

UNICEF: Child Mortality Estimates

Introduction

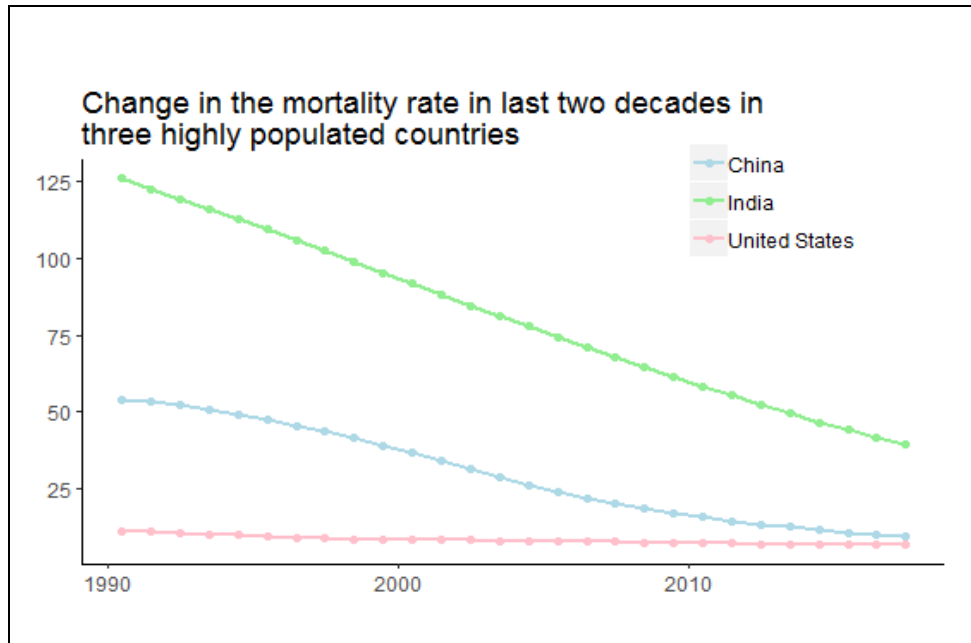
According to UNICEF (UNICEF, 2018), the countries have made exceptional progress in reducing the child mortality rate. In past two decades, the chances of survival of the children before reaching the age of 5 have significantly increased. As per the analysis done by UNICEF, it was recorded that in 1990 1 in 11 children died under the age of 5 as compared 1 in 26 died in the year 2017. Even though child mortality rate is reducing, an estimated 5.4 million children under the age of 5 died in the year 2017. The number of child deaths are alarming and calls for exigent and concentrated measures to save the life of millions of newborns.

This report consists of the analysis of the child mortality rate in the three most populated countries of the world; United States of America, China and India. The choice of selecting these countries was entirely focused on their population and economic status. These countries have the highest population in the world, however, among them only United States has a strong economy, whereas, the economies of India and China are still in transition and have a status of developing nations (UN, 2014). Thus, it would be interesting to know how these three big nations of the world have progressed in handling and reducing the situation of child mortality. Moreover, to justify the story and highlight more insights, graphs were built on R (ggplot) and interspersed in between the text.

