Response to COVID-19 in Italy challenges, opportunities and lessons learnt

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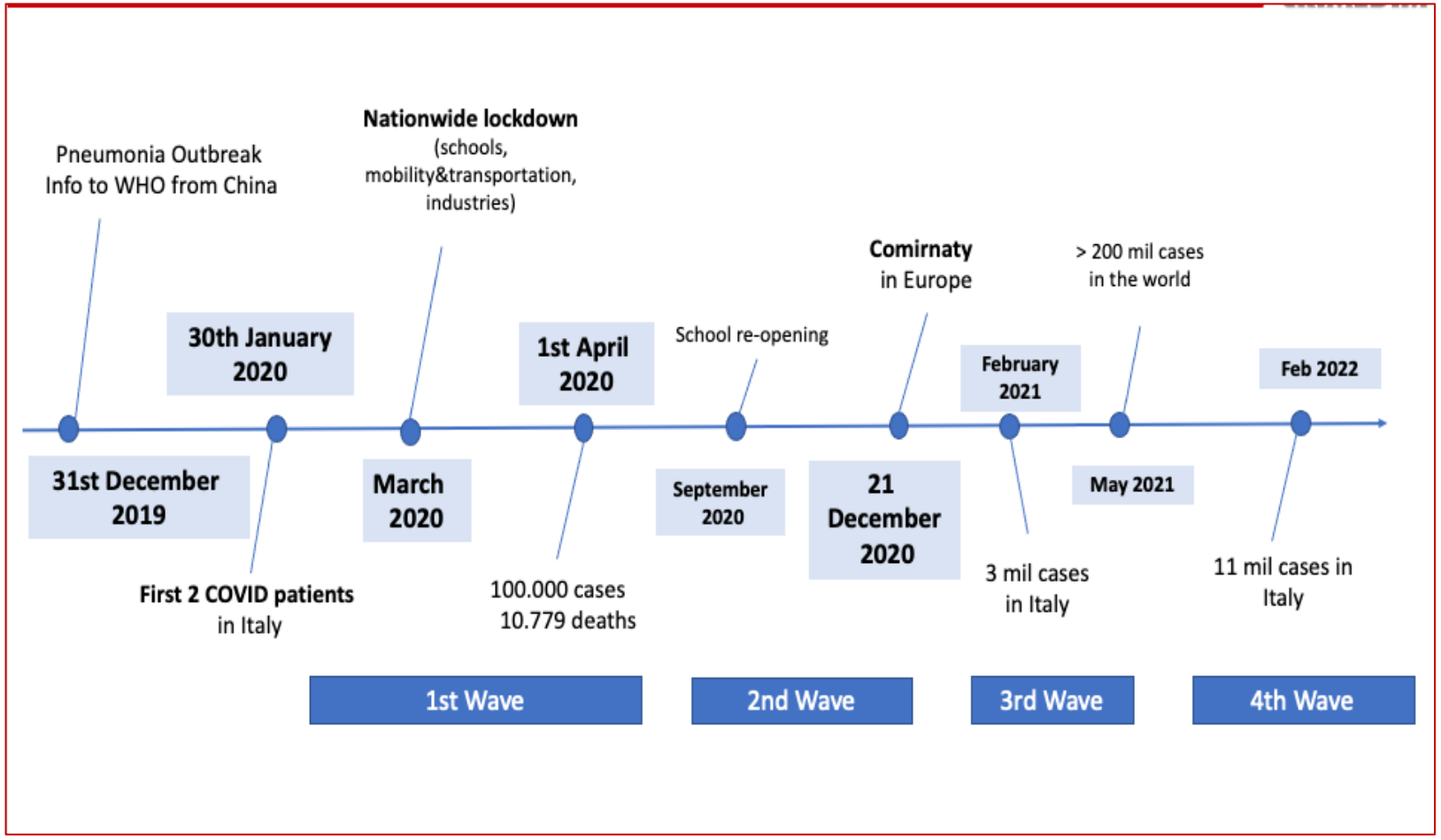
Fostering innovative resilience of clinical services to major disasters

