NECTM9, MAY 24TH, 2024

NATURAL DISASTERS

Speaker:

Merete Engell,

Registered Nurse,

Project Coordinator and

Head of Learning and Development in MSF Denmark

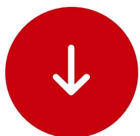

Photo: MSF

Note:
In 2010 I was sent to Haiti, big earthquake.
In MSF it was the largest ever rapid emergency response. The mother of recent natural disasters and a situation that taught us and the world society a lot about interventions. I will come back to that.
App. 300.000 people were killed, and 1,5 million people became homeless.

Photo: MSF

MSF INTERVENTION

Note:
This is a picture of one of our hospitals. This is the second floor where the OT was. Patients, relatives and staff was killed in the building.

The earthquake destroyed 60 per cent of the existing health facilities and 10 per cent of medical staff were either killed or left the country.
MSF had already worked in Haiti for 19 years and were running three health facilities in the country, mainly maternity services and trauma care. We were already present and therefore started to receive patients 10 minutes after the earthquake was over.

In the initial emergency phase, we opened 26 projects in hospitals and clinics in PAP and other towns in the first month and increased the staff from 800 to over 4000 to be able to respond.

A 1000 different organisations arrived in Haiti and the international community promised millions of dollars in funds for the emergency work and the long rehabilitation work afterwards.

EARTHQUAKE SURVIVORS

Note:
The first medical intervention was surgical. People torn from the rubble, up to 2 weeks after the earth quake came into our facilities in makeshift ambulances, wheel barrols and ladders mounted by a matress. Here in Leogane, a town 50 km outside PAP. Here a woman who had chattered both her legs and pelvis.

All over Haiti In the first months we did almost 6000 major surgical procedures across MSF facilities.

Note:
We did first aid out in the open air, nobody wanted to be inside the clinic due to aftershocks. We set our OT up under a roof and started to operate.

Note:

We operated around 25 patients a day in our project besides seeing around 200 patients in the emergency room. We did not have a lot of material, no plaster of Paris, used cardboard boxes to stabilise. The US were blocking the airport. No real surgical equipment besides the most basic. Did a lot of amputations. Trained local doctors of all kinds.

Photos: Private

Note:
Setup of post op, emergency room, maternity, mobile clinics besides the OT.

We treated 358000 patients the next 9 months and delivered 15.100 babies. We rehabilitated 10 hospitals and constructed four new facilities, in all a capacity of over a 1000 beds.

Photo: Private

DISASTER DEFINITION

“

"A (natural) disaster is characterized by a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources".

UNISDR
The United Nations Office for Disaster Risk Reduction

TYPES OF DISASTER:

Natural

Hydrological	Floods, landslides, wave action
Geophysical	Earthquake, volcano, mass movement (tsunami)
Meteorological	Extreme temperatures, fog, storm
Biological	Epidemics; viral, bacterial etc.
Climatological	Heat wave, drought, extreme cold, fires
Extra terrestrial	Meteoroid, comets, effects to the earths spheres

Man made

International war, civil war, ethnic conflict, genocide.

Technological, industrial, chemical, nuclear, transport

Frequently disasters are a combination, contributing to each other.

Note:

Then what types of disasters.

Not just natural disasters. Look at the definition, we are also talking mad made disasters.

Frequently, disasters are a ***combination***, contributing to each other. In many countries where we work, natural disasters happen in countries that are already affected by armed conflict, post war situation, poverty, climate changes that contributes to the consequenses of the natural disaster.

FX. An earthquake in Japan does not has such severe consequences as an earthquake in Haiti.

And intervening in disaster and humanitarian emergencies are more complicated today.

Volatile countries

More people are living in urban settings

Disasters are happening in Middle income countries and the health problems that entails. A double burden of disease.

Climate changes

Protracted crisis

Migration and displaces populations.

DISASTER TRENDS 2004-2023

300
250
200
150
100
50
0

Note:
The typical natural disasters where MSF works, but not exclusively. Most common are earthquakes, storms followed by flooding and the consequenses of drought with malnutrition.

Also epidemics, landslides, tsunamies

Natural disasters caused by climate changes are predicted to increase.
Kilde International Disasters database

Drought
Earthquake
Flood
Storm

2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023

s. Source: International Disaster Database

THE 10 TOP PRIORITIES IN THE EMERGENCY FASE:

1. ***Initial assessment***
2. ***Measles immunization***
3. ***Water and sanitation***
4. ***Food and nutrition***
5. ***Shelter and site planning***
6. ***Health care in the emergency phase***
7. ***Control of communicable diseases and epidemics***
8. ***Public health surveillance***
9. ***Human Resources and training***
10. ***Coordination***

Note:
How do we manage a natural disaster?

