

# Hospital Pandemic Preparedness

Surabaya, 10 May 2010



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# Why do we need a plan?

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# Why do we need a plan?

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- Provide a time-bound framework
  - for emergency response to the influenza pandemic based on national priorities
- Ensure that resources are mobilized and used most efficiently
- Facilitate coordination
  - among various sectors, particularly those dealing with human and animal health



# Hospital pandemic preparedness plans

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- The plan should be kept simple and it must be widely shared.
- It must be understood by all concerned actors (staff, patients, volunteers, partner institutions etc)
- It must clearly define roles, behaviors and protocols of all those involved
- The protocols should not substantially differ from the daily practice and vice versa.



# Implications for pre-hospital care

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# Implications for pre-hospital care

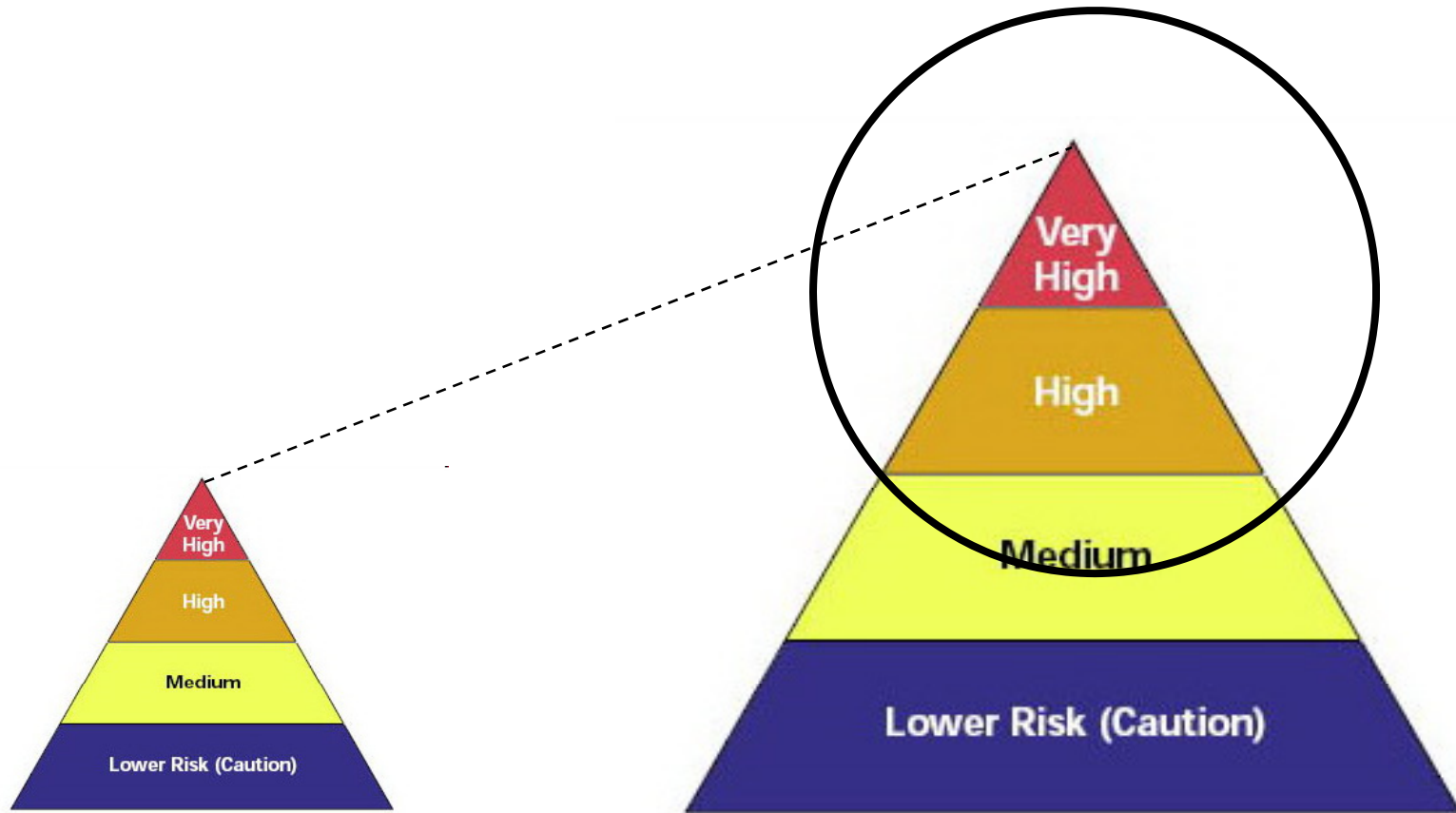
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## 1. Surge