Topics of today's presentation

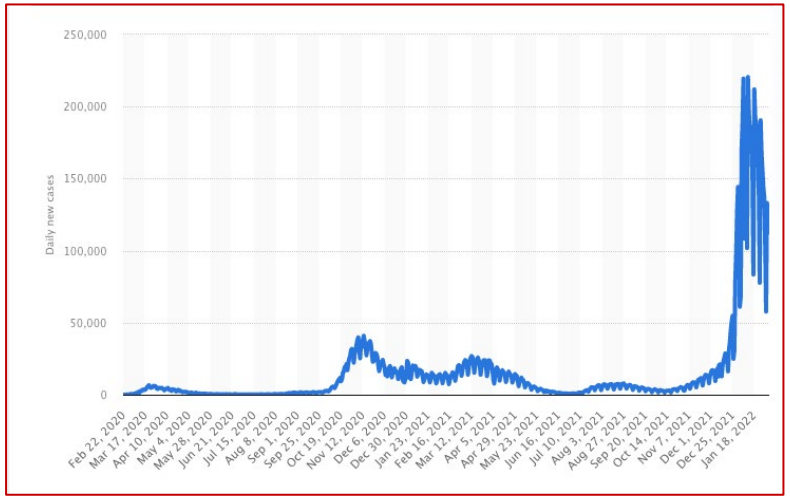
- **Introduction**
  - COVID-19 in Italy
- **Challenges**
  - Hospital and community level
- **Opportunities**
  - Strategies implemented
- **Lessons learnt**
  - Way forward

COVID-19 in Italy



Italy:

- 1st EU country hit by the virus, one of the most affected, especially during the 1st wave
- Infected: > 11 mln
- Deaths: > 140k (IHME)



Consequences on the health system

HOSPITALS

- Pressure on emergency services with swift saturation of beds in sub/ICU care
- Shortage of HCWs → surge capacity of unexperienced professionals
- Continuity of operations for urgent non-COVID cases
- Safety of staff and patients

COMMUNITY

- Surge in health care needs
- PHC-HCWs were few and sick
- Management of large number of patients/suspected cases at home
- Management = Monitoring over time
- Refer most serious cases to hospitals

NURSING HOMES

- Management of "fragile" patients
- Safety of staff and patients
- Preventive isolation of patients from relatives
- Referral of serious cases to the hospital

In-hospital surge capacity

Increased demand for clinical care → Health Service Expands Beyond Normal Capacity

Re-engineering of in-hospital services

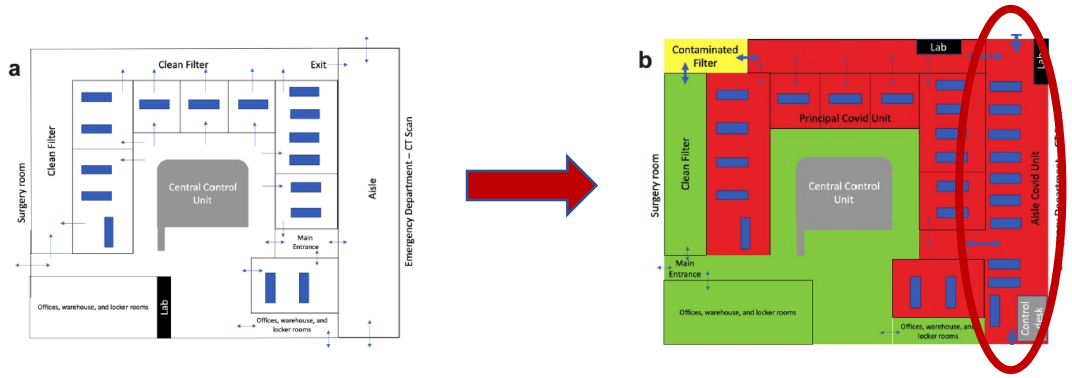
Expand the hospital capacity (physical space, personnel, supplies and processes)

- **Alternative** sites
- **Conversion** of hotels, gyms, into care units
- Cancel **dispensable services** if necessary
- **Adapt** admission and discharge **criteria**

Grant continuity of operations

- **Prioritize patients and clinical interventions** based on treatment capacity and demand
- Facilitate transfers to other hospitals reinforcing **health transportation system**
- **Safety** of HCWs
- **Training** of HCWs

