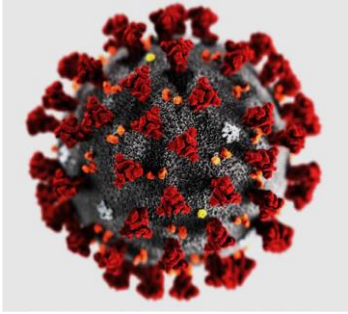
醫院管理局
HOSPITAL AUTHORITY



Coronavirus Disease 2019 (COVID-19) - Infection Control Measures in HA

Prepared by

Chief Infection Control Officer (CICO) Office

26 February 2020

Emergency Response Level

- On 25 Jan 2020, HA announced the activation of **Emergency Response Level** in public hospitals to tie in with the Government raising the response level from “Serious” to “Emergency” in response to the latest situation of Novel Coronavirus.

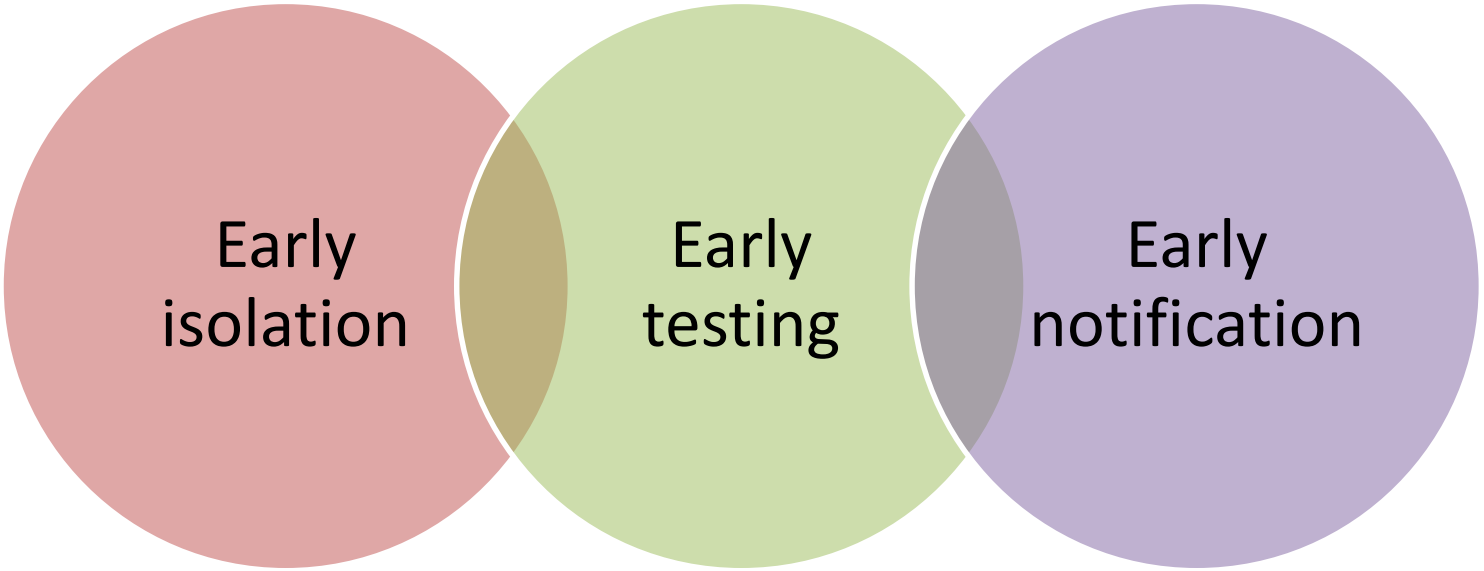
Routes of Transmission

- This evidence demonstrates viral transmission by droplets and contact with contaminated surfaces of equipment; it does not support routine airborne transmission.

- Airborne transmission may happen, as has been shown with other viral respiratory diseases, during aerosol-generating procedures (e.g., tracheal intubation, bronchoscopy), thus WHO recommends airborne precautions for these procedures.