Analysis

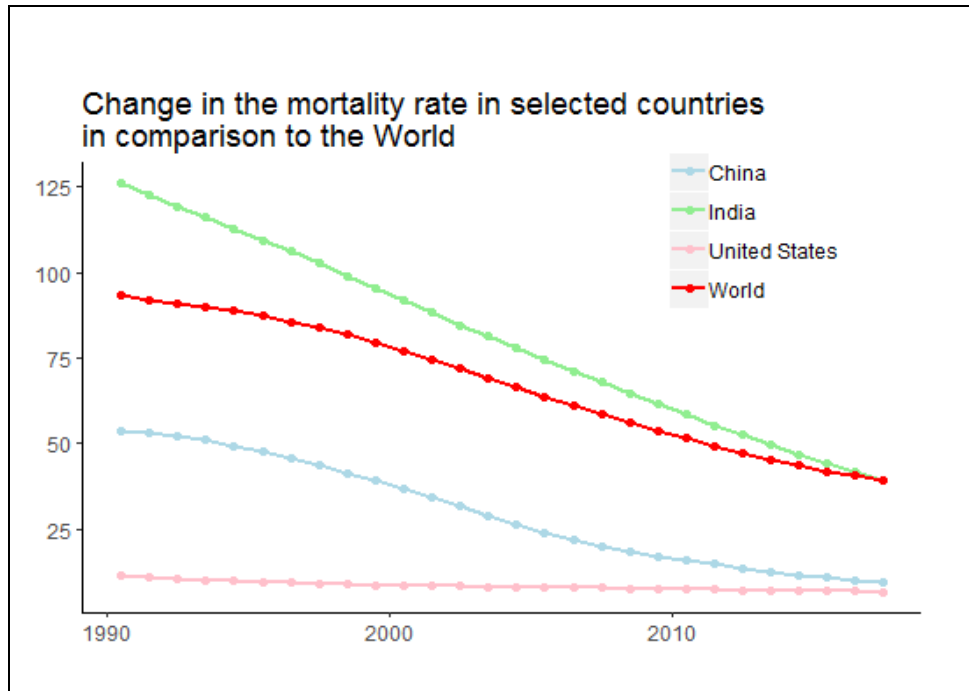
1. Analysis of Under-5 mortality rate of the selected countries in last two decades

The U5MR_mortality_rate_2018 dataset was analyzed to determine the change in the mortality rate over last two decades.

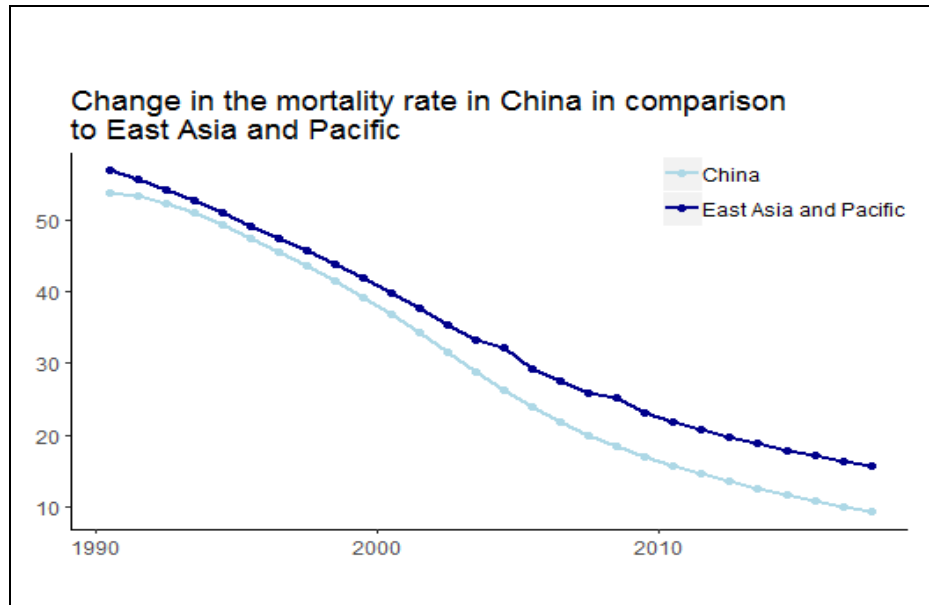


The above graph represents that India has the highest mortality rate (125 approx.) in 1990 among the selected countries and the United States has the lowest mortality rate (12 approx.). The mortality rate is defined in terms of number of deaths of children under the age of 5, per 1000 live births. The analysis also shows that the mortality rate of India has been constantly decreasing. Whereas, the United States even though had a lowest mortality rate in 1990 has a constant mortality rate throughout last two decades. It was also observed that the United States has the worst child mortality rate compared to other top 19 wealthiest countries (Howard, 2018). Considering the analysis of China, the country has child mortality rate higher than that of United States, progressively worked in reducing the rate and achieved a rate equivalent to United States.

