

# Disaster pharmacy

Challenges and organization in a pandemic situation

GSASA Digital Congress, November 25, 2020

Josiane Tinguely Casserini & Nicolas Widmer

Specialized Centre for Emergency and Disaster Pharmacy, Geneva

*« It is not about providing plans and tools  
to avoid surprise – but to prepare to be  
surprised »*

Prof. Todd R. LaPorte

University of California, Berkeley, 2008

# Personal presentation

## Josiane Tinguely Casserini

- Deputy cantonal pharmacist canton Bern, since 2008
- CAS student in medicine and medical devices in emergency and disaster pharmacy, 2020-2021
- Former hospital pharmacist at Inselspital, 2001-2008

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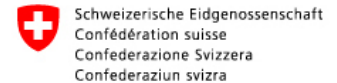


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# Personal presentation

## Nicolas Widmer

- Chief-pharmacist of the Pharmacy of Eastern Vaud Hospitals since 2014
- Operative head of the Specialised Centre for Emergency and Disaster Pharmacy since 2017
- Pharmacist officer at the Military Medical Officer School 41 (Lieutenant colonel) since 2018



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<http://www.disaster-pharmacy.ch/>

# Plan

- Introduction to disaster pharmacy
- Pharmaceutical management of COVID-19 pandemic in Switzerland:
  - Public health administrations
  - Hospitals
- Workshop (about 45 min.)

# Disaster pharmacy

## Introduction

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PD Dr Nicolas Widmer

Specialized Centre for Emergency and Disaster Pharmacy, Geneva

# Definitions

## Disaster

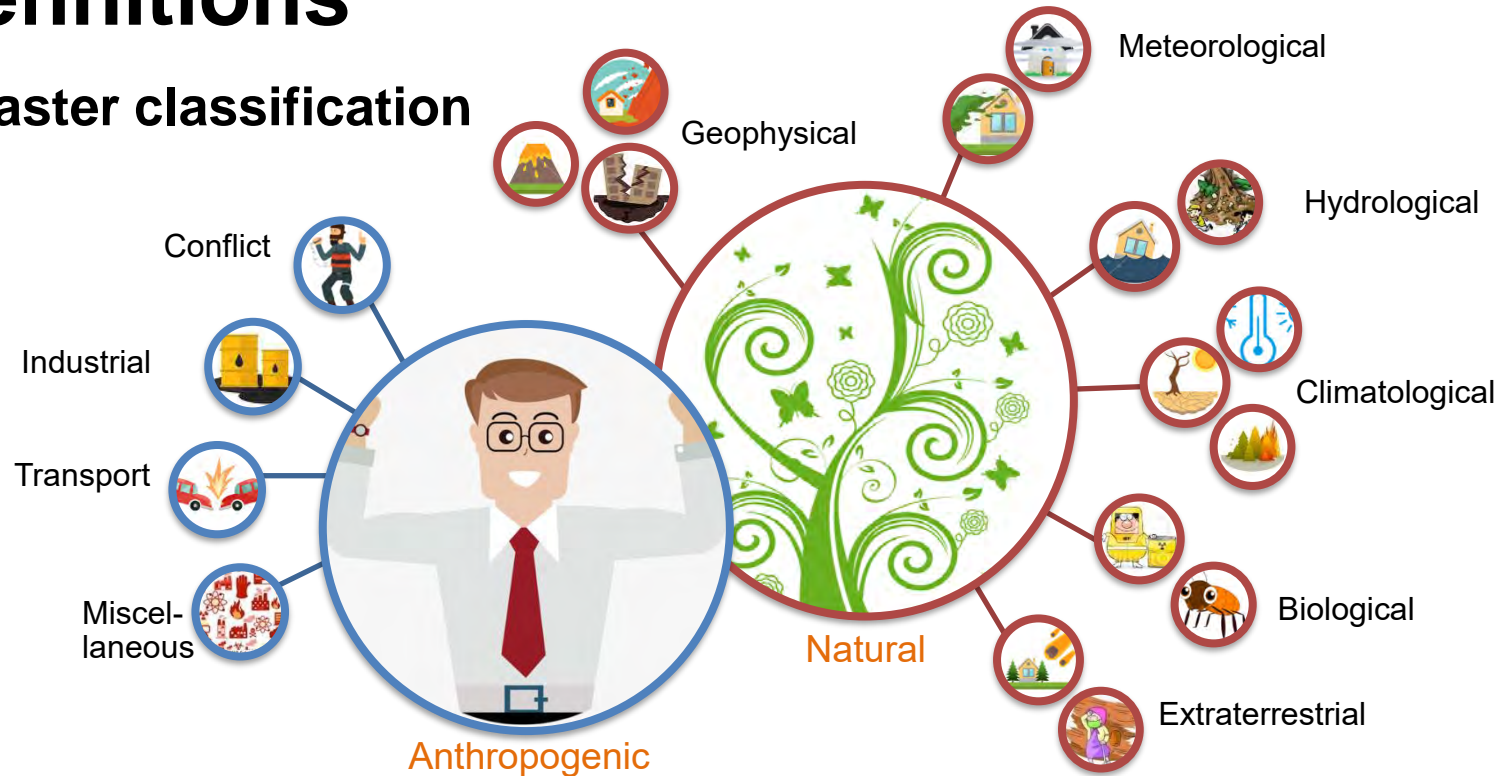
- Refers to the damaging effects of a sudden, long-lasting or intense natural or man-made phenomenon. It comes from the Italian word *disastro* (literally «mis/ill-star»).
- Extraordinary health situation  
⇒ provision of care exceeded by demand!