Source:
1. WHO (16 Feb 2020). Q&A on infection prevention and control for health care workers caring for patients with suspected or confirmed 2019-nCoV. https://www.who.int/news-room/q-a-detail/q-a-on-infection-prevention-and-control-for-health-care-workers-caring-for-patients-with-suspected-or-confirmed-2019-ncov
2. WHO (23 Feb 2020). Q&A on coronaviruses (COVID-19). https://www.who.int/news-room/q-a-detail/q-a-coronaviruses

Bundle Approach



AED Triage – FTOCC Risk Assessment

Patient

Arrives at hospital
A&E registration

Triage
Staff should wear minimum PPE: Surgical mask, eye protection, gown, +/- gloves

Fulfill **FTOCC** reporting criteria
- Fever
- Travel
- Occupational exposure
- Contact history
- Clustering phenomenon

Yes

No

Follow usual A&E procedure

Designated AIIR Assessment
Staff should wear PPE: N95 respirator, goggle / face shield, gown, gloves

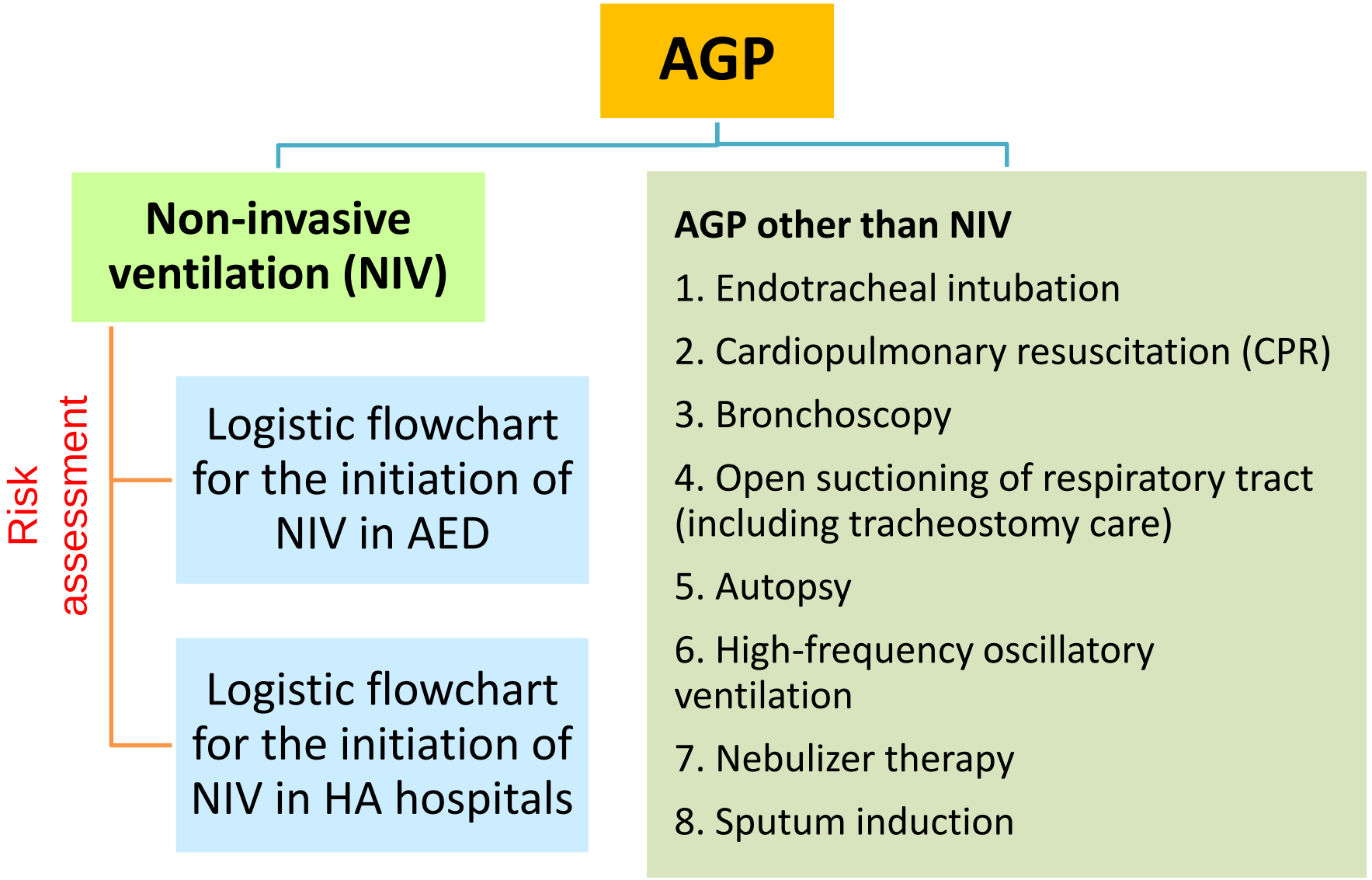
Patient Isolation

1. Nurse in **Airborne Infection Isolation Room (AIIR)** (i.e. with negative pressure and at least 12 ACH) en- suite with toilet facility, in an isolation ward setting)

2. Implement **Airborne, Droplet and Contact Precautions** in addition to Standard Precautions

3. PPE: N95 respirator, eye protection (goggles / face shield), isolation gown, gloves, and cap (optional) for aerosol-generating procedures (AGPs) and routine patient care

Aerosol-generating Procedures (AGPs)



Aerosol-generating Procedures (AGPs)

- All AGPs should be conducted under airborne precautions.
- In high risk patient areas, place patient in a negative pressure airborne infection isolation room (AIIR) before performing AGPs.
- In other patient areas, place patient in a well-ventilated area (e.g. at least minimum overall 6 air changes per hour (ACH) or use portable HEPA filter e.g. IQ Air if indicated) before performing AGPs.

Respiratory Protection Program for Healthcare Workers

- Before initial use of N95 respirator, fit test should be performed to select a suitable type, model and size of respirator for individual respirator user. Test results should be maintained according to local hospital protocol.
- Qualitative Fit Test (QLFT) and Quantitative Fit Test (QNFT)