On comparing these countries with the world's child mortality rate, the following analysis was obtained:



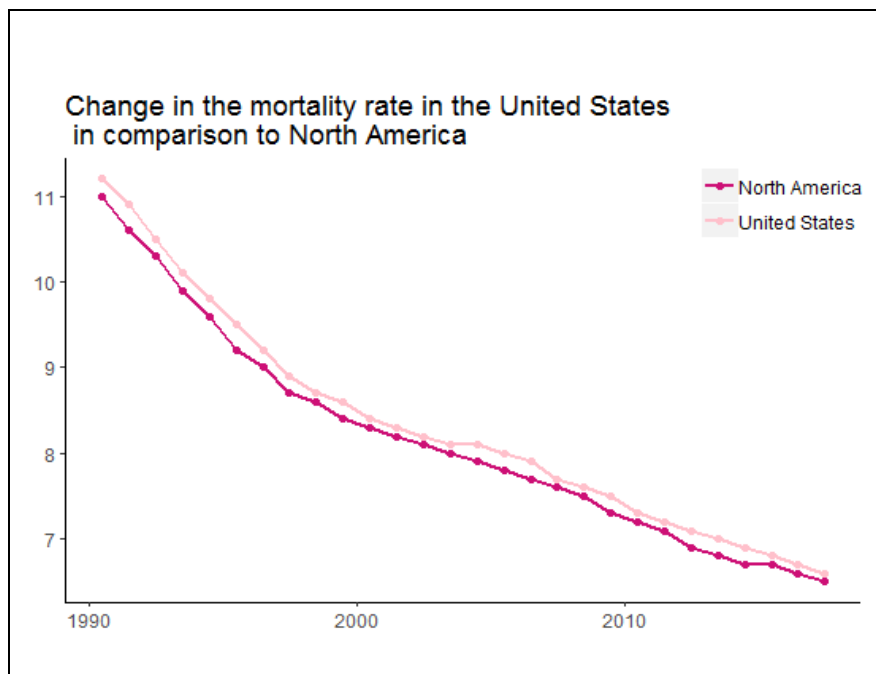
The above represents that both the United States and China have significantly lower child mortality rate as compared to the global mortality rate, whereas, by 2017 India achieved the rate equivalent to the global mortality rate. However, observing the world's mortality rate, it can be said that millions of newborns are still dying before reaching to the age of 5 and there is a dire need to take some essential measures to save the life of the newborns. The selected countries were also compared with their respective regions to understand how the countries are progressing in reducing the mortality rate in their regions.



The above graph highlights the comparison of child mortality rate between China and East Asia and Pacific region. China is one of the biggest economies in East Asia and has the highest population. In 1990, there is a very marginal difference in the mortality rate between China and East Asia and Pacific region. However, as the development progresses in China and notable improvements have been made in the healthcare facilities by the country to save the newborns, by 2017 there was a significant difference between the mortality rates.

