

Sharing of HA Current Protocols on Dengue Fever (DF)

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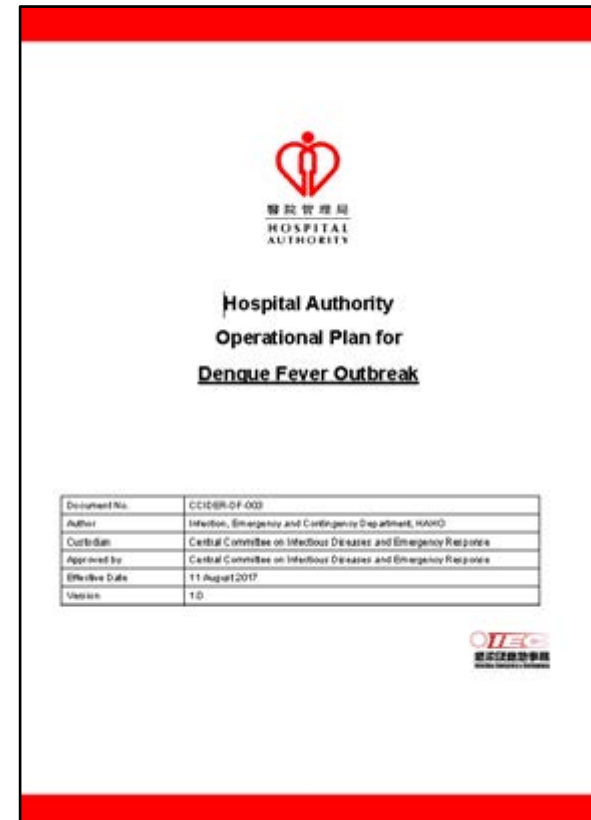
醫院管理局
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AUTHORITY

HA Preparedness for Dengue Fever Outbreak

- HA Operational Plan for Dengue Fever Outbreak
http://ha.home/ho/cico/ha_operational_plan_dengue.pdf
- HA Operational Plan of Designated Clinics for Dengue Fever
http://ha.home/ho/cico/operational_plan_dc_dengue.pdf
- HA Guideline on Clinical Management of Dengue Fever
http://ha.home/ho/cico/Guideline_Dengue_Fever.pdf
- HA Fact Sheet on Dengue Fever
http://ha.home/ho/ps/Factsheet_Dengue.pdf
- HA Designated Webpage for Dengue Fever
<http://qsdportal/iec/Website/IEC%20Webpage/Dengue%20Fever.htm>

HA Operational Plan for DF

- Risk assessment
- Command structure
- Surveillance and electronic notification
- HA laboratory network
- Infection control measure
- Blood and blood product safety
- Essential medical services
- Facilities management
- Clinical management
- Human resources and staff deployment
- Staff training
- Disaster psychosocial services for HA staff
- Research
- Communication (internal and external)
- Port health measure



Parameters for Dengue Alert

- 1) Local epidemiology:
 - a) 2 or more local cases from different foci reported within 2 week
 - b) 2 or more local cases reported from a single focus (epidemiological linked)
- 2) Upsurge in number of unusual outbreak occurring in surrounding country with frequent traffic to (from) HK
- 3) Increase in daily request of dengue fever test (*NDORS notification*)
- 4) Vector surveillance (positive lab surveillance for Dengue virus positive in *Aedes albopitus*)
- 5) Increase in number of imported case



Ad hoc
CCIDER

Directors'
Meeting

Central
Command
Committee

Emergency
Executive
Committee

Hospital Authority Operation Plan for DF

3. Epidemiological scenarios (Reference from DH's contingency plan)

Scenarios	Public Health Objectives
A. Sporadic clusters of local DF cases in human	To identify foci of infection, prevent local transmission and hence outbreak from occurring, and to prevent exportation of disease to other places
B. Outbreaks (epidemic) of local DF cases with multiple foci in a season	To minimize morbidity and mortality To prevent becoming endemic
C. Indigenous transmission of DF with multiple foci in mosquito active season in consecutive years / When local mosquito positive for dengue virus	To minimize morbidity and mortality To explore the potential use of Dengue Vaccine