- Susceptibility of population
- Transmissibility of influenza virus
- Health seeking behaviour



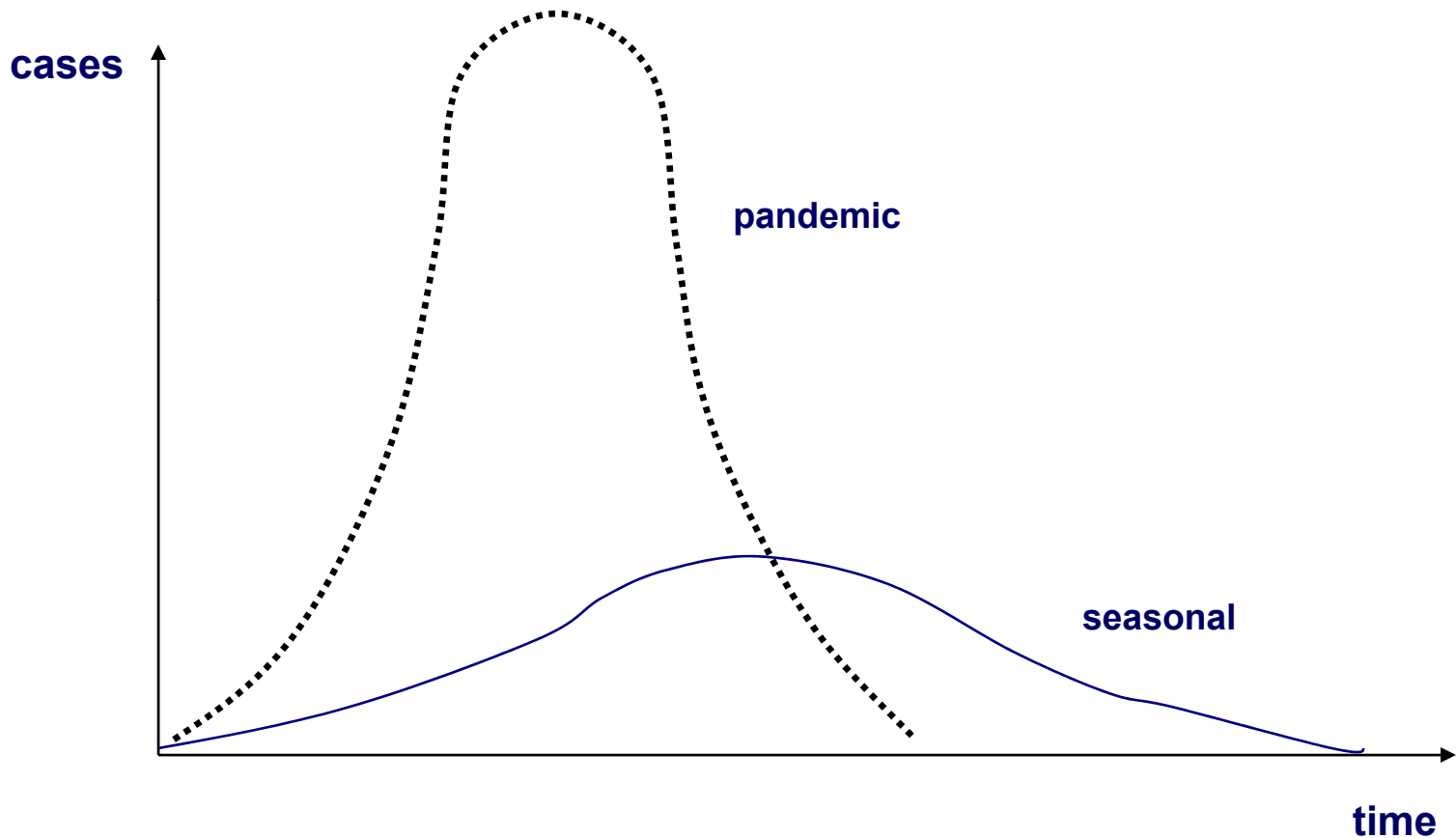
# Implications for hospital



**Seasonal influenza**

**Pandemic influenza**

# Implications for hospital care





# Impact of pandemic in hospitals

## 2. Disruption to services

- Hospital facilities including outpatient clinics, inpatient wards, intensive care units and hospital logistic units are expected to come under great stress during a pandemic.



# Impact of pandemic in hospitals

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## 2. Disruption to services

- We also anticipate the normal functioning of the hospitals to be affected by additional measures in triage and infection control.



# Implications for pre-hospital care

## 3. Healthcare worker absenteeism

**BMC Public Health**



Study protocol

Open Access

**Healthcare workers' attitudes towards working during pandemic influenza: A multi method study**

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“There are potentially greater than normal health risks for some healthcare workers working during a pandemic, and these workers may be concerned about infecting family members/ friends.”

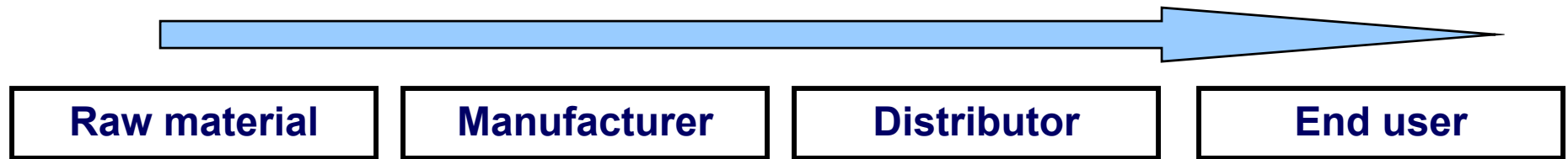
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# Impact of pandemic in hospitals

## 4. Supplies



### Potential vulnerabilities

1. Multiple sources of raw material
2. Reduced transportation
3. Workforce absenteeism
4. Increased demand

# Specific issues in hospital pandemic response

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# Specific issues in hospital pandemic response

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## 1. Implementation of hospital pandemic preparedness and response plan

- The implementation of the plan can be scaled upwards incrementally according to the extent of the burden with which the hospital is dealing
- In most scenarios, we may expect transiting from the first suspected cases of likely epidemic infections to a full scale progression of the pandemic occurring in the concerned community with community level transmission
- The strategy of the hospital should align itself with that of local or national government e.g. containment or mitigation strategies



# Specific issues in hospital pandemic response

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## 2. Screening, isolation, cohorting and traffic control of patients

- Triage early
  - The aim of this is to minimize mixing of pandemic cases with non-pandemic ones so as to avoid nosocomial infections
  - especially for those who are at high risk of morbidity and mortality from pandemic disease
- Procedures should be in place for identification of cases (both confirmed as well as suspect cases, based on prevailing case definitions) with implementation of isolation precautions