- Maintain Fit Test results record

*每次配戴N95呼吸器後, 要做正壓及負壓密合檢查。
*Perform positive and negative seal check every time after wearing N95 respirator

正壓檢查:
以雙手遮著口罩，然後大力呼氣。如空氣從口罩邊緣溢出，表示配戴不當，必須再次調校頭帶。

負壓檢查:
以雙手遮著口罩，然後大力吸氣。口罩中央會凹陷，如空氣從口罩邊緣進入，表示配戴不當，必須再次調校頭帶。在未將口罩校至適合位置前，切勿進入空氣污染地區。

- **Positive Seal Check:**

Place both hands completely over the respirator and exhale sharply. If air leaks around respirator edges, adjust the straps back along the sides of your head. Perform seal check again if an adjustment is made.

- **Negative Seal Check:**

Place both hands completely over the respirator. Inhale sharply and the respirator will collapse slightly. If inward leakage of air is detected, the seal of the respirator is considered unsatisfactory. Reposition it by adjusting the straps. If you cannot achieve a proper seal, do not enter the contaminated area.

Patient Care Equipment

1. Handle used/soiled patient-care equipment carefully to prevent skin and mucous membrane exposures, contamination of clothing, and transfer of microorganisms to other patients and environment

2. Use disposable items when those items cannot be cleaned or disinfected properly

3. Designate non-critical patient care equipment to the patients. If sharing is unavoidable, clean and disinfect with sodium hypochlorite solution 1,000 ppm after each patient use

4. Respiratory therapy equipment require high-level disinfection. Central reprocessing is preferred based on local hospital policy. Well-packed contaminated items before transfer to prevent environmental contamination

Environmental Control

1. Decontaminate the environment regularly and immediately when becomes visibly soiled

2. Decontaminate patient environment, **especially high-touch areas**, at least once daily in general clinical areas

3. Clean and disinfect with sodium hypochlorite solution 1,000 ppm twice daily in high risk areas with suspected and confirmed patients

4. Perform terminal disinfection upon each patient discharge

5. Strengthen cleaning schedule as advised by HICT

Linen Handling

1. All linen should be classified as infected linen. Linen bag should be secured with "infected linen" tag with information of the origin.

