SARI CLINICAL CARE TRAINING

PANDEMIC PREPAREDNESS AND ETHICAL CONSIDERATIONS

World Health Organization

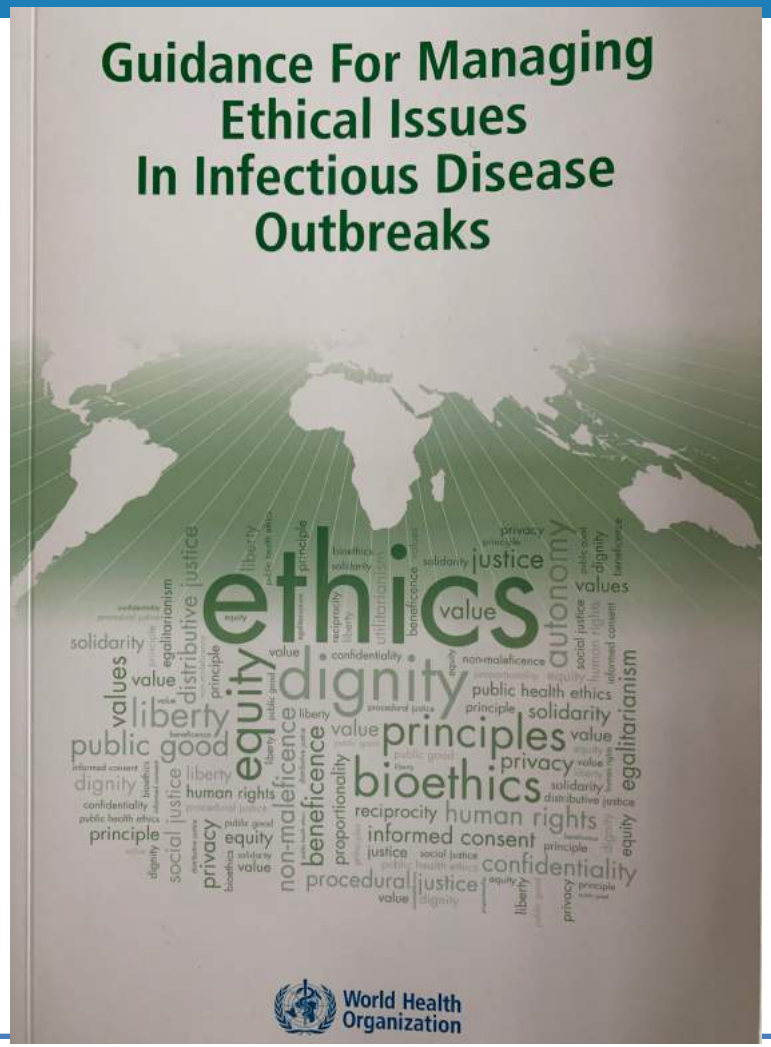
HEALTH EMERGENCIES programme

Learning objectives

At the end of this lecture, you will be able to:

- Describe importance of pandemic (or disaster) preparedness
- Describe how the context of triage may change during a pandemic (or other disaster)
- Describe the human rights framework
- Create a triage considerations to be used during a pandemic (or disaster) using five ethical principles

WHO Ethics publication



https://www.who.int/ethics/publications/infectious-disease-outbreaks/en/

Pandemic (or disasters) can easily overwhelm health systems

- Demand may exceed available ICU resources:
  - i.e. number of patients with respiratory failure requiring MV may exceed available resources.

- The triage principle of “first come, first served” that guides triage decisions into critical care units during non-pandemic times no longer suffice.

Challenge: to whom should ventilator be given?

PREPARE AND BE READY

Introduction and Executive Summary

Care of the Critically Ill and Injured During Pandemics and Disasters: CHEST Consensus Statement

- 2014, international consensus statement.
- Set of 12 comprehensive guidelines for pandemic and disaster preparedness.

