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TOPICS

1. Limiting child obesity in Western countries
2. Lowering infant mortality in Sub-Saharan Africa.

CHAIRS

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Introduction

As children are the future of the global society, infant mortality is a serious issue, which is even more alarming when looking at poor areas like Sub-Saharan Africa, where the infant mortality rate was the highest of the world with 51 deaths before the children reaching their first year of life per 1,000 live births. In comparison to the European Region, where the infant mortality rate lies at 8 per 1,000 live births, this shows how disproportionately different regions are affected.

Already, there has been a reduction of children dying at a young age. The global infant mortality rate has decreased from about 65 deaths per 1,000 live births in 1990 to 29 deaths per 1,000 live births in 2017. Therefore, the positive effects of past actions are evident. But further actions are necessary, because children are a vital part of every society as they will eventually care for the survival of this society.

To contribute to the fight against child mortality, it is important to not only look at the factors affecting the children, but also the factors affecting their mothers and their environment in general, as especially maternal mortality is linked to the survival of the child.

Definition of Key terms

Neonatal mortality rate: This rate shows the probability of a child to not survive the first 28 days of life per 1,000 live births.

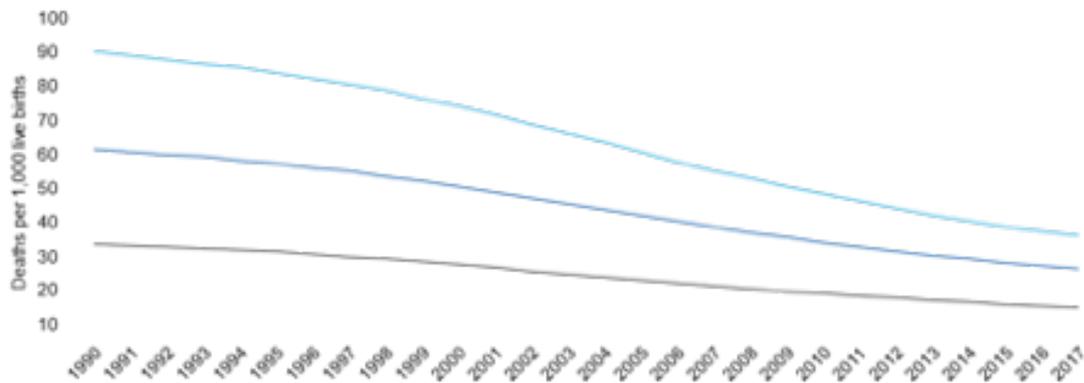
The infant mortality rate expresses the deaths of children before they reach the age of 1 year per 1,000 live births.

Under-five mortality rate: This rate, which is shown per 1,000 live births, indicates the chance for a child of dying during the first five years of age.

Maternal mortality rate: The number of women dying during pregnancy or within 42 days after the end of their pregnancy.

Background

Fig. 1



The importance of fighting child mortality can be seen when looking at the number of children dying each year. In 2017, about 4.1 million infants died with a rate of 29 deaths per 1,000 live births. Compared to 1990, when 8.8 million infants died before completing their first year of life, this is a major improvement. However, the total number of children dying before they reach the age of 5 is a lot higher: 9.2 million. This can also be seen in Fig. 1, which shows the global under-five (light blue), infant (dark blue) and neonatal mortality (black) rates.

The most remarkable aspects about this feature are that the majority of these deaths occur due to conditions, which are in fact preventable, and that they appear in developing regions like Africa, especially Sub-Saharan Africa.

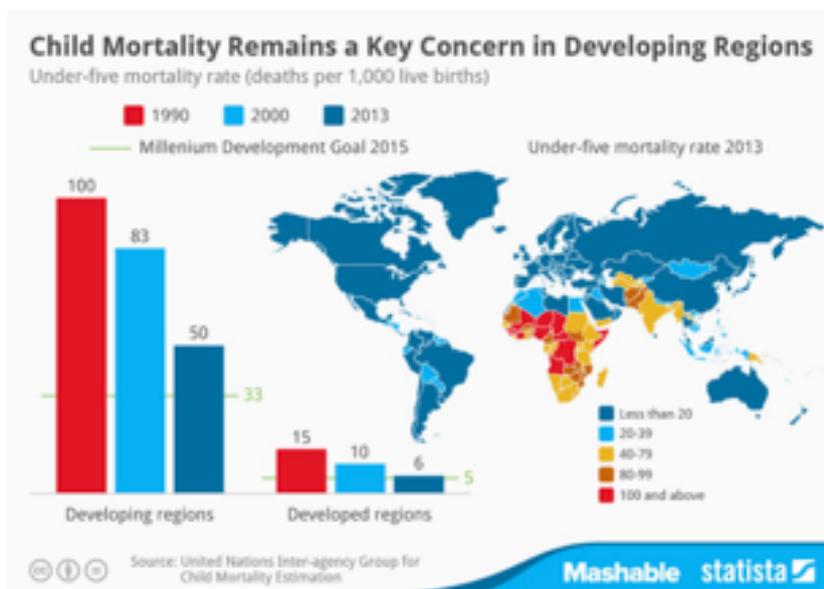


Fig. 2

This can also be recognized when looking at Fig. 2, which shows the state of under-five mortality rate in the world from 1990 to 2013 (left) and the under-five mortality rate per country in 2013 (map).