2. Avoid sorting linens in patient-care areas.

3. Place linen into water soluble bag, then a laundry bag with minimal manipulation or agitation to avoid contamination of air, surfaces and persons.

Waste Management

- All wastes from suspected or confirmed patients are classified as **clinical waste**

  Follow HA Operation Circular No. 14/2015 Implementation of Clinical Waste Management Plan (CWMP) for proper handling and disposal of clinical wastes

- Use bedpan washer to clean and thermal disinfect the urinals and bedpans

- If bedpan washer is not available, please consider to use the liner bag. After use, the contents are to be solidified with high-absorbency gel and then discarded as **clinical waste**.

Example:
Bedpan Liner

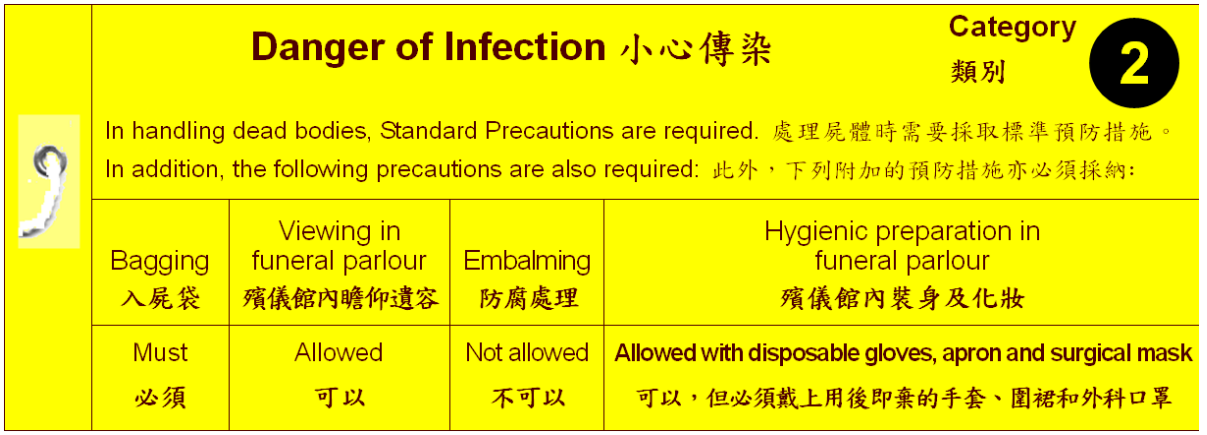
Cleaning of Spillage of blood, body fluids, or other potentially infectious materials

1. Clean the visible soils with disposable absorbent material and discard it into the appropriate waste bag
2. Mop the area with a cloth or paper towels wetted with sodium hypochlorite solution 10,000 ppm, leave for 10 minutes
3. Then rinse with water and allow the area to air dry

4. 70% alcohol can be used in metal surface if household bleach is contraindicated

Handling of Dead Body

1. Handling and disposal of dead body according to **Cat. 2**
2. **Full PPE i.e. N95 respirator, eye protection (goggles or face shield), fluid resistant gown, disposable gloves**
3. **The dead body should be first placed in a robust and leak-proof transparent plastic bag of not less than 150 µm thick, which should be zippered closed. Pins are NOT to be used. The bagged body should be either wrapped with a mortuary sheet or placed in an opaque body bag.**
4. **The outside of the body bag should be wiped with 1 in 4 diluted household bleach (mixing 1 part of 5.25% bleach with 4 parts of water) and allow to air dry.**
5. Use YELLOW label



Danger of Infection 小心傳染

Category 類別 **2**

In handling dead bodies, Standard Precautions are required. 處理屍體時需要採取標準預防措施。
In addition, the following precautions are also required: 此外，下列附加的預防措施亦必須採納：

Bagging 入屍袋	Viewing in funeral parlour 殯儀館內瞻仰遺容	Embalming 防腐處理	Hygienic preparation in funeral parlour 殯儀館內裝身及化妝
Must 必須	Allowed 可以	Not allowed 不可以	**Allowed with disposable gloves, apron and surgical mask** 可以，但必須戴上用後即棄的手套、圍裙和外科口罩

