

MAGNITUDE AND CAUSES OF CHILD MORTALITY

Topic 1

Magnitude of child mortality

- Child mortality can be measured using indicators such as infant mortality rates (IMR), under 5 mortality rate (U5MR), perinatal mortality rates, neonatal mortality rates etc. These also indicate the level of health in a country.
- **Infant Mortality Rate** is the number of deaths of infants under one year old per 1000 live births.
- **Global trends in IMR:** Global IMR has decreased from 63 deaths per 1000 live births in 1990 to 32 deaths per 1000 live births in 2015. However, in 2015 alone, 4.5million children died within the first year of life and this accounted for 75% of under 5 deaths.

- **Under 5 Mortality Rate** is the probability of dying between birth and five years expressed per 1000 live births
- **Global trends in U5MR:** As you are probably aware, the 4th Millennium Developmental Goal (MDG) was a two-thirds reduction in U5MR between 1990 and 2015. This target was not achieved but there has been a dramatic reduction in U5MR from 12.7 million in 1990 to 5.9million in 2015.

□ **Neonatal Mortality Rate** is the number of neonates dying before reaching 28 days of life per 1000 live births in a given year.

□ In 2015, around 45% of under five deaths occurred during the first year of life.

□ While under five mortality is declining, the proportion of under five deaths occurring in the neonatal period is increasing.

□ It is important to design and implement interventions that are aimed at preventing neonatal deaths as these are often different from interventions aimed at preventing other under five deaths.

- In sub-Saharan Africa which has had the highest child mortality rates, there has been a significant decrease in child mortality.
- However, the fact remains that out of the 195 countries that provided estimates of U5MR only 62 met the fourth MDG and of these only 24 were LMICs.
- In addition, the majority of these child deaths are due to infectious diseases or neonatal complications which could have either been prevented or treated by cost-effective, evidence-based interventions.

Resource 1:

- Please read *the 2015 Report on Levels and Trends of Child Mortality* prepared by the UN Inter-agency group for Child Mortality Estimation available [here](#).

The next few slides contain some major summary points from the report:

The remarkable improvements in child survival since 2000 have saved the lives of 48 million children under age five – children who survived as the under-five mortality rate has fallen from 2000 onward. These children would have died had mortality remained at the same level as in 2000 in each country. Accelerated progress since 2000 has saved the lives of about 18 million children globally, accounting for nearly 40 percent of the 48 million children saved. In other words, 18 million children would not have survived to see their fifth birthday had the under-five mortality rate declined at the same pace it did in the 1990s.

Resource 1 (continued):

Yet, despite substantial gains in improving child survival, progress has been insufficient to achieve MDG 4 worldwide. The 53 percent decline in the under-five mortality rate globally is far from the two-thirds reduction required to meet the MDG 4 target. If current trends continue, the world as a whole would reach the MDG 4 target in 2026 – more than 10 years behind schedule. The toll of under-five deaths over the past two decades is staggering: between 1990 and 2015, 236 (234, 240) million children worldwide died before their fifth birthday – more than today's population of Brazil, the world's fifth most populous country. Had the necessary steady progress been made since 2000 to achieve MDG 4, 14 million more children would have survived to age five since 2000.

Resource 1 (continued):

Child survival remains an urgent concern. It is unacceptable that about 16,000 children still die every single day – equivalent to 11 deaths occurring every minute. Without any further acceleration to the current pace of reduction in under-five mortality, a projected 69 million children – more than the current population of Thailand – will die before they reach their fifth birthday between now and 2030, the SDG target year, with 3.6 million of these lives lost in the year 2030 alone. These numbers are still unacceptably high. A concerted effort is needed to further accelerate the pace of progress, and countries and the international community must invest further to end preventable child deaths.