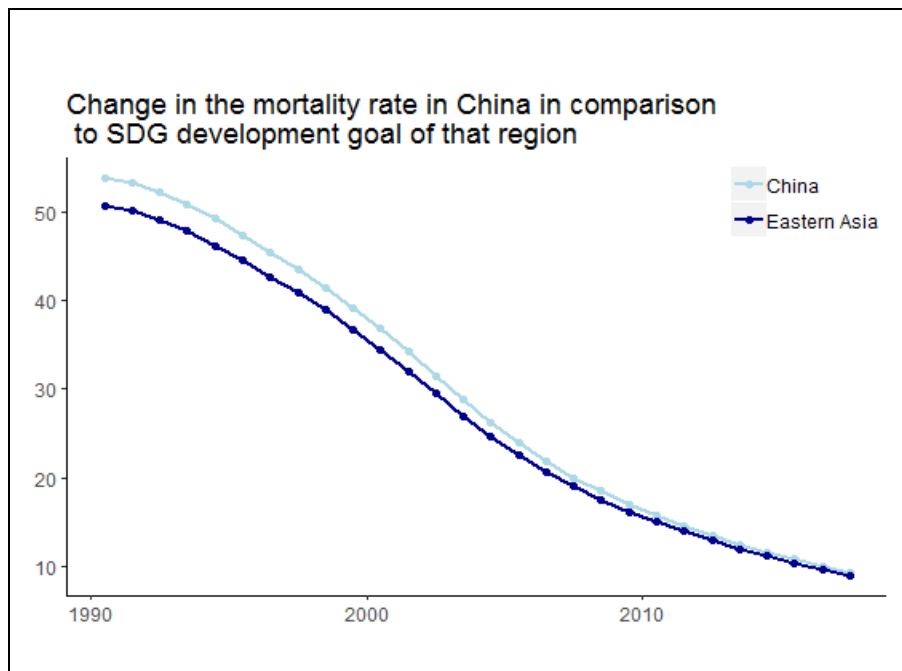


India is constantly working on saving the lives of millions of children by introducing various health schemes and it can be clearly observed from the above trend that the mortality rate in India is constantly decreasing and it is also comparatively lower than that of the South Asia region.

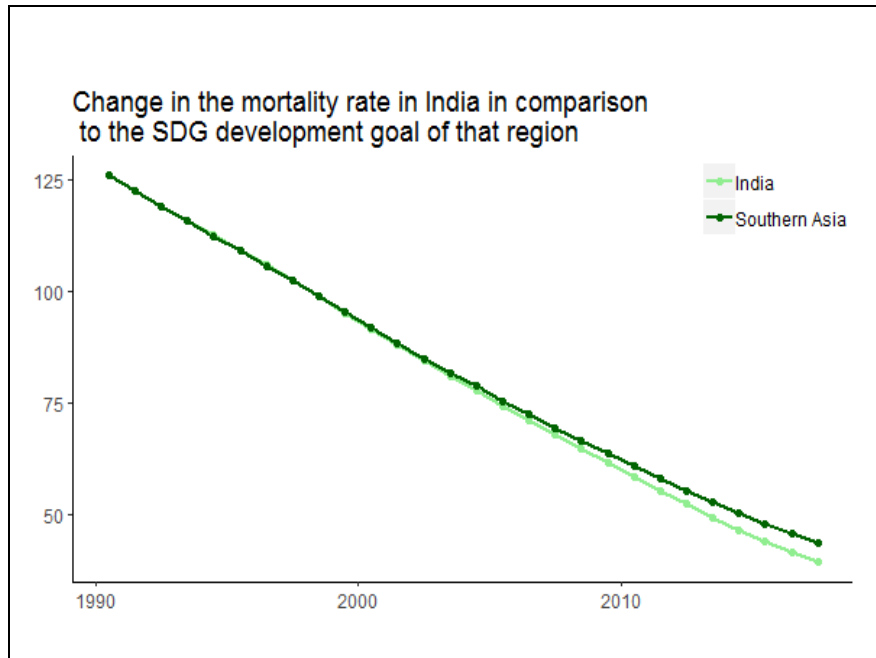


However, when the United States was compared with North America it was observed that the United States has mortality rate higher as compared to North America. However, the mortality rate has come down from 11 to 6.6 but rate at which the country is progressing is relatively lower as compared to the other developed and wealthy nations. Maybe, that's the reason the child mortality rate of United States ranks worst among 20 wealthiest countries.