ICU re-engineering of services at MCH, Italy



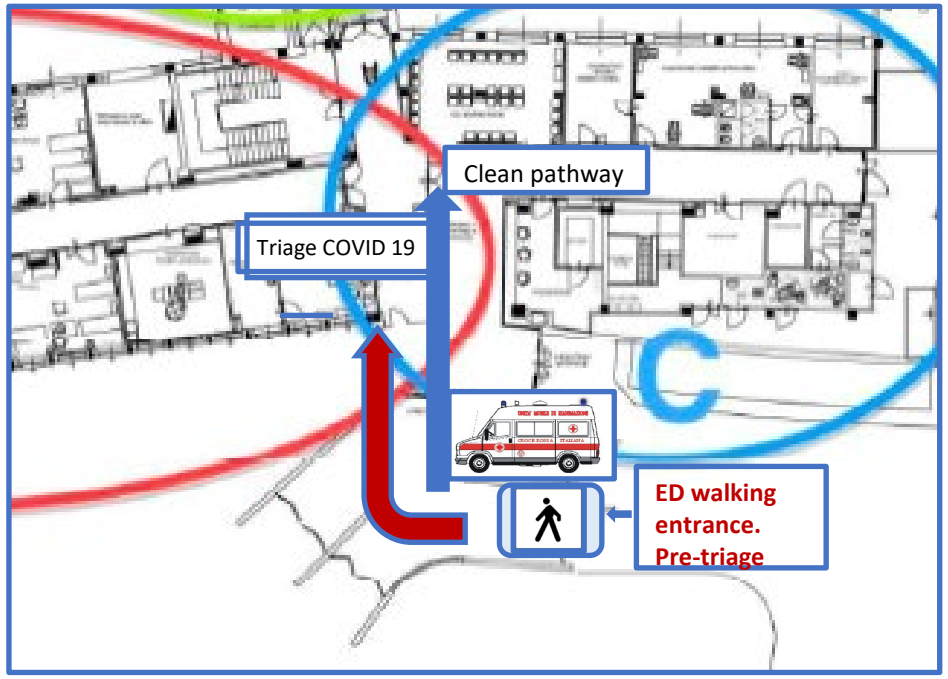
ICU

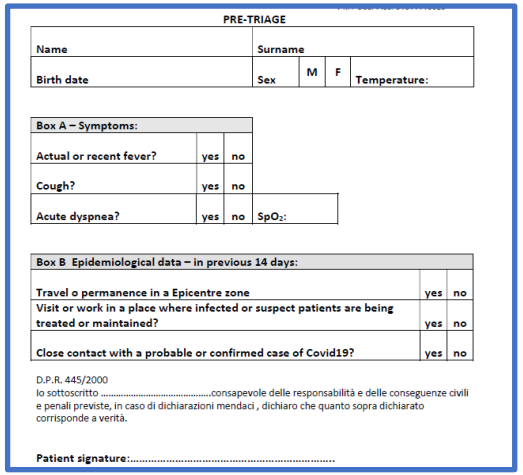
- All non-Covid patients transferred to Cardiovascular ICU
- New COVID-ICU: 29 beds
- Elective surgery suspended and emergency surgery moved to other ORs
- HCWs recruited from other depts. (also non-clinical)

CHALLENGES

- Necessity to swiftly expand number of beds in subICU/ICU
- Shortage of HCWs → > 300 healthcare workers were asked to change roles
- Continuity of operations for non-COVID urgent cases
- Safety of HCWs and patients

ED re-engineering of services





PRE-TRIAGE

Name	Surname			
Birth date	Sex	M	F	Temperature:

Box A – Symptoms:			
Actual or recent fever?	yes	no	
Cough?	yes	no	
Acute dyspnea?	yes	no	SpO_2:

Box B Epidemiological data – in previous 14 days:		
Travel o permanence in a Epicentre zone	yes	no
Visit or work in a place where infected or suspect patients are being treated or maintained?	yes	no
Close contact with a probable or confirmed case of Covid19?	yes	no

D.P.R. 445/2000
Io sottoscritto .....consapevole delle responsabilità e delle conseguenze civili e penali previste, in caso di dichiarazioni mendaci , dichiaro che quanto sopra dichiarato corrisponde a verità.

