

HEY KIDS READY FOR DISASTER ?

Gerlant van Berlaer

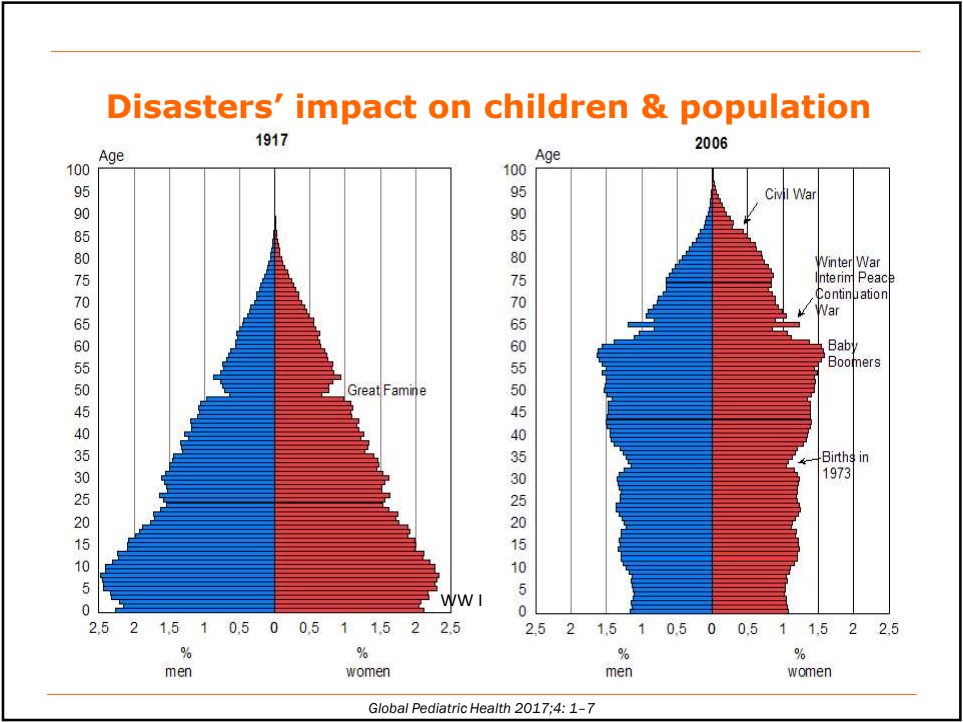


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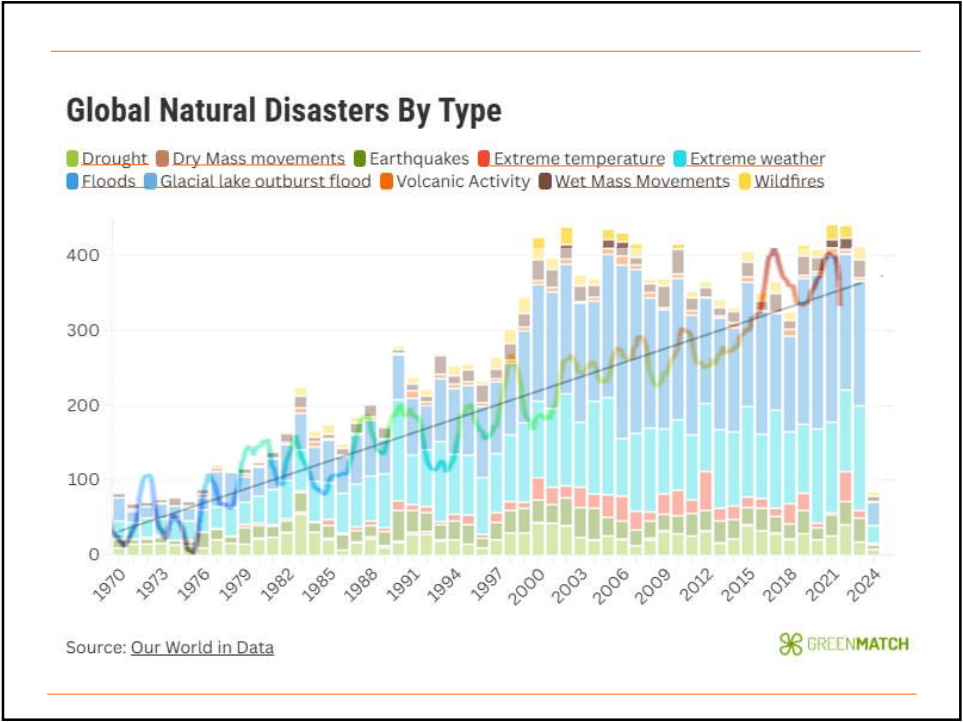
Hey kids: ready for disaster ?

- **Children in disasters**
- WHO Emergency Medical Teams initiative
- Disaster epidemiology
- Do children suffer from different problems?
- Do children need a different approach?
- Is there a role for paediatricians in EMTs?