To further reduce child mortality, the United Nations have embedded the goal of ending the deaths of children, which are preventable, in the Sustainable Development Goal 3 named 'good health and well-being'. It specifically targets the reduction of neonatal mortality to 12 per 1,000 live births and under-five mortality to 25 per 1,000 live births. To reach this goal, the different causes of deaths of children need to be targeted.

Globally, this means the fight against the following most prominent causes.

However, there are several causes for child mortality in developing countries. The leading causes in 2016 were preterm birth complications (18%), pneumonia (16%), events related to the process of birth (12%), innated abnormalities (9%), diarrhea (8%), neonatal sepsis (7%) and malaria (5%). Other causes include AIDS (Acquired immune deficiency syndrome), pre-term birth and birth asphyxia (suffocation). A lot of these diseases and complications are related to the lack of healthcare facilities and conditions which are not good enough for the health standard as well as the lack of education and information.

This can easily be seen with the example of pneumonia. Pneumonia means that the air sacs in the lungs, called the alveoli, are filled with pus and liquid. Infected persons have problems with breathing and cannot take enough oxygen in. Especially malnourished persons who have a weak immune system have a higher risk of dying of pneumonia, but there are several factors which can contribute to the infection with the disease. For instance, pre-existing illnesses, like HIV, high levels of indoor air pollution caused by e.g. cooking with biomass fuels like wood or dung, crowded homes and smoking parents are some of these factors. However, pneumonia can be treated or even cured with antibiotics. Unfortunately, only a third of all children affected by pneumonia even get the necessary and life-saving antibiotics.

Another disease with a connection to malnourishment is the diarrheal disease. Each year, 760,000 children under the age of 5 years old die of this disease, which is caused by unclean drinking water, contaminated food and poor hygiene. Just like with pneumonia, malnourished persons, especially children, in developing countries are more likely to be affected by diarrhea. As this disease leads to even more malnourishment, the affected persons are likely to contract diarrhea again, which can lead to severe dehydration and eventually to the death of the person. To prevent this, the patients are treated with rehydration zinc supplements. But again, a lot of the affected persons do not get the necessary treatment.

However, the severeness of not providing children with important medicine and treatment can be best illustrated with the example of malaria. If a patient infected with malaria is not treated within 24 hours, this leads to the death of the person. In Africa, every minute a child

dies from malaria because they do not get any treatment, or the treatment is not sufficient. However, the disease, which is transmitted to humans via mosquito bites, is preventable by simply using a mosquito net.

It has shown that there is a close link of child mortality to maternal mortality, as there are high child mortality rates in countries, where the maternal mortality rate is high as well. The average maternal mortality rate in Africa is 1,000 in 100,000 live births. This high rate is caused by different lacks in the healthcare infrastructure. For instance, only half of all women in Africa give birth in health facilities with the presence of a skilled attendant and less than a third of the women with complications during birth receive life-saving care in time, which is due to the fact that the Emergency obstetric care (EmOC) is extremely low in some African regions. In certain areas like Malawi, the provision with life-saving services is prohibited by legal restrictions. In this specific country, the permission to perform every kind of health service is not given to nurse-midwives, leading to them sometimes being unable to help women who give birth and have severe complications.

Another aspect of child mortality is newborn care. This kind of care is not commonly practiced in Africa. However, newborn or post-natal care is necessary in order to be able to recognize and identify maternal and neonatal signs of danger at an early point in time and to be therefore able to prevent the death of children and their mothers. Thus, the lack of newborn care is an issue that needs to be addressed.

However, the risk of death does not only exist for newborns, but for every child. Consequently, the lack of healthcare means that every child has a great risk of dying before reaching a certain age.

This is also linked to the lack of basic health infrastructure. One aspect of this infrastructure is EmOC facilities. The minimum for these facilities is four basic facilities per 500,000 people to provide life-saving services in time for every patient. Another basic necessity is the provision with roads, water, electricity and telecommunications to support the development of less developed countries. In addition, the facilities themselves need to be provided with functional equipment and sufficient essential supplies like drugs and regular supervision.

However, not only the facilities, but also the persons providing the healthcare are lacking certain necessities. On one hand they need to be provided with the equipment they need, as mentioned before. On the other hand, there is often not enough training, which is obviously not good. Plus, a lot of health workers do not have a possibility to develop a career that could motivate them.

A lot of these things can be provided by Non-governmental Organizations (NGOs), but the governments of the affected should have the most influence and should be able to introduce solutions against child mortality. This does still often not happen, what can be observed when looking at the lack of policies to reach poor and marginalized communities in their countries and the lack of complete coverage of interventions.

