

[MUSIC PLAYING]

**JOHAN VON
SCHREEB:**

Hello. My name is Johan von Schreeb. I am a general surgeon and Associate Professor of Specialized and Disaster Medicine. Since more than 20 years, I have worked in the field, providing health care following several disasters worldwide, and have witnessed what impact disasters can have on people and populations.

Today, I will talk about disasters and injuries and their health effects. They are represented by the green box in the global disease burden tree map, labeled "injuries". Every year, around 5 million people die due to injuries, which makes up about 10% of all death in the world. Even though injuries account for about the same share of death worldwide, the type of injuries differs substantially between low, middle, and high income countries.

The typical person that dies from injuries in a high income country is an old person dying after falling. While a typical person in a low income setting is a young male dying in a traffic accident. In addition, many are injured and become disabled for life, losing their ability to earn a living, which on top of health care spendings, can make a whole family fall into poverty.

Injuries can be divided into unintentional injuries, such as traffic injuries, drowning, and fires, and intentional injuries, such as violence and self harm. Out of the 5 million injury deaths every year, around 1.3 million are traffic deaths. Every day, more than 4,000 people die in traffic accidents.

That is two every minute. A silent disaster, which is also the leading cause of death in young people worldwide. And for every person dying in a traffic accident, another 20 individuals are seriously injured.

Other forms of unintentional injuries that cause a significant number of death are drowning and fires, which are most common in low income countries. We also have the intentional injuries, like violence and self harm. Globally, they stand for only 2% of all death. But in some categories, like women between 15 and 19 years old, self harm is, sadly, the most common cause of death, as you can see on this arrow diagram from the Global Burden of Disease website.

As I said earlier, my special interest is disasters and how to provide health care in this

challenging context. Disasters occur suddenly or more slowly, and is the result of both hazard and vulnerability. When these two meet, a disaster takes place. A disaster is defined by the fact that the affected community is not able to cope with the situation without assistance from outside.

Vulnerability is closely associated with low socioeconomic status. The 2010 earthquake that affected the low income country, Haiti, killed around 200,000 people. Had a similar earthquake affected Tokyo or San Francisco, the death toll would have been significantly lower. The main reason is that there is enough money in these cities to build earthquake safe infrastructure.

A disaster is thus the combination of both hazard, which for earthquakes is the Richter scale shaking of the ground, and levels of vulnerability, which is the socioeconomic status. Disasters can be categorized based on their cause. There are natural, man made, and mixed disasters. However, these categories are not very well defined, and they often overlap.

Man made disasters include technological disasters, such as chemical spills, while most man made disasters are conflicts. Natural disasters can be seismic, such as earthquakes and tsunamis. But they can also be climactic. That includes flooding and high winds. Mixed disasters is a combination of the above and include landslides and drought.

It takes many years for a country to recover, following a natural disaster such as an earthquake. However, the media coverage is intensely focused on the first week of a relief. This may lead to a wrong perception of what type of needs there are and in what order they should be addressed. The number of deaths is not a good indicator to describe the severity of a disaster.

It is the survivors that need assistance, not the dead. Disasters affect close to 500 million people in many low and middle income countries every year. Around 300 million people live in situations of violent insecurity and conflict. And another 200 million are annually exposed to the effects of natural disasters, the majority living in Asia.

Flooding is the most common type of natural disaster, and also affects most people. In coming years, the effects of extreme weather due to climatic change is predicted to affect many more people. In 2015, we witnessed an escalating disaster affecting millions of people. According to UNHCR, United Nations High Commissioner for Refugees, close to 60 million people were, in 2015, forced to leave their homes around the world.

A substantial part of Syria's population are on the move, trying to find a safe haven away from their home. Since the start of the conflict, more than hundreds of thousands of people have been killed, while the indirect number of casualties, due to displacement, lack of health care, and increased vulnerabilities, is likely significantly higher, but has not been systematically documented.

The suffering caused by disasters goes beyond the number of dead and injured. More work is needed to prevent and mitigate the effects of disasters. There are some good examples of how a country can prepare to reduce the effects of disasters.

Bangladesh is a country that is regularly affected by cyclones. In the 1970s and '80s, the effects of these disasters were measured in hundreds of thousands of people dying. Today, that is not the case anymore.

Through systematic work, focusing on disaster mitigation, that is, building safe, concrete houses, high up in the air. And preparedness, developing warning systems with speakers that warn the population that a cyclone is coming, the number of killed in new cyclones has dramatically decreased.

My work has mainly been in providing assistance when the disaster is a fact. Humanitarian assistance is provided to people in need. In recent years, more assistance has been sent to countries affected by dramatic natural events, such as earthquakes. However, critique has been raised that this assistance is not based on the needs of the affected population.

To optimally assist disaster-affected people, it is not enough to have a warm, helping heart. For good results, this heart must be guided by a cold brain that has the knowledge and experience of what is actually needed and actually works.