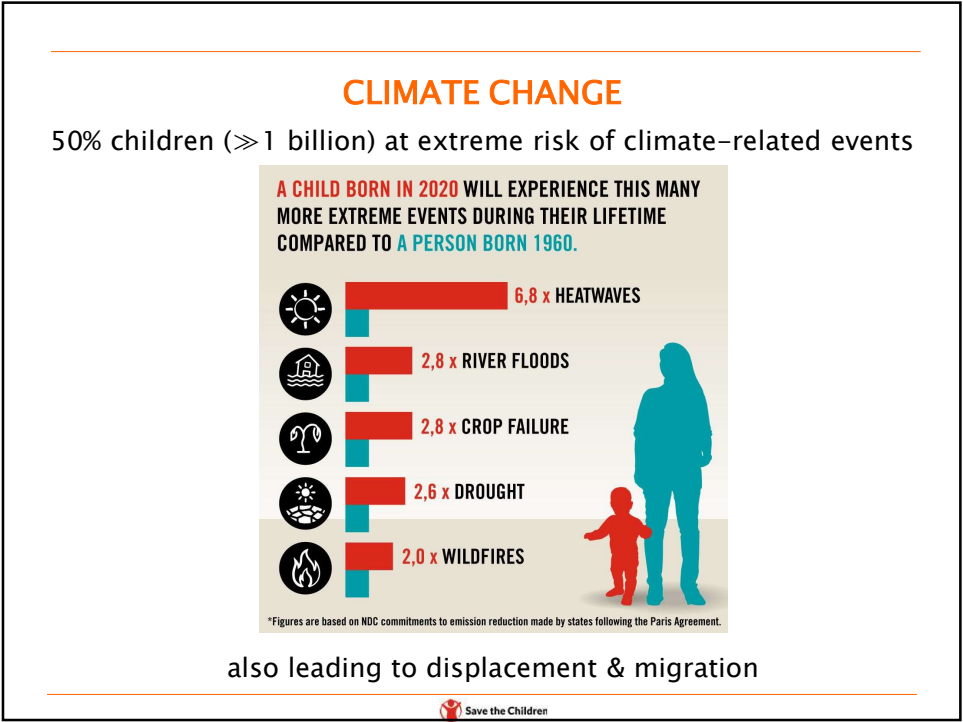
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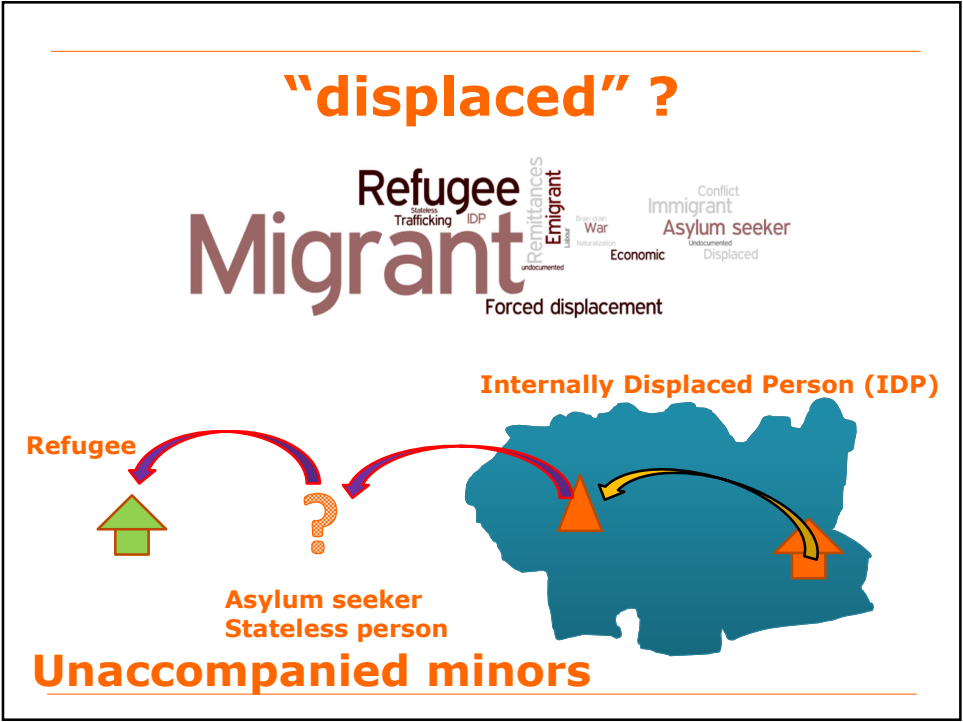
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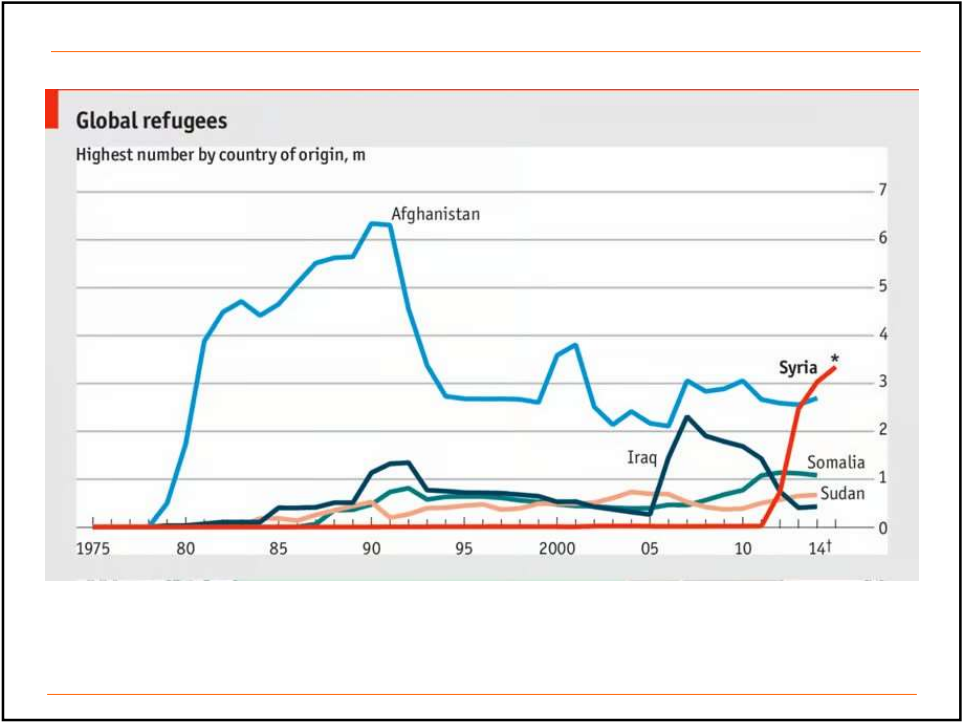
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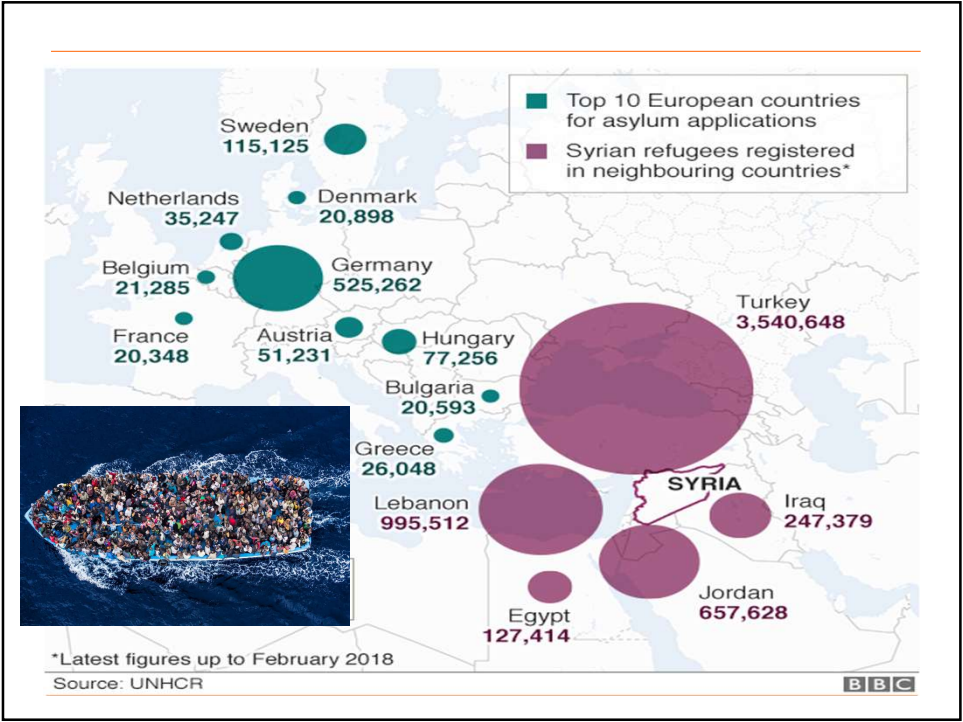
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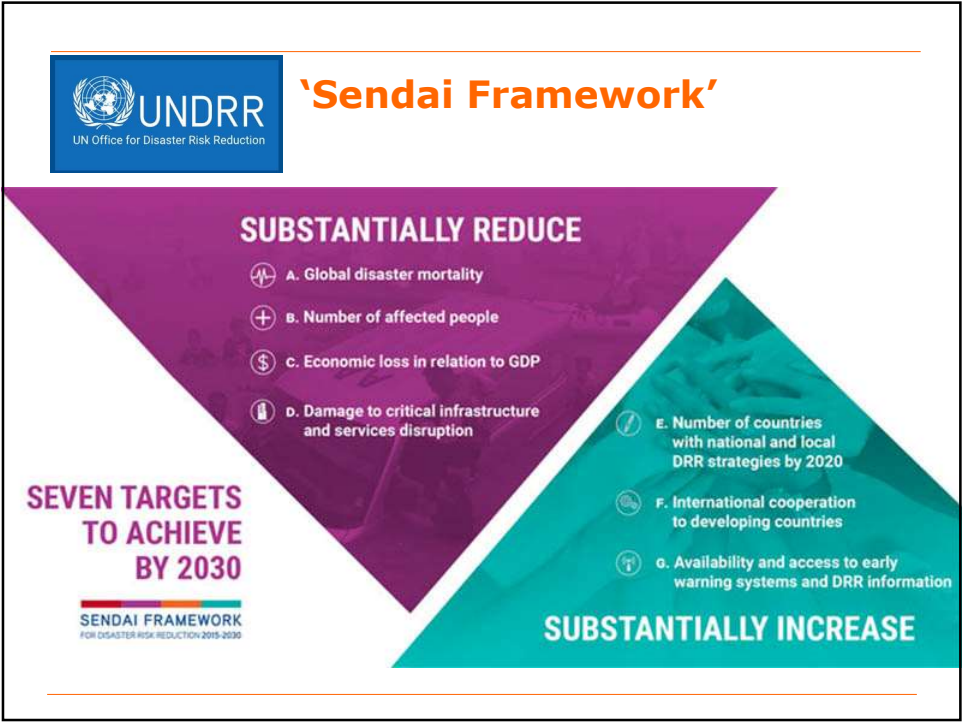