In conclusion, there are a lot of aspects contributing to high rates of child mortality. All these factors need to be addressed in tandem as they are interconnected and cause each other, like poverty causing malnourishment and therefore also causing diseases like diarrhea.

Key events

A very important step in the fight against infant mortality was the Abuja declaration from April 2001 in which the member countries of the African Union set a goal of spending a minimum of 15% of their annual budget in the health sector. This was supposed to improve this specific sector, but the declaration also called for increased support through donors. However, only one of the countries who signed the declaration, Tanzania, has reached the goal of spending 15% of their budget on the health sector. While 26 countries managed to raise the amount of spending in the health sector, 11 countries had even reduced it. The remaining nine countries did not show any difference in the allocation of their budget.

Even after the Abuja Declaration, Sub-Saharan Africa is one of the regions where there is no significant progress in child health is made. Even though the reduction of the under-five-mortality rate has doubled in the years between 1990-2000 and 2000-2011, children born in this region still have the highest risk of dying before reaching their first month of life.

Major Member States involved

Chad:

Chad struggles with huge numbers of refugees coming into the country, which made the establishment of 12 refugee camps necessary. About 60% of these refugees are children which is very concerning when taking the fact that 18,000 children under 14 years of age suffer from AIDS in Chad. In addition, the rates of infant, under-five and maternal mortality are extremely high in the country and especially the refugee camps. This led to UNICEF opening 3 offices in Chad to bring aid to the region in 2005. The organization then provided the people with various kinds of aid, like mosquito nets, which have been treated with insecticides, for pregnant women and children, therapeutic feeding for malnourished children, permanent school tents, water kits, blankets and vaccinations among others.

Finland:

This country is also very interesting in terms of infant mortality. During the 1930s, the infant mortality rate in Finland was extremely high (65 deaths per 1,000 live births). Nowadays, the state has one of the lowest rates in the world. This change was achieved by the introduction of a box provided by the state for mothers to be. They can choose between this box and 140 euros, but about 95% of the women choose the box as it provides a lot more benefits to the baby and to the mother. For instance, the cardboard box contains clothes, a book, a toy, hygiene supplies among other things. In addition, the box doubles as a sleeping box for babies as it has a mattress at the bottom, providing the newborns with a very safe place to

sleep. Not only did this box help the babies themselves, but the women benefit from it as well because they must see a doctor before the fourth month of pregnancy in order to receive the box, leading to more mothers being provided with healthcare during their pregnancy. In addition, the baby box leads to all babies in Finland starting their lives in the same way, no matter what family they come from, leading to some kind of equality.

Malawi:

This country is very interesting as there has been a significant drop in the infant mortality rate. In 2007, the rate was 63.4 deaths per 1000 live births, which has been reduced to 38.5 deaths per 1000 live births in 2017. One of the reasons for the drop is the new care for pregnant women, who must come to the hospital even before labor starts. This leads to the doctors and midwives being able to help them right away, not after labor has started. However, not all pregnant women have an easy access to hospitals, especially in rural areas. To solve this problem, health workers visit the women at their homes to inform and advise them about their pregnancy.

Rwanda:

Another country which has had a dramatic decrease in infant mortality rate is Rwanda. This country had an infant mortality rate of 50 deaths per live births in 2010. This still is a high number and needs to be significantly reduced. But when looking at the rate in the year 2000, a huge decrease in numbers of deaths of infants can be seen. In 2000, 107 infants out of 1,000 live births died, which was caused by the genocide against the ethnicity of the Tutsi. To induce the drop in infant mortality, the government of Rwanda has introduced interventions which start to solve the problem at the community base, e.g. by lowering the financial, infrastructural, and geographical barriers to access health care.

Venezuela:

Unlike the other countries, Venezuela has had an increase in the infant mortality rate due to a collapse of the health-care system in the country. While there have been 15 deaths of infants per 1,000 live births in 2007, the rate has risen to 25,7 deaths per 1000 live births in 2017. Due to the lack of an adequate healthcare system, diseases like malaria, measles, diphtheria and HIV spread a lot faster, emphasizing the need for healthcare systems in order to fight child mortality.

Possible Solutions

As already stated, there are a lot of factors contributing to child mortality. One of these factors is obviously diseases, which need to be stopped from spreading as fast as they do now. The WHO suggests the distribution of vaccinations to all countries, as well as preventing the transmission of specific diseases like malaria. Also, maternal mortality needs to be prevented, e.g. by increasing the access to healthcare facilities. In addition, the

provision with enough nutrition for everyone needs to be guaranteed to prohibit malnourishment.

Next to directly targeting the causes of child mortality, these causes need not to be completely prevented from the start. Therefore, there must be enough provision with education and medical training for adults, to make sure that many deaths can be prevented using necessary skills and education. In order to provide this, schools and locations for medical training need to be established or improved.

To make all these solutions possible in Africa, the political commitment needs to be increased, e.g. by binding treaties and laws supporting the fight against child mortality. In addition, investments into healthcare need to be raised, as it is not possible to realize improvements in this sector without financial means. Therefore, the affected states must increase their budget for the health of their citizens.

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