We need to have a list of priorities. An algorithm which we know will reduce the mortality. We do things in a certain orden in the same way as you would do when you receive a trauma patients.

2 phases in the intervention:
Emergency phase
Post-emergency phase

MEDECINS SANS FRONTIERES
LÆGER UDEN GRÆNSER

THE ADDITIONAL TOP PRIORITIES IN THE EMERGENCY FASE:

NOTE:

IN MSF WE ADDED 5 MORE PRIORITIES.

11. Security

(prevention and care for victims of violence)

12. Mental Health

13. Protection

14. Temoignage

15. Proximity

MEDECINS SANS FRONTIERES
LÆGER UDEN GRÆNSER

Note:
What happens when a natural disaster hits and we press the big emergency button?
A good example is the Syria/Turkey earthquake last year.
Syria a country where we are already present. A lot of other organisations as well.

We need to have an overview so we make a first initial assessment while two big supply centers get ready and HR is being mobilised.
We focus on health needs but many different data is needed.
In country already resources and supplies for most like scenarios.
Start up basic, cannot wait for better conditions. Gather info and data. First wave of staff. Distributions and basic medical care and immunisation, surgery. Water and shelter.

Türkiye no license to operate, much more difficult to get started fast.

LIBYA FLASH FLOOD, DERNA 2023

Note:

Libya flash flood in Derna last year as well. An explo team travelled fast to the town and started assessing the situation.

Medical organisation. We look at health facilities and see where there are unmet needs, while we have mobile clinics.

As in Haiti, we start with the most urgent health need, often deriving from the disaster itself. First aid, surgery, in droughts, food and water etc.

Other organisations do other types of assessments. The International Red Cross and Red Crecent movement is often ready with their national organisation providing disaster relief etc.

Photos: MSF

Note:
Lets go back to Haiti. What was the next we saw? 1.5 million people living in the streets. Conditions.

The next disaster, I like to call it, are all the things that always follow a major disaster and mass displacement situation.
Access to healthcare, vaccination, clean drinking water, food, shelter and control of epidemic diseases. All on the prioritised list that needs to be handled in the emergency phase.

Photo: MSF

Note:
When we talk about health of a population hit by disaster.
Have serious effects on the health of populations. 60 x higher mortality than expected in a normal setting in the first weeks of a displacement

HEALTH SITUATION

Health problems from the disaster itself;

Earthquake, famine, epidemic, etc.

Mental health issues

Often the same health problems in a disaster;

Top 4 Killers! 50-95% of the mortality:

- Respiratory infections
- Diarrhoea
- Measles
- Malaria

With malnutrition as an aggravating factor

Children under 5 years most vulnerable

Note:
What is the health situation like in a disaster situation?
Health problems from the disaster itself:
Haiti it was injuries and needed surgical interventions and first aid.
Epidemic of any kind, we need to do case management
Famine, drought we treat malnourishment and so on.
And for all disasters, let us not forget the trauma people have gone through and are going through.

This is the ***classic picture***, it is rapidly changing as we see different context being affected by natural disasters.
Middle income countries and therefore it can be different according to the population affected and the disease patterns of that community.
New areas hit by disaster fx. Because of climate changes.

Photo: MSF

HEALTH SITUATION

- ***Normal health situation;***

  Non-communicable diseases,

  Mother-child health

  Vulnerable populations, key populations

  Often defined by the context and society

- ***Epidemics*** (communicable diseases);

  Which are endemic and which can we see due to the situation?

- ***Violence and Sexual Violence;***

  In a destabilised society, always higher prevalence of sexual violence.

Note:
Then we have a population that has the same diseases as they always do, even outside disaster situations. In low income countries for example, they have the many of the diseases we saw on the former slide. But we also have these diseases, and we have vulnerable populations, the disabled, elderly, and key populations like LGBTQI+ people, sexworkers and drugusers.
Often defined by the context.

Come back to control of communicable diseases.