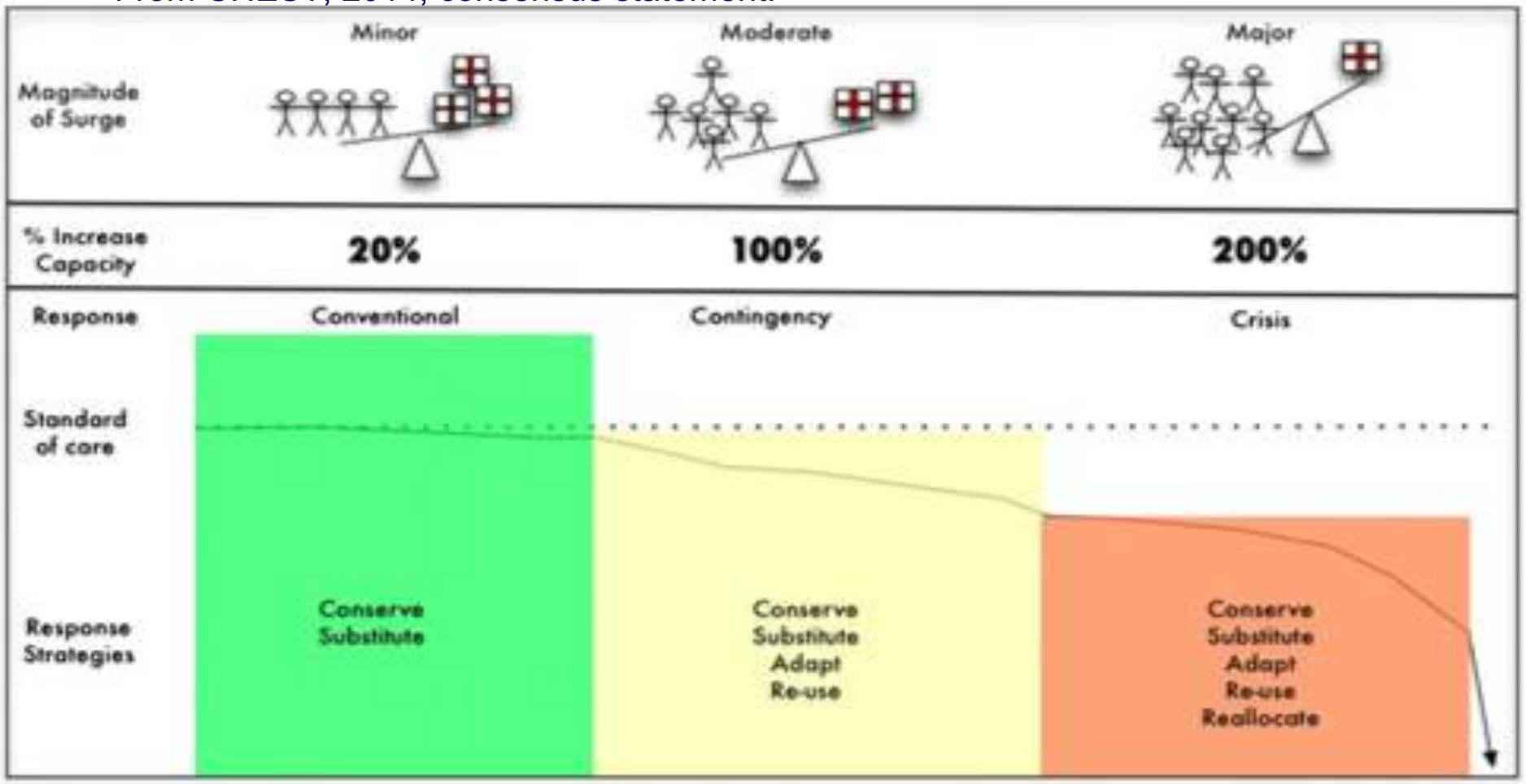
http://www.chestnet.org/Guidelines-and-Resources/Guidelines-and-Consensus-Statements/CHEST-Guidelines

Principles of pandemic preparedness plans

- Preparedness enables the **public and health systems** better respond to a pandemic or disaster.
- Created by an interdisciplinary team (e.g. health ministries, clinicians, administrators, managers, logisticians, pharmacists, engineers, ethicists, etc.).
- Early public engagement is essential to set priorities with stakeholders from civil society.
- Maintenance of transparency and fairness is essential to avoid chaos and fear.