Patient signature:.....

ED:

- Re-engineering of pathways and systems to keep suspects/confirmed cases/other people separate
- Give priority to people with flu-like symptoms
- Triage-out: among COVID patients, admit only those with symptoms
- HCWs recruited from other departments (also non-clinical)

CHALLENGES

- No issues with bed capacity in the ER (ER capacities: limitless)
- Continuity of operations for urgent non-COVID cases granted
- Shortage of HCWs → surge capacity of unexperienced professionals
- Safety of staff and patients
- **ED as interlocutor for all instances**: emergency treatment, occupational health, GP-cases, public health (surveillance, contact tracing…)

Temporary hospitals

- Creation of alternative sites for COVID patients
- Low intensity patients: recovering from severe COVID-19, not ready to be discharged home

CHALLENGES

- 1st experience in a large-scale PHE/disaster for most of HCWs
- HCWs: No previous studies on disaster med in med/nursing schools
- Newly built hospital + disaster setting + unexperienced health care professionals from university + logisticians, engineers…

"*Valentino*" Field hospital
Torino – November 2020

At the community level

PHC professionals

- not equipped with PPE
- not trained for PHE/disasters
- not able to grant continuity of operations to their communities, no capacities for home-based care
- USCA: COVID special units of continuity of care

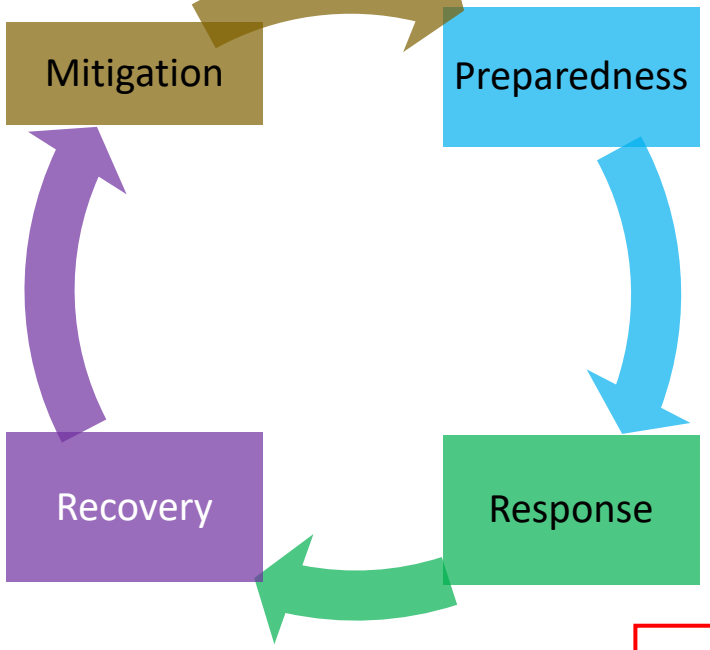
Nursing homes

- Not equipped at first with PPE --> safety of HCWs and patients
- Referral protocols with hospitals/GPs were lacking
- Preventive isolation of patients from relatives → psychological aspects (for patients, relatives and staff)

Communities

- Vulnerable communities (people with NCDs, with social or legal barriers) most impacted
- Conflicting and confusing information from media and public health experts