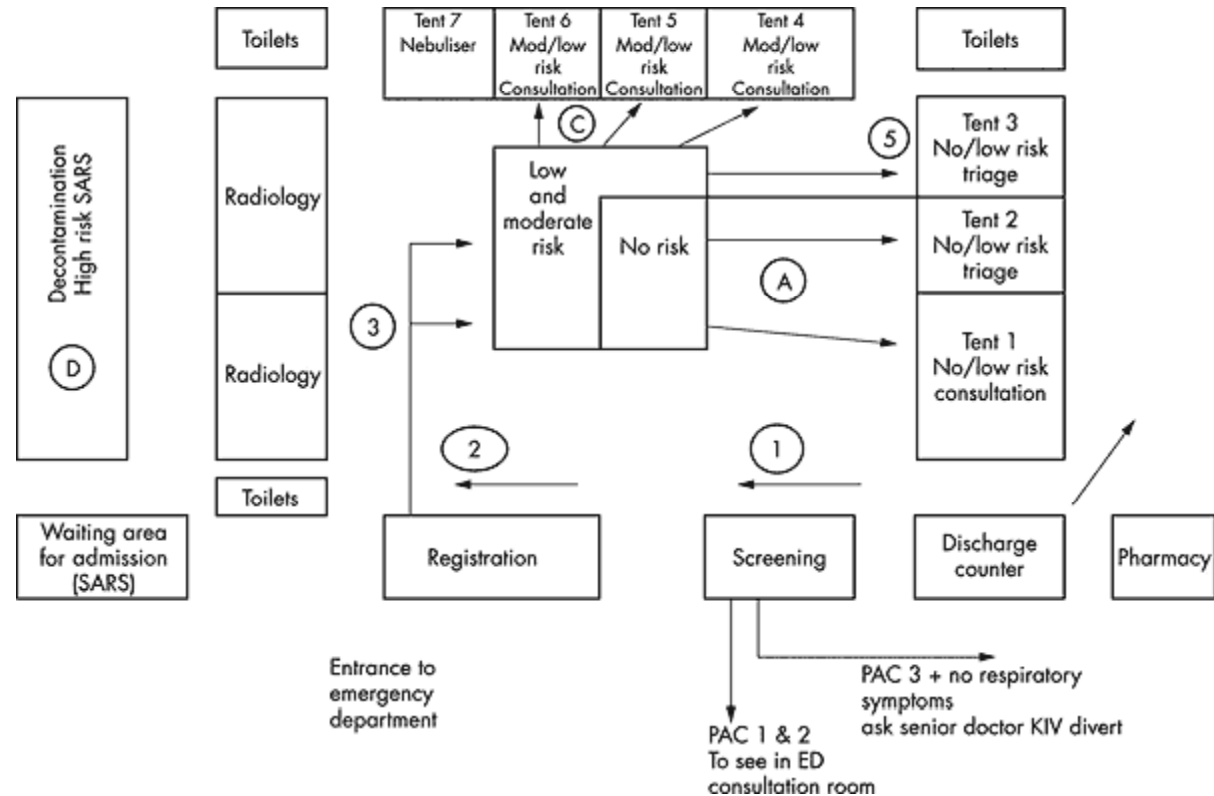
# Specific issues in hospital pandemic response

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# Specific issues in hospital pandemic response



# Hospital Infection Control

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- Hospital Infection Control Committee
  - Infectious diseases specialist
  - Laboratory technician
  - Pharmacist
  - Infection control nurses
- Surveillance
  - Hospital acquired infection surveillance
- Infection Control Nurses



# Isolation Precautions

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- **Standard Precautions**
- **Respiratory Hygiene and Cough Etiquette**
- **Expanded Precautions : Droplet, Contact, Airborne**



# Respiratory Hygiene / Cough Etiquette

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- **Apply to all patients with respiratory illness**
- **Source control measures**
- **Early separation**
- **Early isolation**
- **Droplet precautions**
- **Hand Hygiene**
- **Waste management**



# Hospital Infection Control – Hospital Management

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- **Administrative measures, Education**
- **Hand hygiene**
- **Patient care equipments, soiled linen**
- **Prevent needle and sharp injury**
- **Patient placement**
- **Transportation of patients**
- **Personal Protective Equipments (PPE)**
- **Waste disposal**
- **Cleaning and disinfection**
- **Personal Hygiene**