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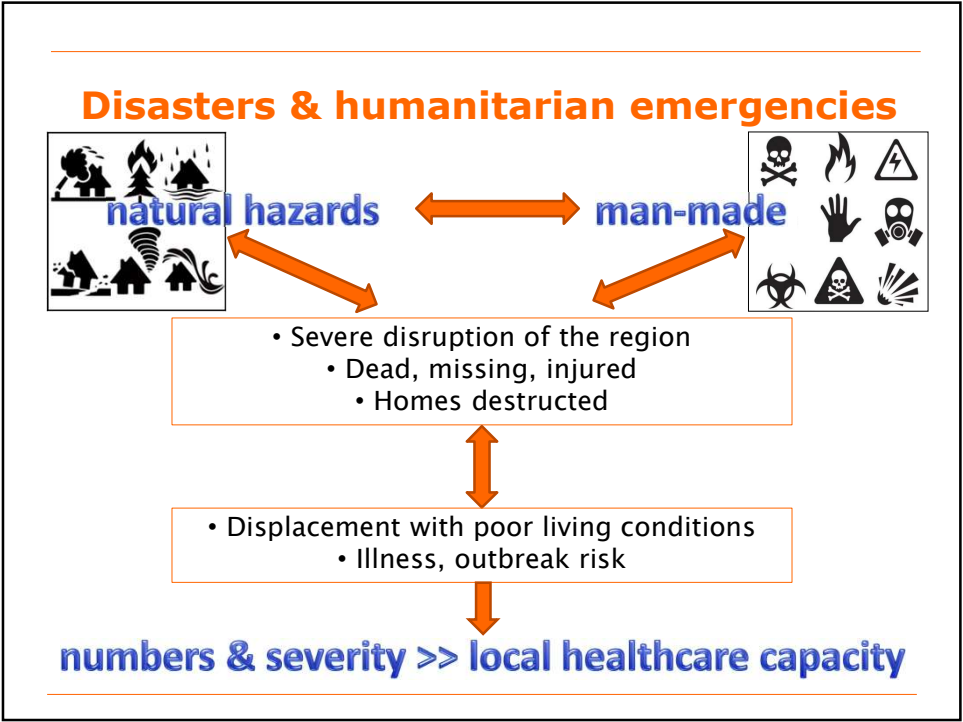
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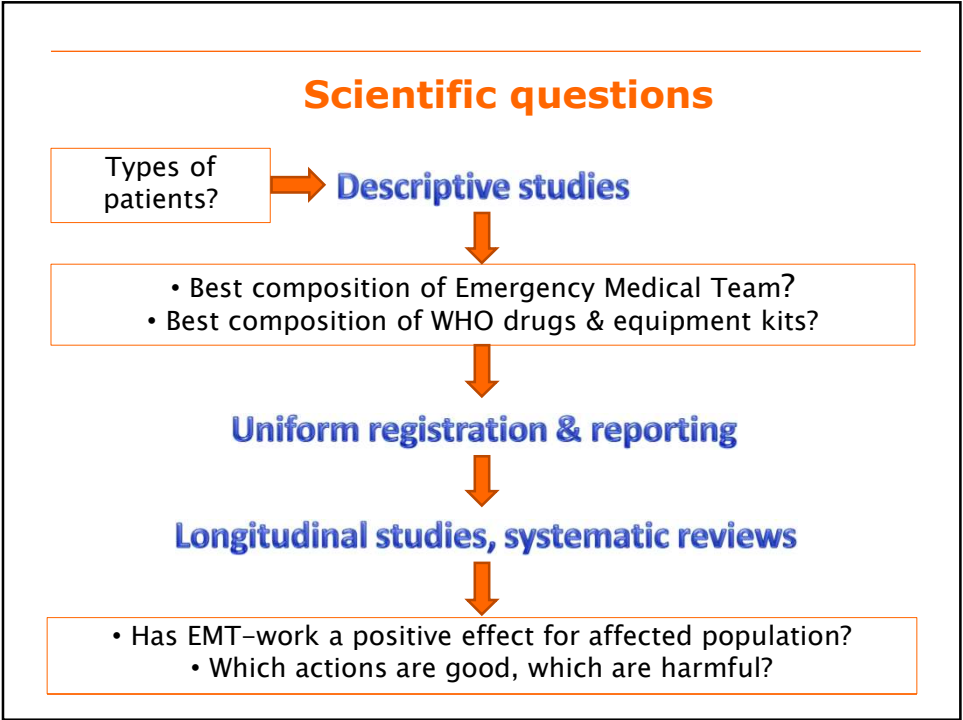
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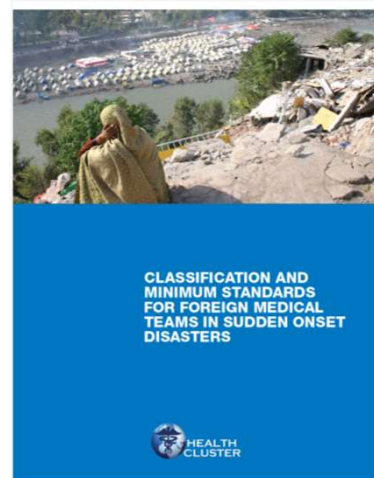
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WHO EMT initiative