Michelangelo,  
The Deluge (1508-9)



# Definitions

## Disaster classification



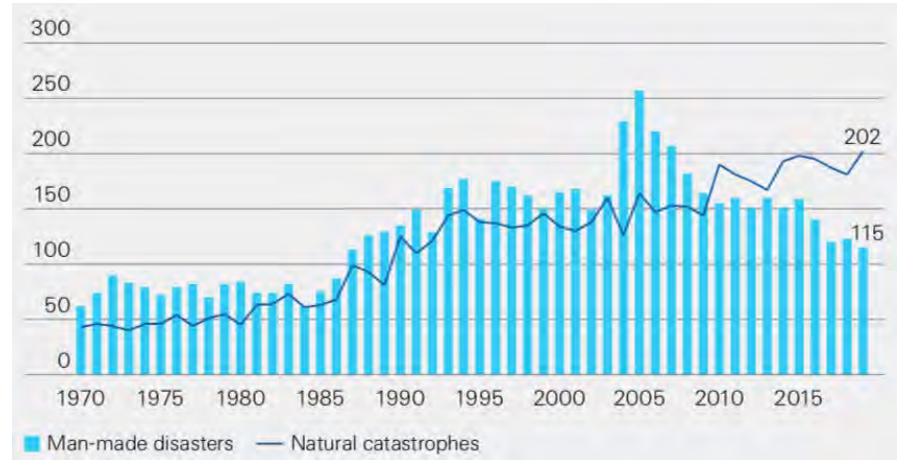
L. Schumacher, UNIGE, 2018; CRED; <https://www.emdat.be/classification>



# Importance of disasters

## Frequency

- The frequency of disasters, of natural as well as human origins, have increased meaningfully in the world in recent decades.
- These situations put a great strain on our health systems.
- Fortunately, the number of victims is tending to decrease.