Lessons learnt from COVID-19



Lack of trained HCWs

Gaps in coordination across the entire HS

Poor logistics → Safety of staff and patients

No integration of crisis management

Overburdening of hospitals

Poor Risk communications strategy

Collapse of PHC services

Vulnerable most affected

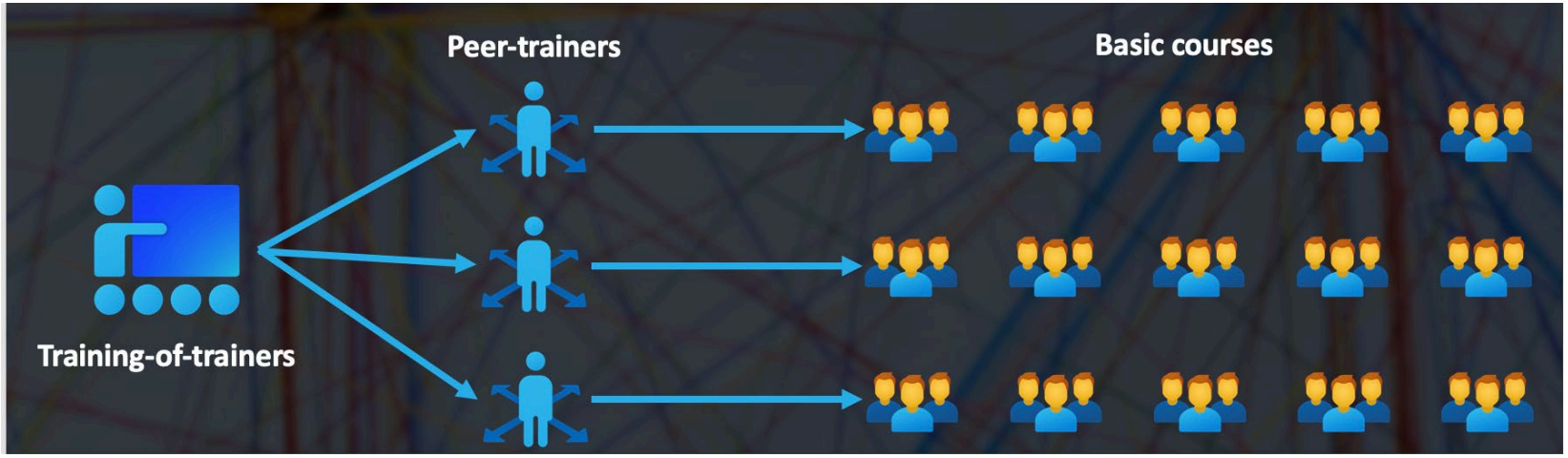
Over-emphasis on response over prep´ness

Dire management of community-based services

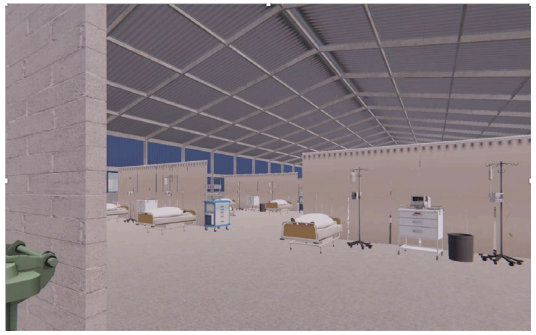
Opportunities: our initiatives



Training programs and simulation for HCWs deployed in temporary hospitals



Peer-to-peer training program for HCWs in hospitals/nursing homes


Virtual reality training

Lessons learned

Stuff

- **Practical lessons for internal organisation** (i.e. oxygen supply, ventilators, monitors, equipment, consumption in time…)

Staff

- **Safety** of HCWs and their families
- Task sharing to other cadres (nurses, healthcare assistants, community health workers…)
- Training:
  - "*just in time*" training
  - incorporate disaster medicine in the **medical and nursing school programs**.

Structure

- Keep separate pathways, consider space, distance, communication system with relatives and patients…
- Referral paths from PHC to hospitals and vice versa
- Need of **collaboration between services** (i.e. PHC, hospitals, pre-hospital services, laboratory, pharmacies, transportation services…) (*whole-of-society approach*)

Way forward

- *Lessons learnt* = H-EDRM precepts
- Further research is needed on how to implement the recommendations into practice
- CRIMEDIM launched the **BRACE** *(**B**olstering **R**esilience **A**nd **C**apacities for **E**mergencies)* initiative for strengthening preparedness of the health system
  - Multidisciplinary initiative (health care workers, disaster management expert, social scientists, legal experts…)
  - Research focusing on assessment of preparedness of different parts of the health system:
    - PHC preparedness
    - Community preparedness
    - Hospital preparedness
    - Other non-health aspects (financial, legal, communication)

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Integration and collaboration of all stakeholders to be more prepared for the next disaster

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