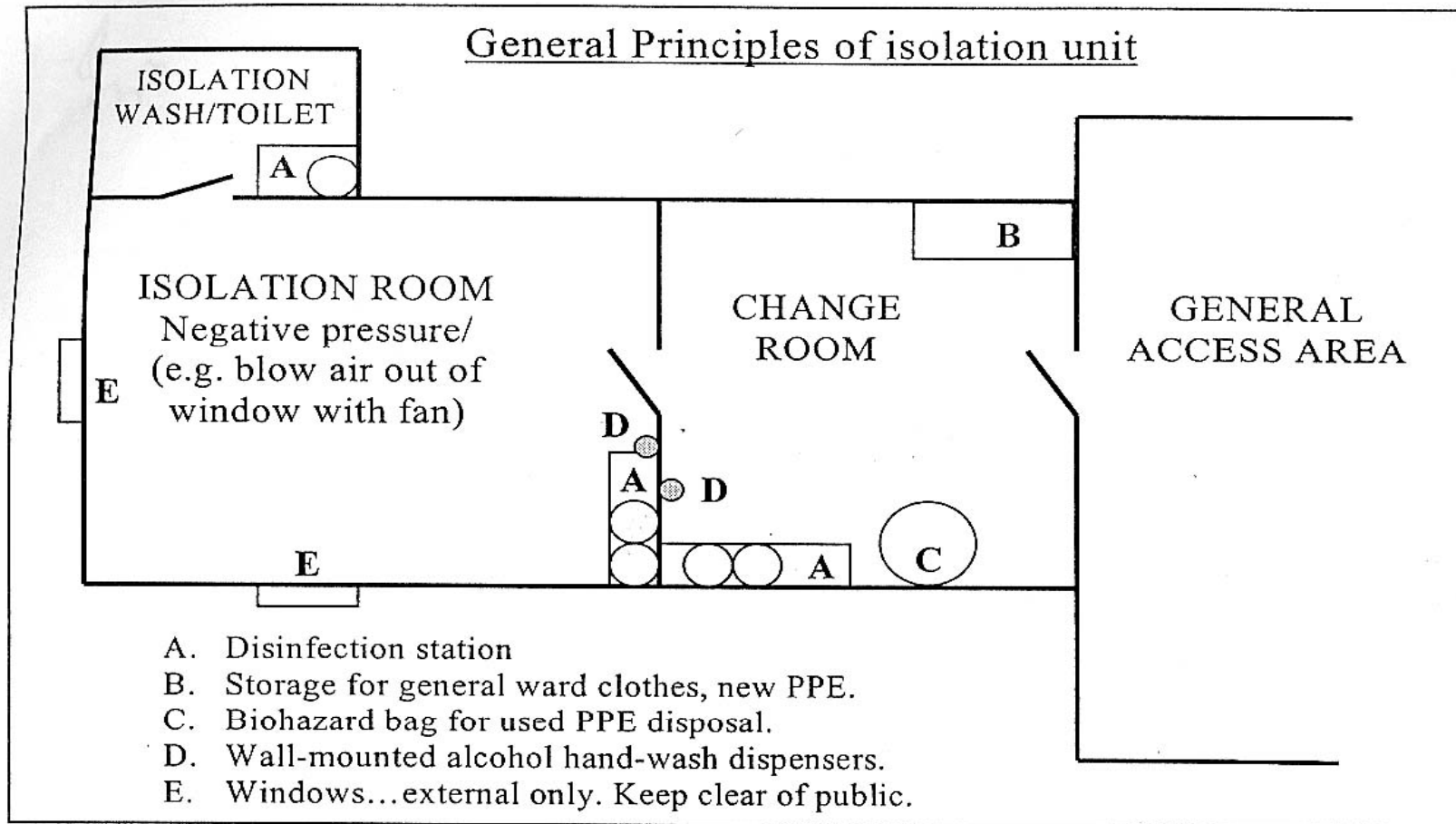
# Patient Placement

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- **Airborne infection isolation room (AIIR)**
- **Single room with toilet and hand hygiene facilities**
- **Anteroom**
- **Ability to provide intensive care: oxygen, suction**
- **Ability to observe the patient from outside**