- Minimum standards:
 - Technical
 - Personnel & competencies
 - Registration & verification process
- Classification of teams:
 - Type 1: outpatients, no surgery
 - Type 2: inpatients, surgery
 - Type 3: advanced care, ICU
 - Specialised Care Teams



Norton I. et al. Classification and minimum standards for foreign medical teams in sudden onset disasters. Geneva: WHO;2013/2018.

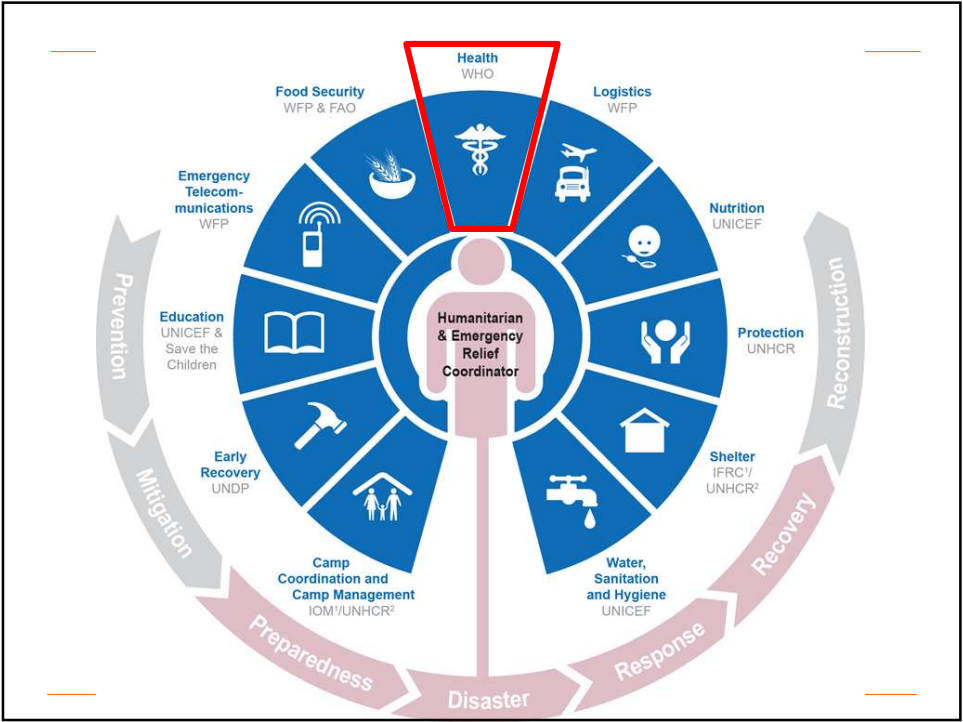
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- Docs
 - Nurses
 - Logisticians
 - Interpreters
- Team lead
 - Back office
 - Diplomats
 - Security

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Disaster epidemiology

New research field (< 25 years)

Epidemiology = the study of patterns of death, health, illness and associated factors at population level

Basic 4 types of patients

- 1) Dead and missing
- 2) Problems directly caused by disaster
- 3) Problems indirectly following disaster
- 4) Problems that already existed before

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Evidence from Belgian EMT

7 large humanitarian emergencies

2010 Haiti earthquake



2012 Brazzaville Explosion



2013 Philippines Typhoon Haiyan



2015 & 2018 Syria Civil War



2015 Brussels refugee camp



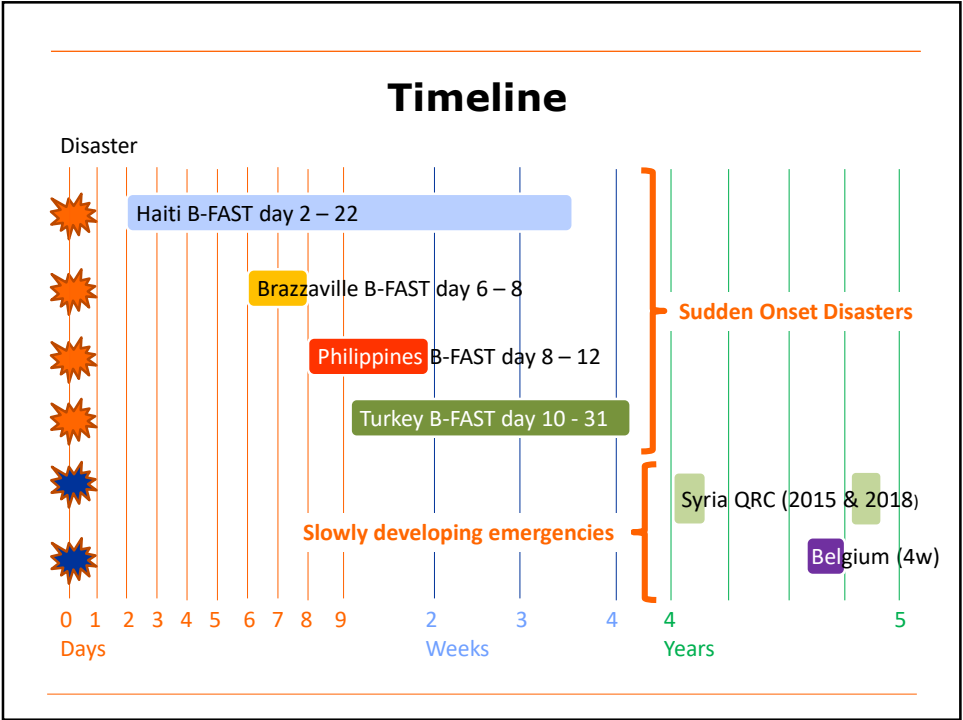
2023 Turkey Earthquake



Data analysis: patterns in pathology ?