Swiss Re Institute 2020

# Importance of disasters

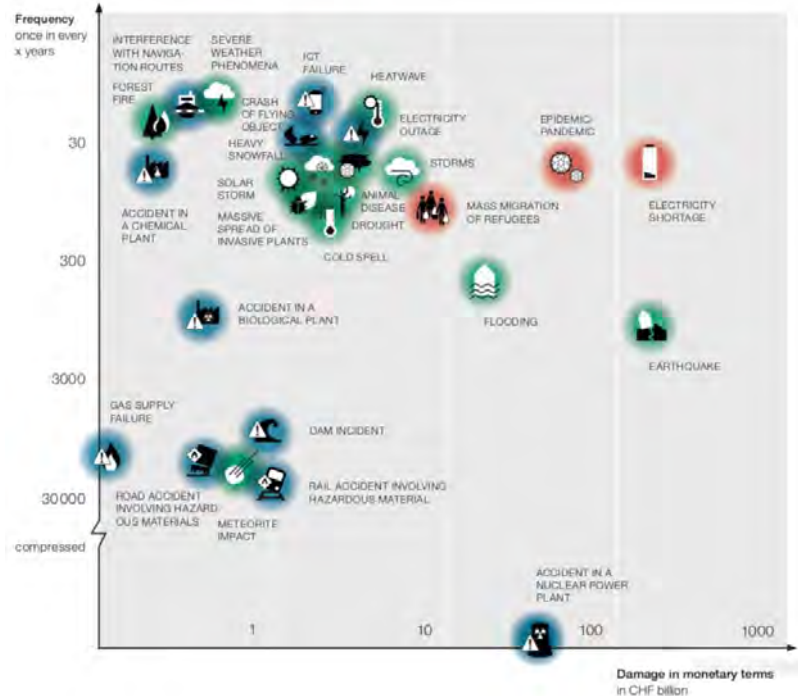
## Mortality

- In the 21<sup>st</sup> century, fewer people die from natural disasters because of:
  - Better prediction of events
  - More resilient infrastructure
  - Faster and more efficient **emergency response**

S. Pinker. Why our World is getting better. 2019

# Importance of disasters

## Risks in Switzerland



FOCP 2015

# Importance of disasters

## The example of epidemics

- Epidemics are rapid spread from an infectious disease to a large number of people.
- They appeared in the Neolithic period, when men have domesticated animals and concentrated in cities (9'000-3'000 years B.C).
- A “pandemic” is an epidemic developing over a large geographical (international) area.

The Plague of Athens (430-426 BC)



Michael Sweerts (1652)

J.-P. Gonzalez, P. Debré. Vie et mort des épidémies. 2013

# Importance of disasters

## The example of epidemics

- Although the ability to quickly identify the infectious germs have improved, the reservoir of pathogens has increased because of deforestation and mining, which promote the emergence of new viruses and bacteria.
- Moreover, human mobility, which has increased by 60% in the last decade, is an aggravating factor.
- The emergence of a global pandemic was therefore a known risk at the beginning of the 21<sup>st</sup> century.



Ebola (2014-2015)

R.S. Dhillon, et al. *Harvard Bus Rev* 2017

# Risk management

## Prevention

- Reducing existing risks and preventing the development of new risks (e.g. reforestation, anti-seismic standards, mapping, etc.).

## Control (⇒ crisis management)

- Reducing the impact of a disaster by **preparing and training specialists**.

## Recovery

- Reducing the risk of future damage by promoting appropriate reconstruction models.

SDC-FDFA; <https://www.eda.admin.ch/deza/en/home/themes-sdc/disaster-reduction-relief-reconstruction.html>

# Risk management

## Health response to disasters

- The coordination and conduct of disaster relief operations underpins the following measures:
  - strengthen the **human resources** available in the affected areas before the health care system is fully overwhelmed;
  - possess, in sufficient quantities, the **therapeutic products** (medicines and medical devices) necessary for the care of victims and the protection of the nursing staff;
  - put in place the appropriate **logistical tools** as soon as possible.
- At the national level, the Coordinated Medical Service has such responsibilities in Switzerland.



# Health response to disasters

- **Emergency medicine** brings together medical resources and necessary surgical procedures to be performed in an emergency.
- When the number of victims is important and/or local infrastructures are affected (roads, hospitals...), we talk about **disaster medicine**.



Eschede derailment (1998). ©Spiegel



# Health response to disasters

- **Emergency and disaster pharmacy** ensure the best possible pharmaceutical care for a population in large-scale emergencies, disasters or other extraordinary health situations.



<http://www.katastrophen-pharmazie.de/>; <http://www.disaster-pharmacy.ch/>