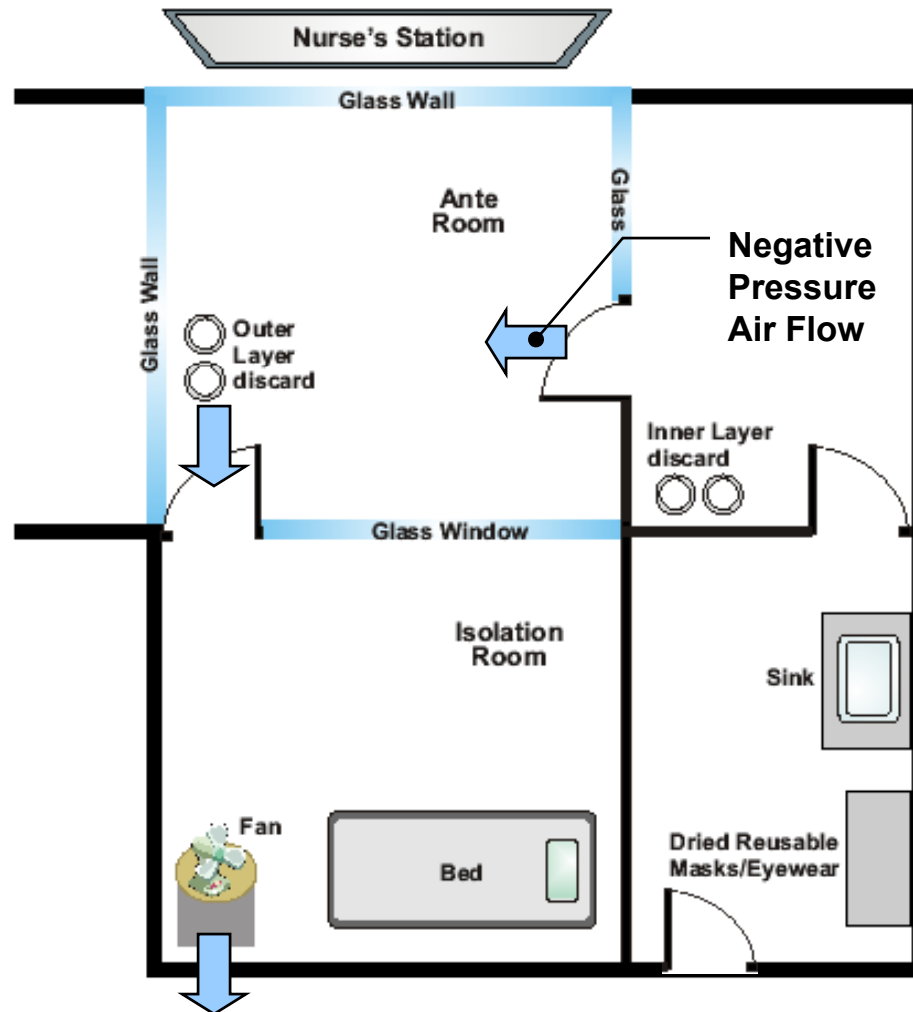


## ANNEX: Recommended Floor Plan for SARS Isolation Unit



Source: World Health Organization, Western Pacific Regional Office. Interim Guidelines for National SARS Preparedness. WHO WPRO, 2003.