MEDECINS SANS FRONTIERES
LÆGER UDEN GRÆNSER

HEALTH SITUATION

Conditions during disasters have many aggravating factors that influences the health situation of a population;

- camp setting, homeless or displacement,
- poor hygiene,
- lack of clean water, food and shelter, necessities
- broken families,
- traumatised population,
- security issues,
- ruined livelihood
- Poverty
- Ruined infra-structure

- ***Poor health structures in beginning phase.***

Lack of access to proper health services, damaged structures, missing staff etc.

Note:
As this was not enough, the conditions itself makes intervention so much more difficult but also many aspects to take into consideration when talking about health.
Any goal with the program is to reduce excess mortality.

Talk about health indicators and how we use them for evaluation of the program.

MEDECINS SANS FRONTIERES
LÆGER UDEN GRÆNSER

Note:
So besides tackling the health situation of the population, both from the disaster and the normal health situation that is aggravated by the situation, we also have to control communicable diseases.

Photo: MSF

CHOLERA

Note:

Cholera hit Haiti. It is believed to have arrived with the UN forces from Nepal and spread through the sewerage system.

47 cholera treatment centres around the country. 91.000 cases were treated by MSF.

MEDECINS SANS FRONTIERES
LÆGER UDEN GRÆNSER

DISEASES TO CONTROL

The 4 major communicable diseases responsible for most mortality:

(diarrhoeal diseases, Acute repiratory infections, Measles and Malaria)

must be brought under control

MEDECINS SANS FRONTIERES
LÆGER UDEN GRÆNSER

OTHER DISEASES TO CONTROL

- **Cholera (AWD)**
- **Meningitis**
- **Hepatitis**
- **Haemorrhagic fevers**
- **Japanese encephalitis**
- **Typhoid fever**
- **Influenza**
- **Leishmaniasis**
- **Plague**

- **Schistosomiasis**
- **Poliomyelitis**
- **Whooping cough**
- **Tetanus**
- **Scabies**
- **Conjunctivitis**
- **Guinea worm**
- **Human african trypanosomiasis**
- **Diphteria**

- **COVID and other emerging diseases**

Note:
Example: 2023: 1 million people in Bangladesh camp – 40 % has Scabies.
New diphtheria epidemic in Bangladesh and Nigeria.
New to MSF.

MEDECINS SANS FRONTIERES
LÆGER UDEN GRÆNSER

Note:
It is important to have coordination.
Why do I show this picture? (Taliban) Because communication with local authorities are a part of being able to respond adequately to the needs of a local population.

Actors in the Humanitarian Landscape

Civil Society and Local NGOs

UN Organizations

Other International NGOs

Patients and Beneficiaries

Local Authorities

ICRC / Red Cross Red Crescent Movement

COORDINATION IN A DISASTER

UN/OCHA - Cluster system within an area

Cluster lead – for health: MOH, WHO or major NGO

Note:
What we learned from Haiti.
1000 organisations. Lack of proximity and collaboration with the population

Aims to provide aid according to need, rather than capacity.

Allows for better collective prioritization and planning to make the most of limited resources.

Avoid gaps and duplication.

Build on and involve local capacity/proximity.

Sphere standards:

Technical standard for Health.

The international support that the country received or that was pledged in the wake of the earthquake is now mostly gone or never materialised

SANDRA LAMARQUE, MSF HEAD OF MISSION, HAITI

Note:
Let us go back to Haiti and talk a bit about the situation today.
The consequences of the disaster 14 years ago. Health structures lacking
The funds has not arrived.
We have responded to floods, storms, landslides and another big earthquake in 2021.
Health situation – lack of access. Security problems. Endless cycle of violence. No real government and a request for international forces to intervene. Gangs.
Critic of international intervention:
Lack of coordination.
Misallocation of funds
Lack of local involvement
Short term focus
Shelter and housing
Cholera

Photo: MSF

DISASTER TRENDS 2004-2023

Note:
Let us just revisit this small graph again.
We are looking into more climate related disasters.
Other populations with other disease patterns and new areas of mass migration due to drought etc. Changing and we all have to change with it.

300
250
200
150
100
50
0

2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023

Drought
Earthquake
Flood
Storm

s. Source: International Disaster Database

HOW TO CONTACT MSF?

MSF - Læger uden Grænser

Strandlodsvej 44, 2

2300 København S

Tel +45 39 77 56 00

www.msf.org / www.msf.dk

Recruitment and questions:

Come visit our stand!

MEDECINS SANS FRONTIERES
LÆGER UDEN GRÆNSER