Eur J Emerg Med 2016 / Prehosp and Disaster Med 2014 / Disaster Med & Public Health Prep. 2016 & 2017 / PLOS One 2017

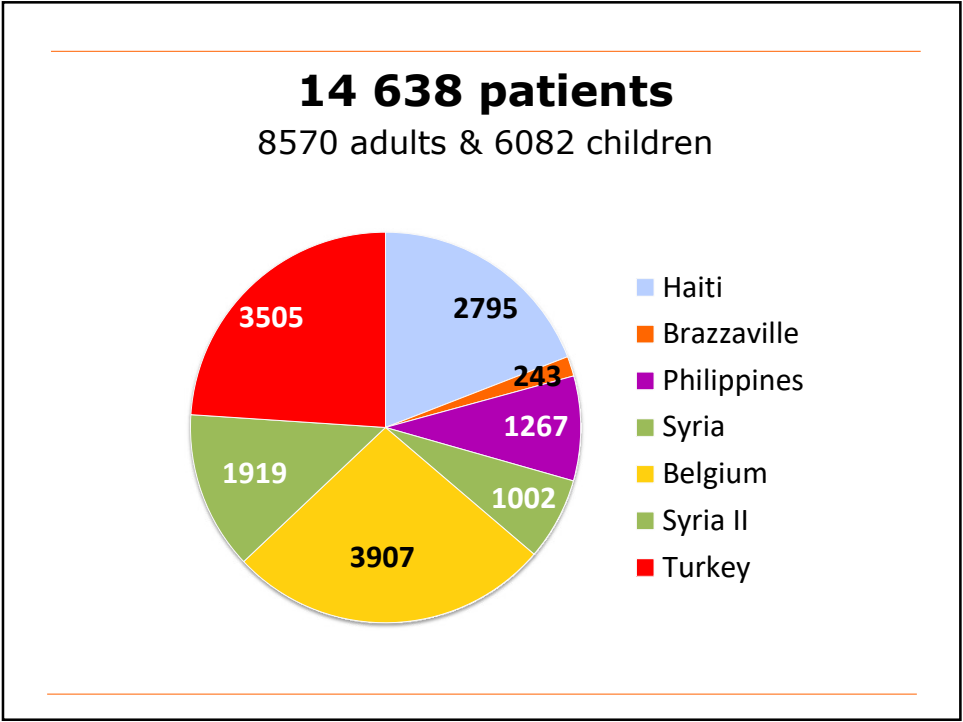
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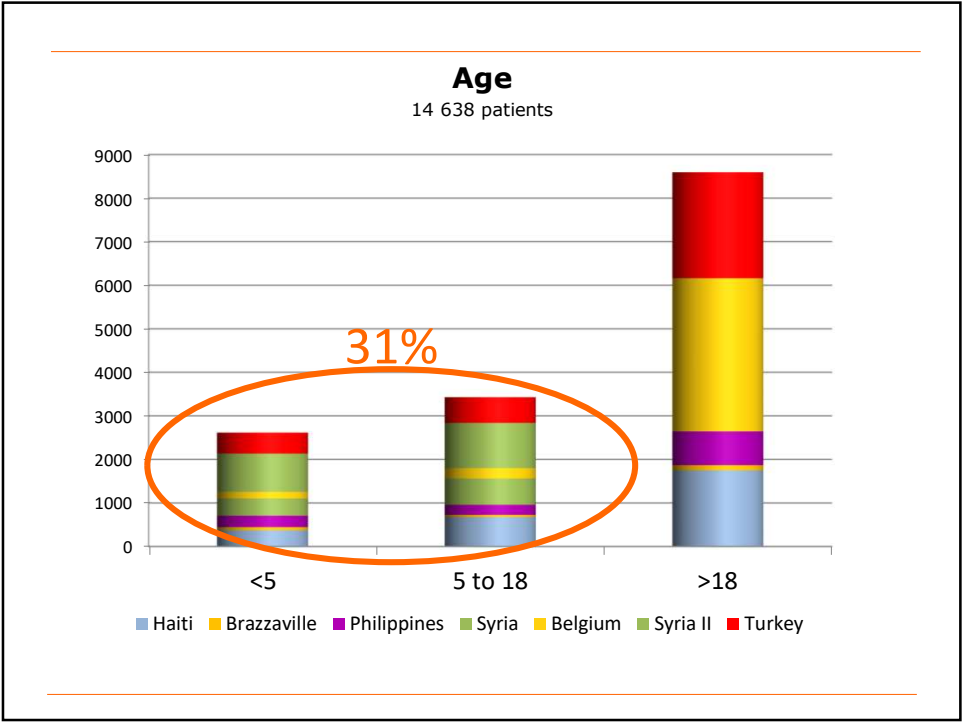
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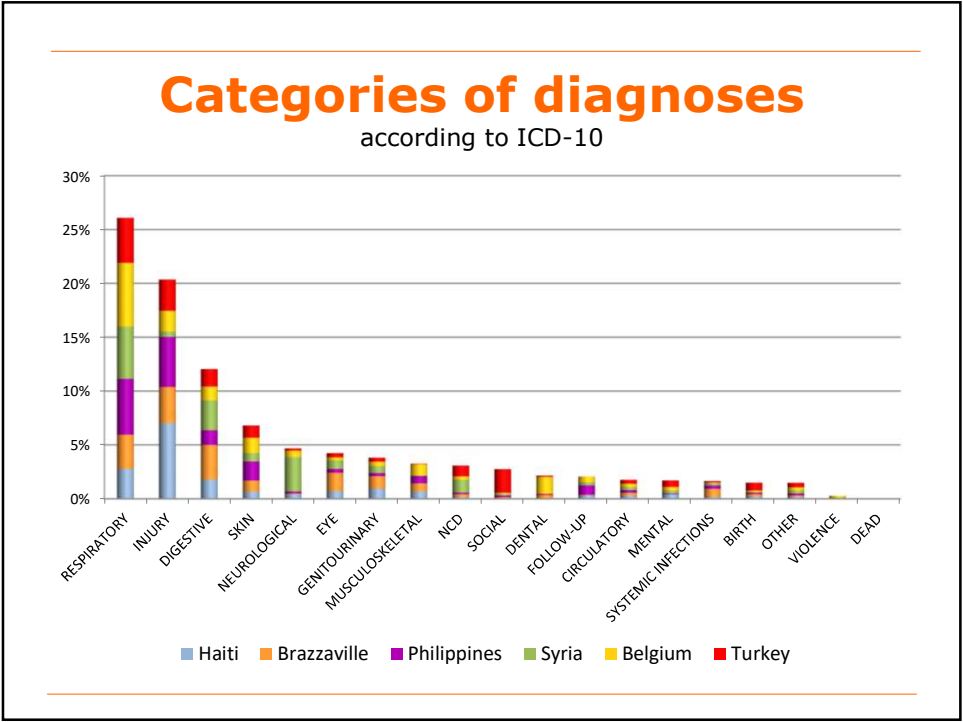
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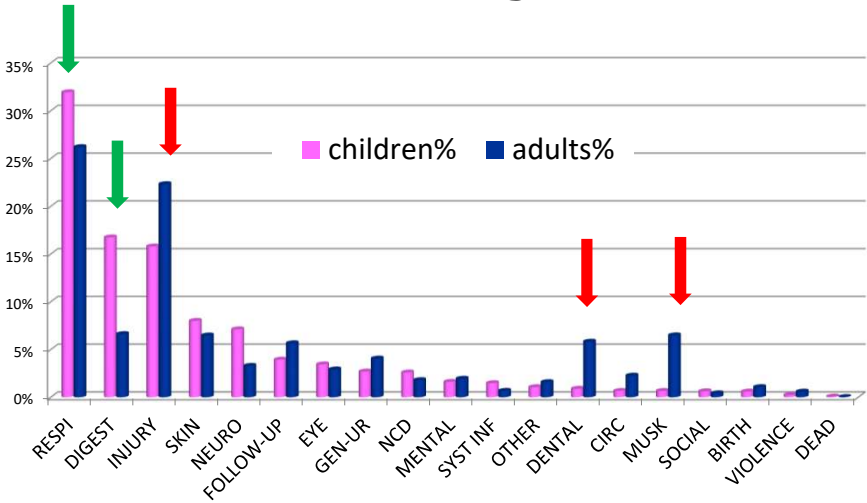
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ICD-10 categories