Resources can become exhausted very quickly. Think of your wider source of resources, not just your unit.

From CHEST, 2014, consensus statement.



Plan for a surge

- Targets set on surge continuum.
- Situational awareness of larger health care system.
- Logistics (i.e. patient flow and distribution, evacuation).
- Staff preparation and organization.
- Value chain supply/continuity of operations.
- Legal considerations.

Plan for a surge

	Conventional	Contingency	Crisis
Space	Usual patient care spaces maximized	Patient care areas re-purposed (PACU, monitored units for ICU-level care)	Non-traditional areas used for critical care or facility damage does not permit usual critical care
Staff	Additional staff called in as needed	Staff extension (supervision of larger number of patients, changes in responsibilities, documentation, etc')	Insufficient ICU trained staff available/unable to care for volume of patients, care team model required & expanded scope
Supplies	Cached/on-hand supplies	Conservation, adaptation and substitution of supplies with selected re-use of supplies when safe	Critical supplies lacking, possible allocation/reallocation or lifesaving resources
Standard of care	Usual care	Minimal impact on usual patient care practices	Not consistent with usual standards of care (Mass Critical Care)
ICU expansion goal	X 1.2 usual capacity (20%)	X 2 usual capacity (100%)	X 3 usual capacity (200%)
Resources	Local	Regional/State	National

Take action early – conserve, substitute, adapt, reuse.

Pandemic preparedness in resource-constrained settings

- Enhance surveillance systems and reporting.
- Emphasize preventative interventions:
  - e.g. vaccination of high risk groups.
- Create partnerships with local and international partners **prior** to event with goal to plan for training and support.
- Equip clinicians with evidence-based triage and treatment protocols from WHO to mitigate need for critical care.

Pandemic preparedness in resource-constrained settings

- Strengthen basic health care facilities and delivery **at all levels.**

- Build on local expertise and services:
  - e.g. if adult or surgical ICU available, then build on this to accommodate children.

- If none available, develop minimum level of critical care to be provided at higher level hospital:
  - create processes that can be applied to patients most likely to benefit
  - e.g. use NIV or bubble CPAP if ventilators are limited.

See WHO website for guidance for COVID-19

- The following website has information for preparedness and readiness guidance and tools.
- https://www.who.int/emergencies/diseases/novel-coronavirus-2019
- https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance

ETHICS DURING PANDEMICS

Human rights framework (1/2)

- All human beings are born free and equal in dignity and rights:
  - right to freedom from cruel, inhumane or degrading treatment or punishments
  - right to freedom of movement and residence
  - right to freedom from arbitrary detention
  - right to health.

International obligation for all nations to promote and protect the health of their civilians, especially by facilitating access to basic health care services

Human rights framework (2/2)

- International law allows restrictions on individual freedoms for the public good (i.e. when public health is threatened).

- Governments, health ministries and public health agencies make restrictions based on:
  - public health necessity
  - reasonableness
  - proportionality
  - justice.

Striking a balance between individual and collective good can be challenging, especially under conditions of scientific uncertainty and crisis.

Equity and health (1/2)

- Inequities are differences in health that are unnecessary, avoidable, unfair and unjust.

- Do **not** discriminate based on:
  - age
  - gender
  - race
  - ethnicity
  - religion
  - political affiliation
  - social or economic status.

Equity and health (2/2)

- Fair distribution of benefits and burdens.

- In some circumstances, distribution of benefits and burdens according to individual or group may be considered fair:
  - e.g. it may be equitable to give preference to those worst off such as the poorest, sickest, or most vulnerable
  - e.g. vaccines or post-exposure prophylaxis for health care workers.