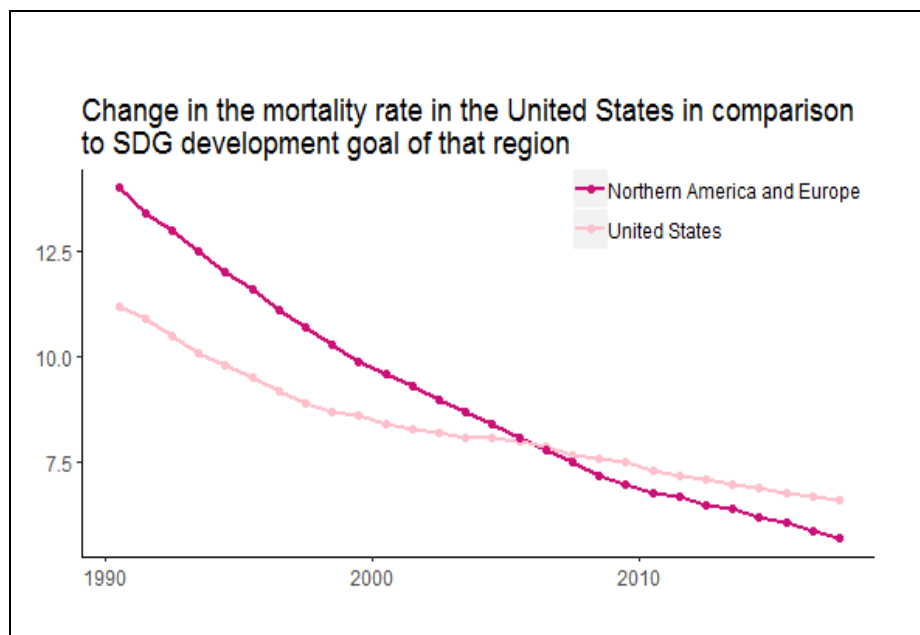
The mortality rate of each country was also compared with the under-5 mortality rate by Sustainable Development goals regions. Every region constantly working on 17 SDGs designed by UNICEF to transform the world. The analysis has been done using the dataset of SDG by region since the SDG of each country wasn't available.



The above graph clearly highlights that China has achieved the SDG goal of Eastern Asia region.



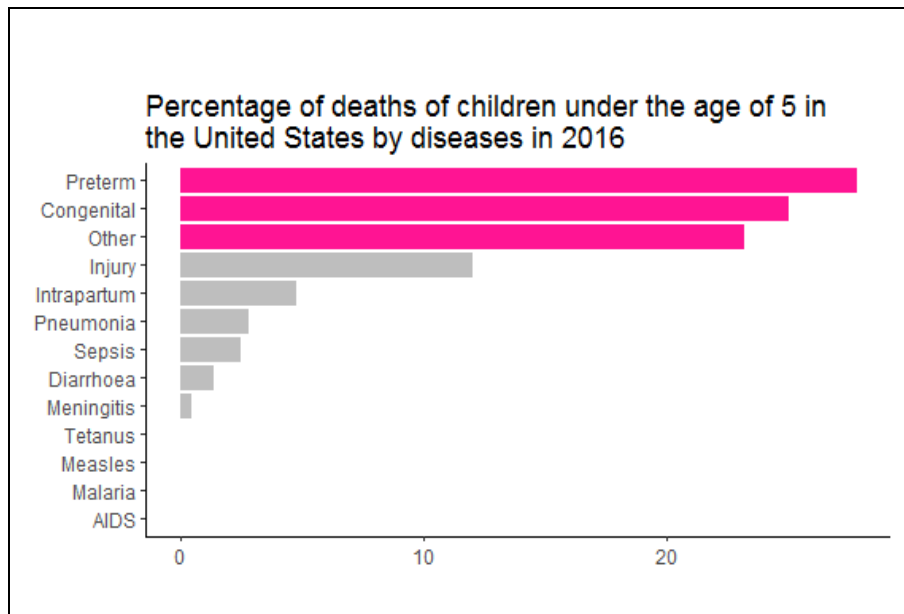
The trend of past two decades in the Southern Asia region shows that India has been achieving the SDG goal of that region. However, India has yet to achieve the SDG goal specific to the country. The reports states that India will achieve the SDG goal between 2018 and 2030.