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CLUSTERS

trauma

Wounds & fractures

Crush syndrome

Intentional injuries, sexual violence, torture

Chemical, Biological Radiological, Nuclear, Explosives



communicable diseases

Infectious diseases

Epidemics (endemic or imported)



non-communicable diseases

Chronical illness, lack of resources and treatment

Mental problems



other

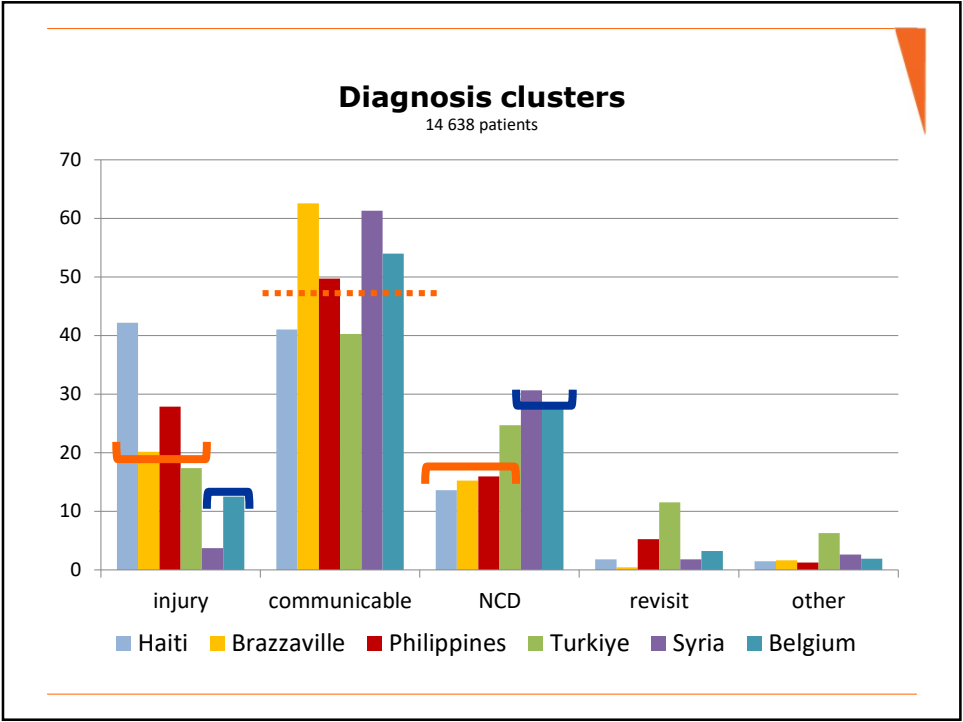
pregnancy, birth, neonates, prematures

Social & practical problems

Re-visits



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Mortality, crime and access to basic needs before and after the Haiti earthquake: a random survey of Port-au-Prince households

Athena R. Kolbe^a, Royce A. Hutson^b, Harry Shannon^c, Eileen Trzcinski^b, Bart Miles^b

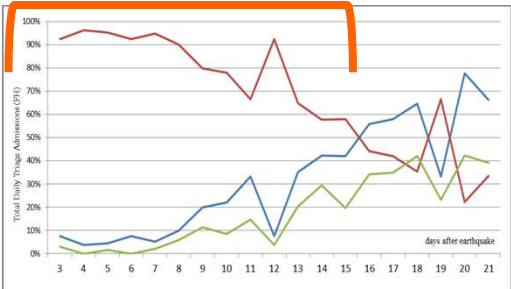


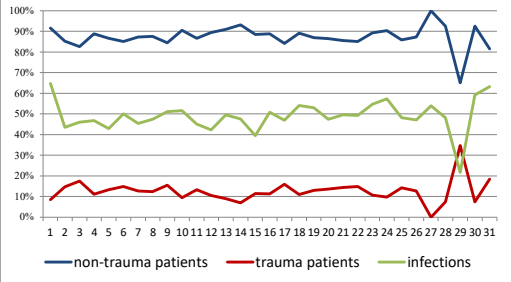
- children <12 = **66 %** of all deaths (CI 61.0–70.4%)
- < 18 : **6x** more likely to be killed during EQ (OR 5.8; 4.0–8.3)
- children **11x** more likely to die of injuries after EQ (OR 5.6–21.4)
- children **2x** more likely to die of illness after EQ (OR 2.0; 0.8–5.3)

as compared to adults

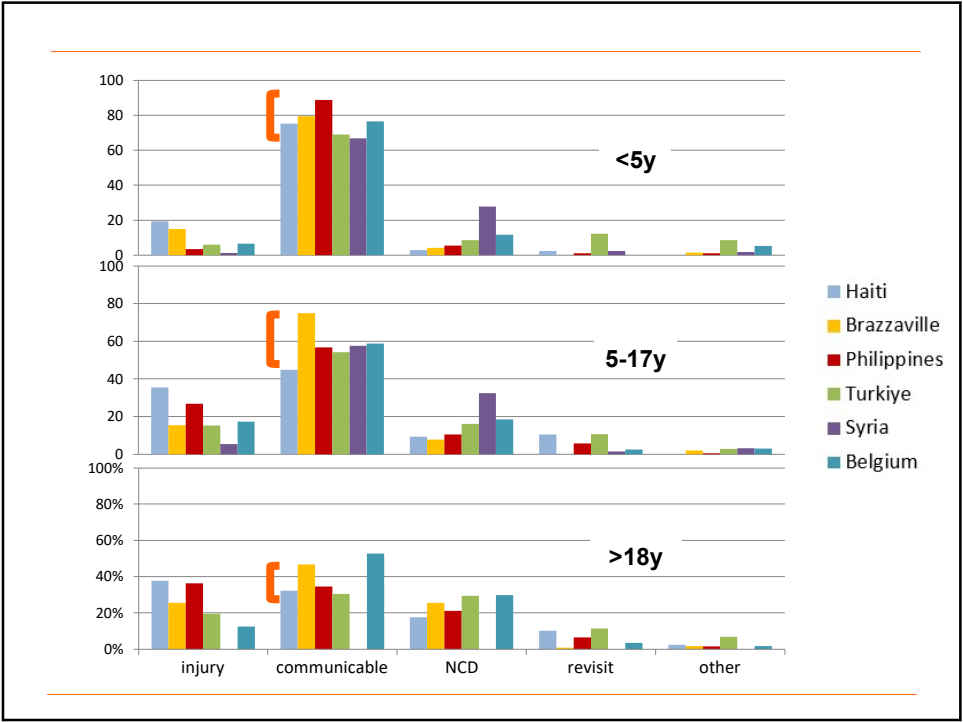
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Sudden versus slow onset emergencies