Ethical principles

Principle of utility

- Commonly accepted and justified during public health emergencies.

- Aim is to save the greatest numbers of lives:
  - meaningful independent survival rather than vegetative state.

- Less priority to patients who are less likely to recover or sicker.

Challenge: is there a triage tool that can quickly predict which patient has lowest chance of short-term survival?

Principle of maximum life years saved

- Aim is to refine principle of utility by considering the number of life-years saved in addition to lives saved.
- If two patients have same short-term survival, but

one has severe comorbid disease that limits long term survival

one is healthy

- Then priority would be given to healthier patient to save more life-years.

Principle of life cycle

- Also known as fair innings or intergenerational equity principles.
- Aim is to give each individual an equal opportunity to live through the various phases of life.
- Priority is given to younger patients relative to older patients.

This may be considered discriminatory against older people, conflict with cultural values prioritizing age over youth. May be considered social worth criterion.

Caution from WHO about life cycle principle

- Everyone is entitled to some "normal span" of life years.
- Younger individuals receive priority because they have had fewer opportunities to live through life's stages.
- Notion of equality to individuals' whole lifetime experiences rather than just to their current situation.
- Any age-based prioritization should rely on broad life stages.

Principles of first come first served and random (lottery) selection

- "If there is no relative difference between patients, then each should have an equal chance to receive life-saving treatment."

- Ensures procedural fairness and equitable access and can be practically implemented:
  - may promote trust, avoids discrimination
  - applicable to paediatric population.

Caution: may unfairly disadvantage those who cannot access hospitals quickly.

Use of triage protocol: CHEST consensus statement 2014

- The **uniform triage process** should be prepared beforehand, publically vetted and widely disseminated.

- If resources become scarce despite all efforts of augmentation, activate the **uniform triage process.**

- The **uniform triage process** should be activated by regional authority with legal protection and situational awareness.

Examples of triage tool (1/4):

http://www.chestnet.org/Guidelines-and-Resources/Guidelines-and-Consensus-Statements/CHEST-Guidelines

- CHEST consensus statement does not recommend a certain tool, but highlights important principles:
  - identify critical care triage officer/team to lead triage to take burden off treating clinicians
  - use of a triage protocol is superior to clinical judgment alone.
  - create inclusion criteria for ICU admission.

Example of triage tool (2/4)

- Consider exclusion for patients with > 90% risk of death and patients with short life expectancy (< 1 year).

– Give opportunity for appeals (deviation from protocol) and re-evaluation after 48–72 hours.

– There is no triage tool that satisfactorily predicts survival in children.

– Include paediatric experts as much as possible in planning and triage process.

Sequential Organ Failure Assessment (SOFA) score

- SOFA has been proposed as a physiologic score to be used as a mortality prediction model in **adults:**
  - higher score associated with worse outcome
  - early study showed that score > 11 associated with > 95% mortality, but follow up studies not as conclusive.