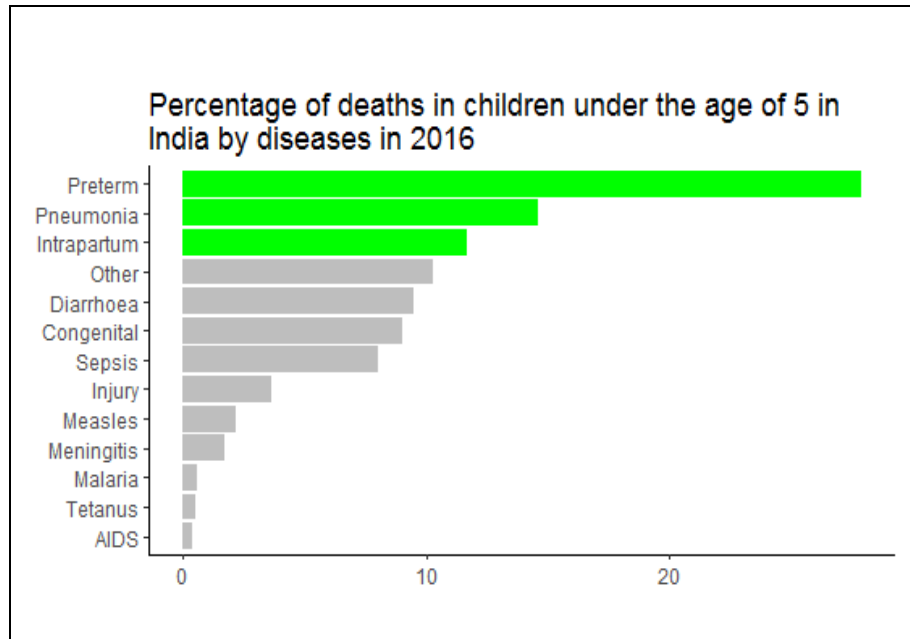
Although, the United States has already achieved the SDG goal specific to the country, but the above analysis shows that despite the mortality rate of the country was well under the SDG development goal of North America and Europe, the mortality rate was above the SDG goal of the region after 2005.

2. Analysis of under-5 mortality rate by cause of death in the selected countries

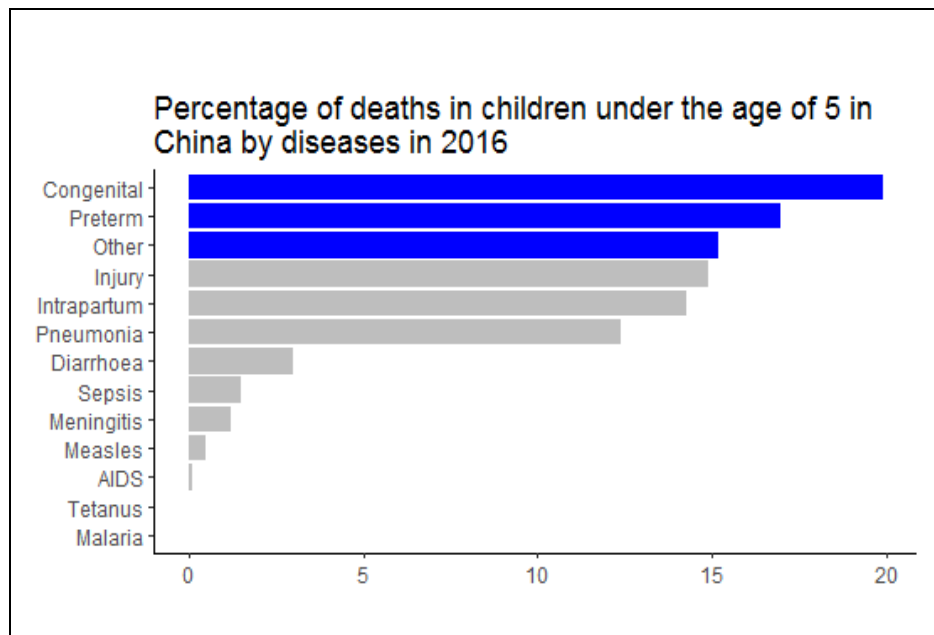
The Cause_of_Death_2017 dataset was analyzed to determine the reasons of child death's by different diseases. For this analysis, only the deaths of children under the age of 5 was included. This age group was selected since a newborn goes through various vaccination in first 5 years and thus this analysis would give a better understanding about the diseases and based on that certain vaccinations can be introduced to fight those diseases.