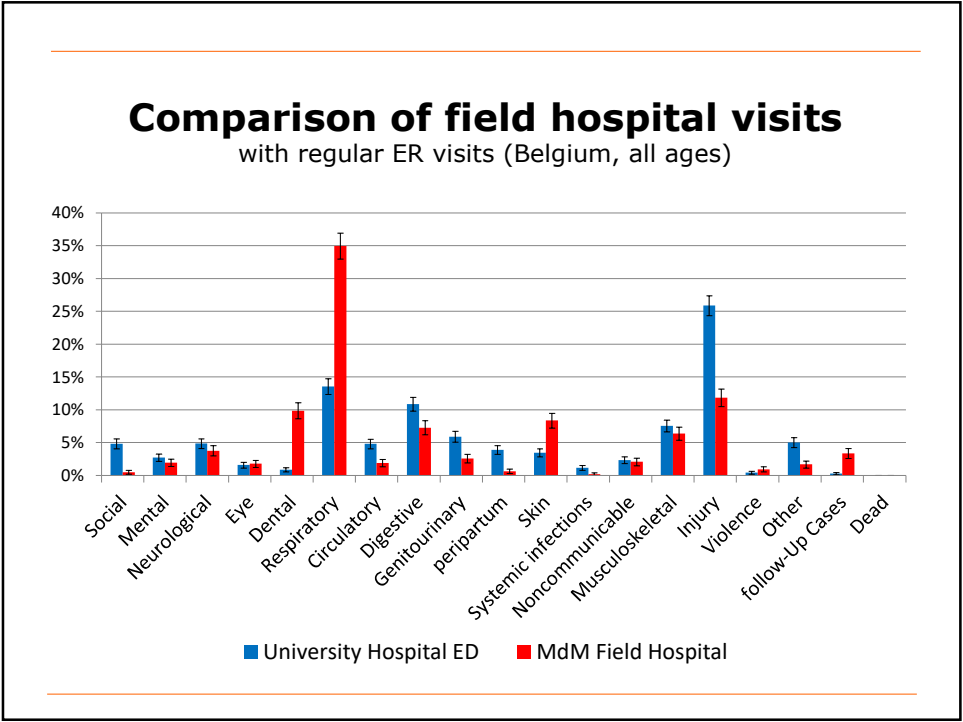




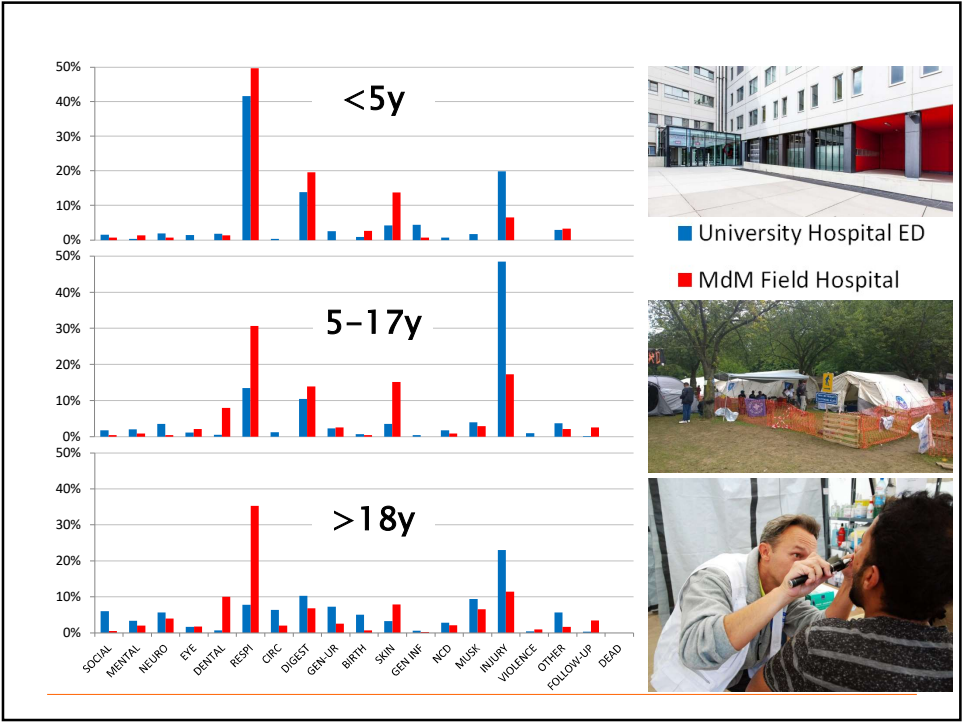
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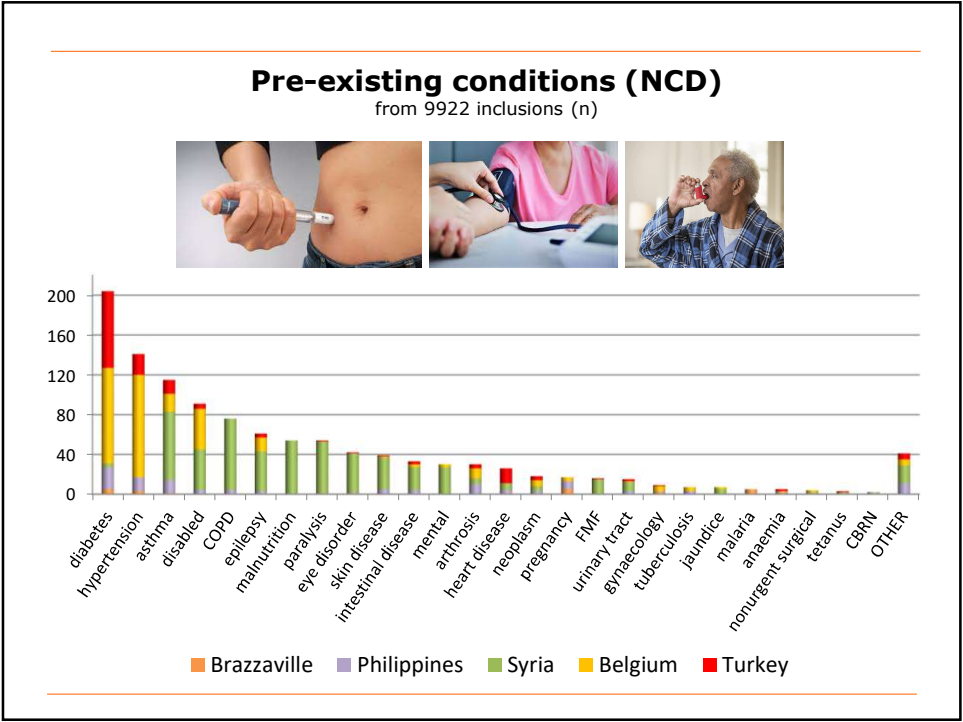
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Children are different



- More infectious diseases
- Injured children either dead or minor injury
- Less chronic diseases
- Different needs



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Children will be born every day,
wherever!