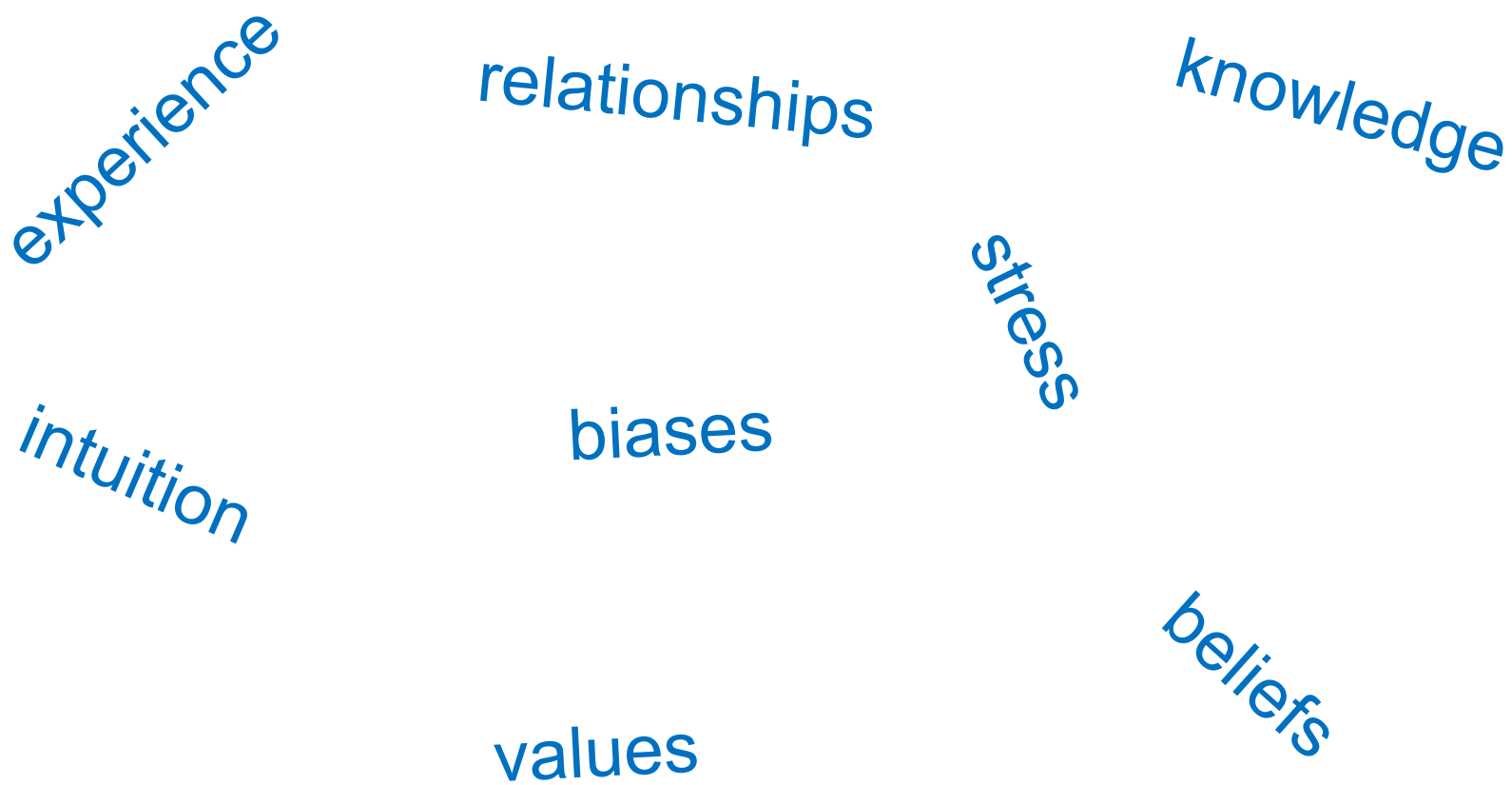
Caution: SOFA score does not always differentiate between survivors and non-survivors across all critically ill patients.

Sequential Organ Failure Assessment (SOFA) score

- SOFA can **not** be used in children because it is not validated in children.

- In general, mortality rates are lower for critically ill children and prediction scores are less reliable in predicting death except in some small groups of children (i.e. out of hospital arrests).

What affects our decisions?



Summary

- Pandemic preparedness should entail surge capacity response, public engagement, and health system strengthening. A uniform triage process should be activated only when resources are overwhelmed.
- During a pandemic or other mass disaster, the need for critical care services can overwhelm available resources and triage decisions may need to be made on how to prioritize patients.
- Five ethical principles that can guide triage tools include: the principles of utility, maximum life-years saved, first come first served, random selection, and life cycle.
- Public engagement in pandemic preparedness is essential to develop a prioritization strategy that is fair, transparent and builds trust.

Acknowledgements

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