Precautions for Handling and Disposal of Dead Bodies, 10th edition.
https://www.chp.gov.hk/files/pdf/grp-guideline-hp-ic-precautions_for_handling_and_disposal_of_dead_bodies_en.pdf

Patient Transport

1. Limit patient transport to essential purpose only
2. Wear appropriate PPE when handling patients
3. Provide surgical mask to patients during transportation if not contraindicated
4. Inform the receiving ward/ parties before patient transport to facilitate appropriate arrangement.
5. Inform the administration to prepare the designated route for transport. The involved area should be disinfected afterwards.
6. Disinfect transport vehicles after use

Enhanced Measures

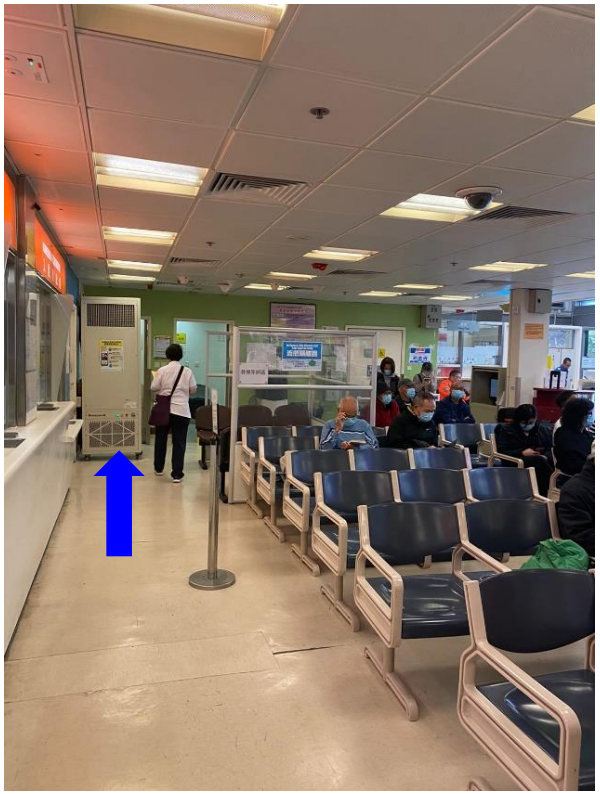
- **Universal masking in ALL HA hospitals and clinics**
- **ILI Segregation Areas at AEDs**
- **Full personal protective equipment (PPE)** i.e. N95 respirator, goggles / face shield, isolation gown & disposable gloves for **aerosol-generating procedures (AGPs)**.

Enhanced Measures

- **Enhanced ventilation at A&E, GOPC & SOPC waiting areas**

  - Completed the widest opening of the fresh air dampers in the air handling equipment in the waiting areas of AEDs, GOPCs and SOPCs to achieve higher fresh air rate with improved air dilution; and

  - Completed wheeling in mobile HEPA units to augment the total air change rates in A&E waiting areas where necessary.



Example:
HEPA unit is placed at QEH AED

Enhanced Measures

- **Isolation facilities utilization**
  - ~1400 airborne infection isolation (AIIR) beds available
  - Daily monitoring of utilization
  - Re-designate the use to meet surge admission if necessary

- **PPE stockpile**
  - Daily monitoring of usage

- **Alcohol-based hand rub (ABHR)**

- **ECMO machine utilization**
  - ECMO referral network
  - Daily monitoring of usage

Enhanced Measures

- Visiting to wards
  - Temporarily **SUSPENDED**
- Volunteer service
  - Temporarily **SUSPENDED**
- Clinical attachment (including research activities)
  - Temporarily **SUSPENDED**