The above graph shows that in the United States majority of deaths were caused by Preterm, Congenital and Other (diseases not specified in the list).



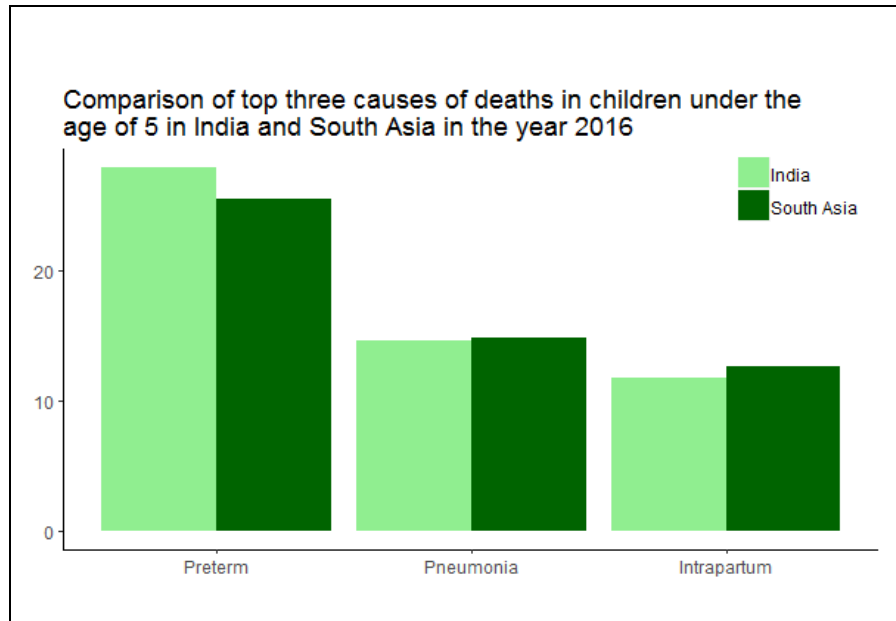
However, in India Preterm, Pneumonia and Intrapartum were the main reasons of death in children under the age of 5 in the year 2016.



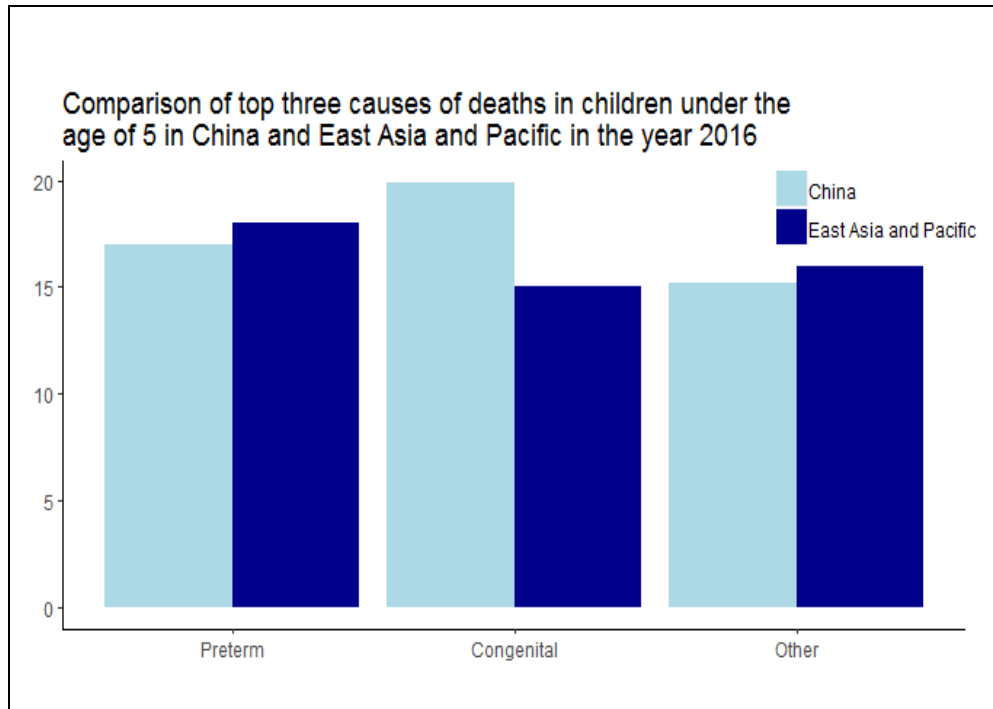
In China, it was observed that Congenital, Preterm and other diseases caused majority of deaths.