**UNHCR: >2 million children
were born as refugees
in the last 5 years**

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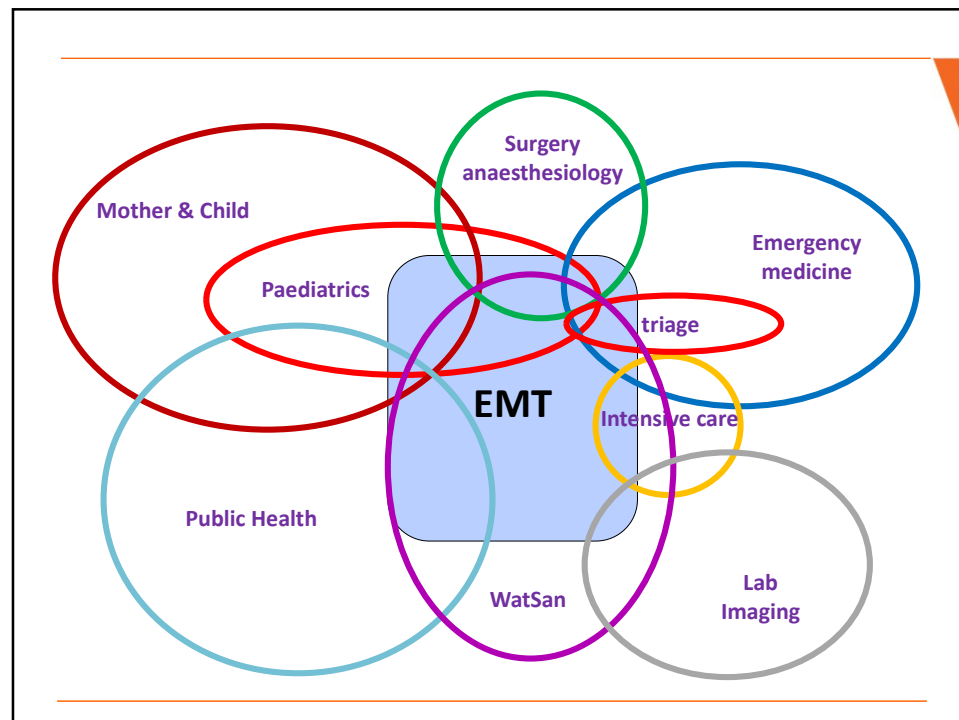
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Children in Disasters

- **DISASTER REDUCTION**
 - Mitigating climate change; reducing hazards
- **PREVENTION**
 - Preparedness plans / policy
- **TRAINING**
 - For pediatricians to cope with new pathology
 - For children to be prepared and self-sufficient
- **DISASTER RESPONSE**
 - 31% patients are children: what about EMT composition?

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EMT personnel

Physicians:

Surgeons

Anaesthesiologists

Emergency physicians

Paediatricians

General physicians

Nurses:

Operating theatre

Emergency department

Midwives & paediatric

Logisticians:

Water & sanitation

Power supply

Information technology & communication

Builders

Other:

Administration

Interpreters

Clinical Pharmacists

Governance

is a paediatrician absolutely necessary?

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Minimum technical standards and recommendations for reproductive, maternal, newborn and child health care

FOR EMERGENCY MEDICAL TEAMS

Medical personnel:

At least 1/3 needs ped experience

Incl surgeons, emergency, anesth,...

Paediatricians, ped nurses, midwives

Focal point

Unaccompanied children

Violence & safety

Logistics

WHO Emergency Medical Teams Initiative

EMT

EMT Toolkit: Content Section

12	Child Health	Staffing Capacity Dedicated Paediatric Care Area Equipment & Pharmacy Considerations
	Clinical Management	Trauma Management Morbidity and Mortality for >5 yrs. Unaccompanied Minors
	Nutrition	MUAC Nutrition Box Training

Drugs: Paediatric formulations

Equipment

Medical records:

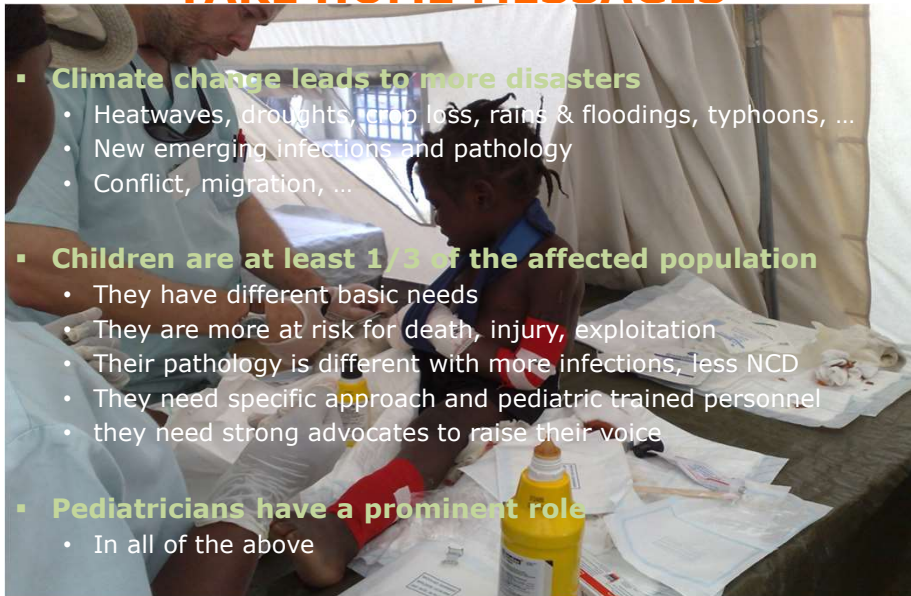
ped considerations

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Prof Dr Gerlant van Berlaer

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TAKE HOME MESSAGES



- **Climate change leads to more disasters**
 - Heatwaves, droughts, crop loss, rains & floodings, typhoons, ...
 - New emerging infections and pathology
 - Conflict, migration, ...
- **Children are at least 1/3 of the affected population**
 - They have different basic needs
 - They are more at risk for death, injury, exploitation
 - Their pathology is different with more infections, less NCD
 - They need specific approach and pediatric trained personnel
 - they need strong advocates to raise their voice
- **Pediatricians have a prominent role**
 - In all of the above

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