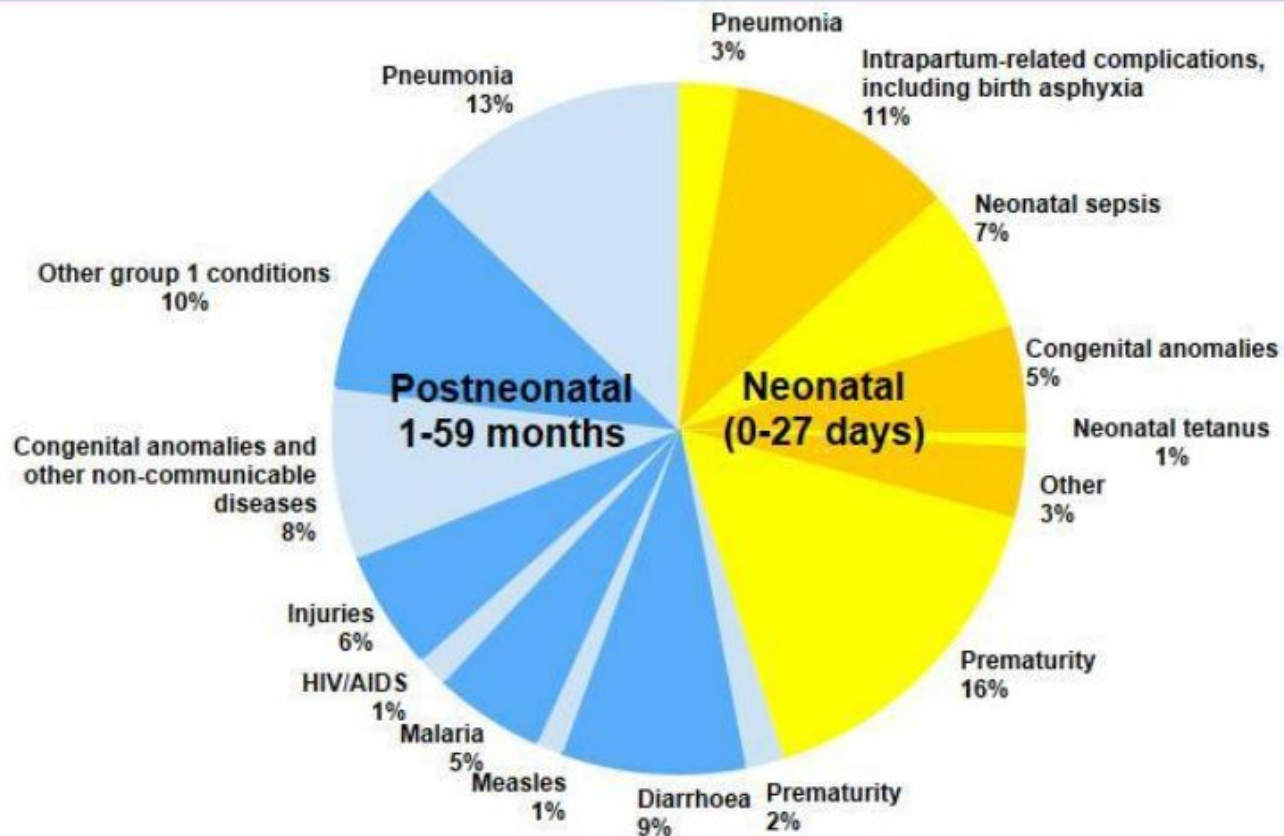
Resource 2: Causes of child mortality

The leading causes of death among children under five in 2015 were preterm birth complications, pneumonia, intrapartum-related complications, diarrhoea, and congenital abnormalities. Neonatal deaths accounted for 45% of under-five deaths in 2015. You will find the graphic on the next slide and can explore the leading causes in your own country via this website: [Causes of child mortality, WHO](#)

There are other causes of death that, despite being less frequent, illustrate the intricate factors that influence children's health. Read [this paper](#) to understand how parents' mental illnesses can impact child mortality.

Resource 2: Causes of child mortality

Causes of deaths among children under 5 years, 2015



Resource 3: Sustainable Developmental Goals (SDGs)

- In 2015, 17 SDGs were agreed upon by all UN member states and SDG3 focuses on health - *Ensure healthy lives and promote wellbeing for all at all ages*
- There are several health targets within SDG3 including one pertaining to child mortality - *By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1000 live births and under-5 mortality to at least as low as 25 per 1000 live births.*

Please explore the UNICEF resource (click on the link below)
[Children and the Sustainable Development Goals](#)

Resource 4: Accuracy of data

This paper

[Practical issues in the measurement of child survival in health systems trials](#)

reviews the problems of data accuracy and suggests some methods for improvement. They state:

Assessing child mortality is essential to understanding healthcare systems performance.

Many low-income and middle-income countries lack robust vital registration systems and censuses, which hinders the reporting of accurate mortality rates.

Child mortality estimates among smaller catchment area populations lack the reliability and precision to inform local or subnational public health programming.

Implementers in resource-limited settings have a limited toolbox for mortality assessment in real time and at local levels.

Points to consider as you read this paper:

- The paper discusses some of the challenges in collecting accurate data on births, child and neonatal mortality. Does your country face any of these challenges in data collection and if so, what efforts can/ are being made to address this situation?

Resource 5:

- Malawi's efforts to counter child mortality is viewed as a success story. This case study [available [here](#)] explains some of the steps undertaken to improve child health in Malawi.

Points to consider as you read the case study:

- What are the interventions that Malawi used to improve child health? Are similar measures being undertaken in your country and have they been as successful as in Malawi?
- Note the difference in reduction in U5MR and NMR between 1990 and 2013. Why do you think there is such a big difference in the decline of these two rates over the same period?

Recommended Reading:

- Every Child's Birth Right: Inequities and trends in birth registration (available [here](#)) is a UNICEF report that discusses some of the barriers to birth registration and ways in which these can be overcome. Go to Page 36, where you will see that:
“Nearly 230 million children under age five do not officially exist. Of these, more than half (59 per cent) live in Asia and another 37 per cent live in sub-Saharan Africa. In that region, 44 per cent of children under five have been registered, with levels ranging from 3 per cent in Somalia to 95 per cent in South Africa. Birth registration stands at only 39 per cent in South Asia, the region with the largest overall number of births and children under five. India is home to nearly one in three unregistered children worldwide.”