This can be concluded from the above analysis that Congenital and Preterm are still the deadliest diseases in these countries which cause majority of the deaths in children under the age of 5 years.

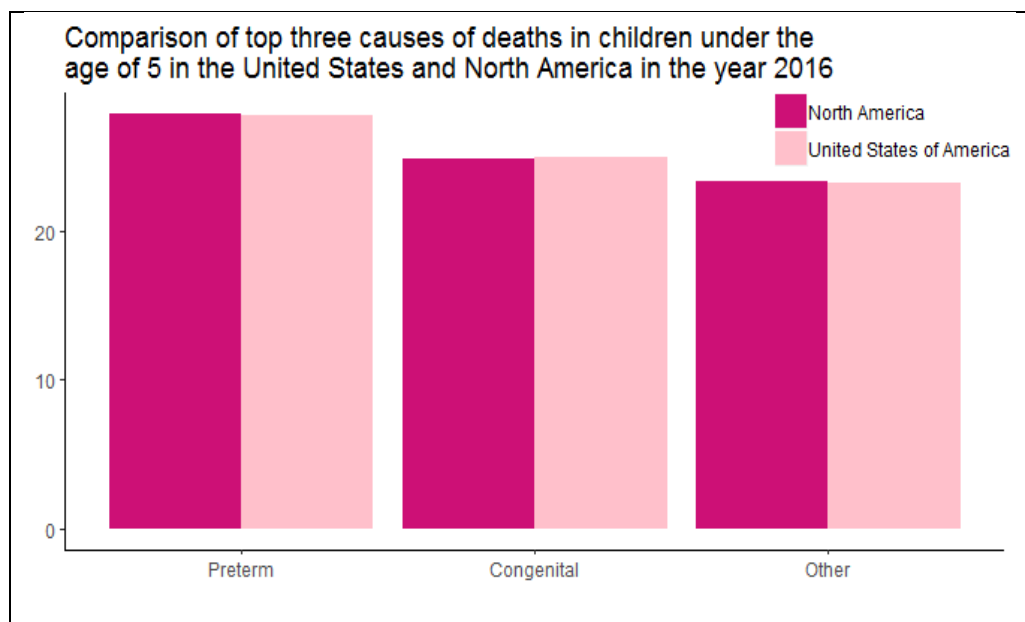
The top three causes of deaths for each selected country were then compared with their respective regions and following results were obtained:



The top three causes of death in India in the year 2016 were Preterm, Pneumonia and Intrapartum. On comparing these diseases with the South Asia region, it was observed that the percentage of death caused by Preterm is higher in India as compared to the South Asia region and the other two diseases has the equal percentage of deaths in both India and South Asia.



In China, the top 3 causes of deaths were Preterm, Congenital and other and upon comparing these diseases with the East Asia and Pacific region, I was found that the percentage of deaths caused by Preterm are equal in both China and East Asia and Pacific region.



The comparison of the diseases between United States and North America shows that the top three diseases are equally prevalent in the North America region. Thus, immediate measures must be taken to control these diseases to save the lives of the newborns.

References:

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