993 Three Delays method of intervention as a basis, HI provides in this table an extended version with two additional pillars — one for health promotion and the other for tertiary prevention — to improve continuum of care from prevention through to detection and follow-up.
Conclusion

As we said in the foreword, the SDGs focus on a broader scope of activities and are thus slowly but surely shifting from mortality to address in a more comprehensive manner the well-being and achievement of maximum potential for children and adolescents.

With a robust component in sexual and reproductive health, this represents a significant frame of reference for Handicap International’s work in MNCH as it has paved the way for integrating MNCH-related impairments into existing health services.

The framework of the SDGs provides a clear vision of the importance of multi-sectorial interventions, which encompass the limit of vertically-organised health systems centred on curative aspects, to offer a more integrated and preventive package of interventions that include chronic conditions, impairments and health for all.

After many years of implementing MNCH projects, Handicap International is well-positioned and firmly established as a major player in this process.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC</td>
<td>Antenatal Care</td>
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<tr>
<td>BP</td>
<td>Birth preparedness</td>
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<tr>
<td>CHW</td>
<td>Community health worker</td>
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<tr>
<td>CR</td>
<td>Complication Readiness</td>
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<tr>
<td>DALYS</td>
<td>Disability Adjusted Life Years</td>
</tr>
<tr>
<td>DPO</td>
<td>Disabled People’s Organisation</td>
</tr>
<tr>
<td>EmONC</td>
<td>Emergency Obstetric and Newborn Care (Basic and Complete)</td>
</tr>
<tr>
<td>EPMM</td>
<td>Ending Preventable Maternal Mortality</td>
</tr>
<tr>
<td>GDM</td>
<td>Gestational Diabetes Mellitus</td>
</tr>
<tr>
<td>HCICS</td>
<td>Health Centre Intrapartum-Care Strategy</td>
</tr>
<tr>
<td>HI</td>
<td>Handicap International</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<tr>
<td>ICD</td>
<td>International Classification of Diseases</td>
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<tr>
<td>ICF</td>
<td>International Classification of Functioning</td>
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<tr>
<td>IEC</td>
<td>Information, Education and Communication</td>
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<tr>
<td>KAP</td>
<td>Knowledge, Attitude and Practices</td>
</tr>
<tr>
<td>MDGs</td>
<td>Millennium Development Goals</td>
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<tr>
<td>MNCH</td>
<td>Mother, Newborn and Child Health</td>
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<tr>
<td>MoH</td>
<td>Ministry of Health</td>
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<tr>
<td>NCD</td>
<td>Non-Communicable Diseases</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
</tr>
<tr>
<td>PPD</td>
<td>Postpartum Depression</td>
</tr>
<tr>
<td>RDS</td>
<td>Respiratory Distress Syndrome</td>
</tr>
<tr>
<td>RMNCAH</td>
<td>Reproductive, Maternal, Newborn, Children and Adolescent health</td>
</tr>
<tr>
<td>RMNCH</td>
<td>Reproductive, Maternal, Newborn and Child Health</td>
</tr>
<tr>
<td>SDGs</td>
<td>Sustainable Development Goals</td>
</tr>
<tr>
<td>SRH</td>
<td>Sexual &amp; Reproductive Health</td>
</tr>
<tr>
<td>SRMNCH</td>
<td>Sexual, Reproductive, Maternal, Neonatal and Child Health</td>
</tr>
<tr>
<td>STI</td>
<td>Sexually Transmitted Infection</td>
</tr>
<tr>
<td>TB</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>TBA</td>
<td>Traditional Birth Attendant</td>
</tr>
<tr>
<td>UNCRPD</td>
<td>United Nations Convention on the Rights of Persons with Disabilities</td>
</tr>
<tr>
<td>YLD</td>
<td>Years Lived with Disability</td>
</tr>
<tr>
<td>YLL</td>
<td>Years of Life Lost</td>
</tr>
</tbody>
</table>
This policy paper describes the operational terms of Handicap International's mandate and values as applied to Mother, Neonatal and Child Health (MNCH).

Presenting the approaches and references underpinning Handicap International's actions, choices and commitments, its purpose is to ensure consistency across its practices while taking account of different contexts.

Intended as a document to guide programme staff, the paper defines the topic, describes the target populations and sets out the methods of intervention (activities and expected results) and the indicators used to monitor and evaluate.

It also aims to ensure that Handicap International programmes implement all projects in accordance with the presented methods of intervention.