Reinforcement on Infection Control Measures

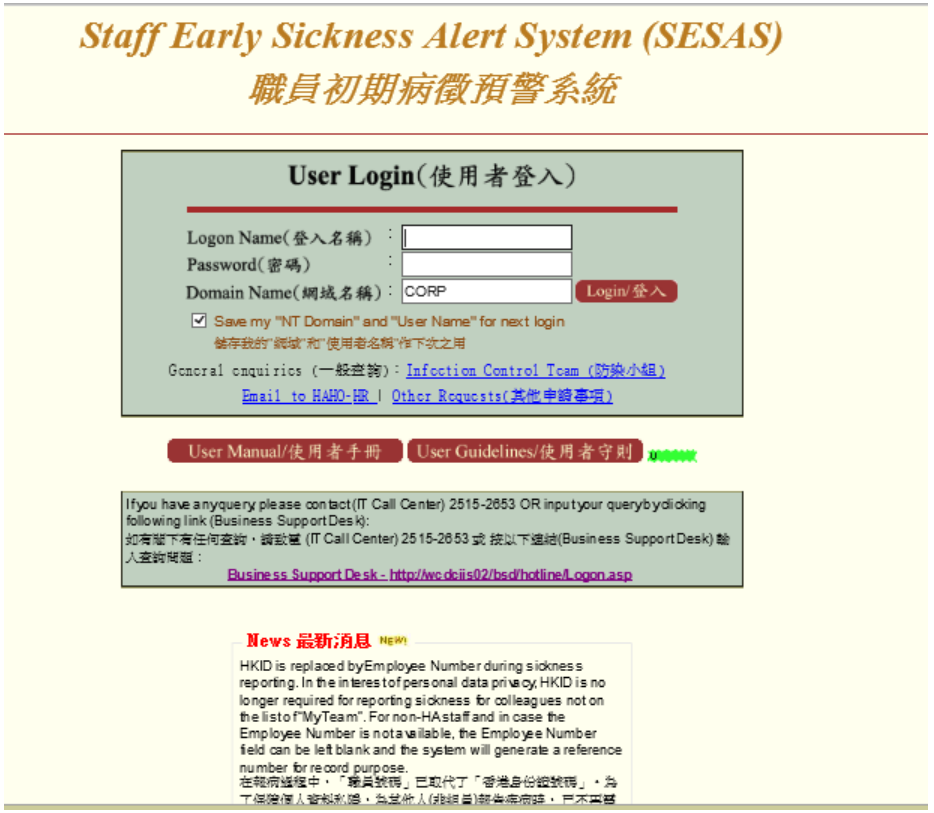
1. Provide surgical masks to patients if necessary
2. Ensure the availability of alcohol-based hand rub (ABHR) at convenient locations (e.g. ward entrance, lobby and corridors)
3. Disposal of masks in lidded rubbish bins
4. Posters / signage at ward entrance and lobby
5. Compliance of universal masking (e.g. conduct site inspection)
6. Full PPE for AGPs to avoid super spreading event (e.g. conduct refresher training or drill exercises)
7. Arrange temperature screening in wards, AEDs, GOPCs and SOPCs (health advice should be given to visitors with fever and respiratory illness)

Pocket size bottle of ABHR for clinical staff

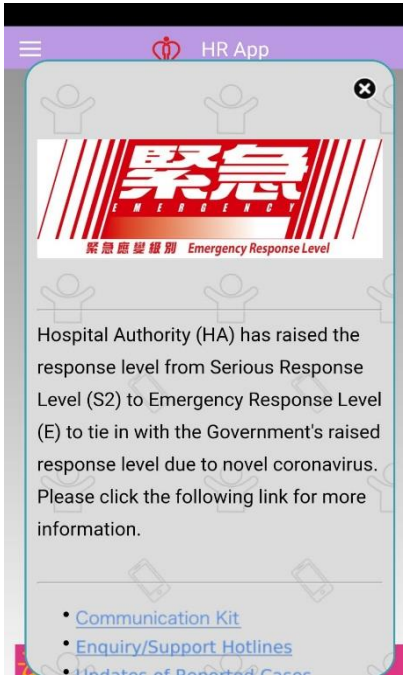
Pamphlet

Staff Early Sickness Alert System (SESAS)

For early detection and control of potentially communicable infectious diseases / outbreaks



Communication

Risk communications

- **Internal:**
  - Designated webpage
  - Communication kit
  - Staff forums
  - HASLink Express
  - HA Touch
  - HR Apps
  - Coronavirus disease 2019 (COVID-19) Bulletin
- **External:**
  - Daily press release on no. of reported cases in the past 24 hours
  - Facebook