# Schematic of Anteroom





# One Real World Example





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**Well sealed room**



# Putting on PPEs





# Taking off PPEs





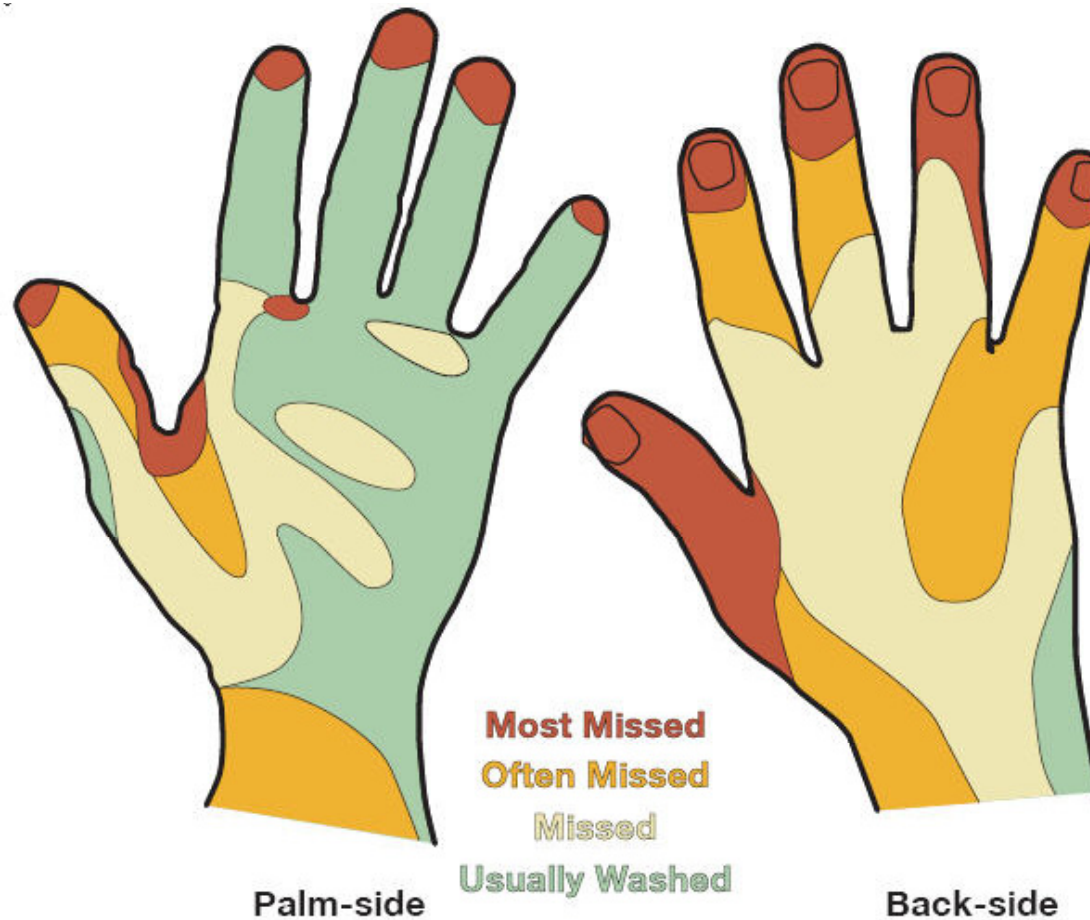




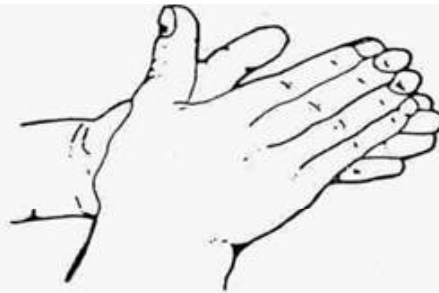
# Hand Washing



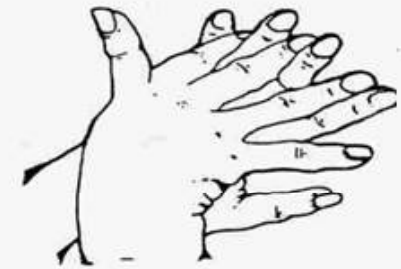
# Parts of Hand Often Missed in Hand Washing



# Six step hand washing technique



1. Palm to palm



2. Right palm over left dorsum and left palm over right dorsum



3. Palm to palm fingers interlaced



4. Backs of fingers to opposing palms with fingers interlocked



5. Rotational rubbing of right thumb clasped in left palm and vice versa



6. Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa

# Specific issues in hospital pandemic response

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- Traffic controls
  - Prevent mixing (exposure)
  - Security



# Specific issues in hospital pandemic response

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- Bed management
  - Criteria for admission
  - ICU
  - Referrals to other hospitals



# Specific issues in hospital pandemic response

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## 3. Vulnerable groups

- People with limited self-sufficiency e.g. elderly and disabled people may not have equal access to medical care in critical situations such as a pandemic. Ironically, these groups may be more likely to develop complications during a pandemic due to their underlying conditions or state of health.
- They may thus require special assistance to facilitate their access to the hospital and to guide them through medical care delivery.

# Key messages

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- Early preparedness is the key
- Adapt plans to your local needs
- Pandemic situation will continue to evolve





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Thank You

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