Hospital Authority Operation Plan for DF

Epidemiological scenarios for Dengue Fever (DF)	Sporadic	Epidemic	Endemic**
Risk assessment [CCIDER]	<ul style="list-style-type: none"> • <i>Clinical severity and occurrence of the local confirmed cases</i> • <i>Availability of preventive measures and possible treatments;</i> • <i>Impact on healthcare infrastructure in Hong Kong</i> • <i>Efficient disease surveillance system</i> • <i>Laboratory demand and support</i> • <i>Latest situation update by CHP</i> • <i>Government's decision to activate different levels of response</i> 		
Command and coordination	Ad hoc CCIDER	+ Activation of CCC and EEC, + HO MICC and cluster MICCs would be activated, if necessary	
Surveillance [CICO, CHP, IT, MICC]	Notification* system for statutory notifiable diseases to CENO via NDORS	+ Enhanced surveillance programs + Activate e-Dengue (require 1 day for system activation) + HO MICC monitor the situation	

* Step up surveillance for **suspected** case, if necessary

** A sustainable action plan with reference to the epidemic scenario will be developed

Hospital Authority Operation Plan for DF

Epidemiological scenarios for Dengue Fever (DF)	Sporadic	Epidemic	Endemic
<p>Laboratory Support</p> <p>[PHLC + HA Laboratory Network]</p>	<p>PHLC provided diagnostic test</p>	<ul style="list-style-type: none"> + Activate HA Laboratory Network (7 clusters +/- KWH) according to PHLC testing protocol + PHLC would operate 7 days a week + Stepwise approach with PHLC to achieve a maximum capacity of around 1,400 dengue fever tests per day + Result turn-around-time would be within 24 hours 	
		<ul style="list-style-type: none"> + Continuous review the testing capacity and strategy 	

Hospital Authority Operation Plan for DF

Epidemiological scenarios for Dengue Fever (DF)	Sporadic	Epidemic	Endemic
Designated Clinic (DC) Activation	No Activation	Activation by phase: <ul style="list-style-type: none"> • 1st stage: 7 designated clinics • 2nd stage: 18 designated clinics 	
Testing Criteria	An acute febrile illness with compatible clinical symptoms	Prompt with clear dengue fever diagnostic criteria: suspected cases must fulfill the followings: A) acute onset of fever plus B) any two of the followings: <ul style="list-style-type: none"> ① anorexia & nausea ② aches and pain ③ rash ④ mucosal bleed ⑤ any warning signs for diagnosis* 	

* Warning signs for diagnosis: (i) Abdominal pain or tenderness (ii) Persistent vomiting (iii) Clinical fluid accumulation

Summary of Hospital Authority Operation Plan for DF

Epidemiological scenarios for Dengue Fever (DF)

Sporadic

Epidemic

Endemic

Admission Criteria

- Suspected cases with any warning sign(s)# or any coexisting condition(s)^
 - Confirmed cases would call back for admission if clinically indicated
 - In case of local dengue clustering, the admission capacity of clinically stable febrile patient is set at **140** (20 patients in each cluster). HA and CHP will closely monitor the situation.
- Haemodynamically unstable patients attended **DCs** or **A&Es**
 - Prompt with clear admission criteria: only confirmed DF cases with warning sign(s)# or having co-existing condition(s)^
 - ICU would support severe dengue and DHF cases

Follow up for confirmed cases [DCs]

- Confirmed cases did not fulfill the admission criteria would be followed up in DCs

Warning signs includes: (i) Abdominal pain or tenderness (ii) Persistent vomiting (iii) Clinical fluid accumulation (iv) Mucosal bleed (v) Laboratory: HCT > 50% or platelet < 50 x 10⁹/L; Warning signs for diagnosis: (i) Abdominal pain or tenderness (ii) Persistent vomiting (iii) Clinical fluid accumulation

^ Coexisting condition includes pregnancy, elderly, infancy, DM, chronic renal or liver disease

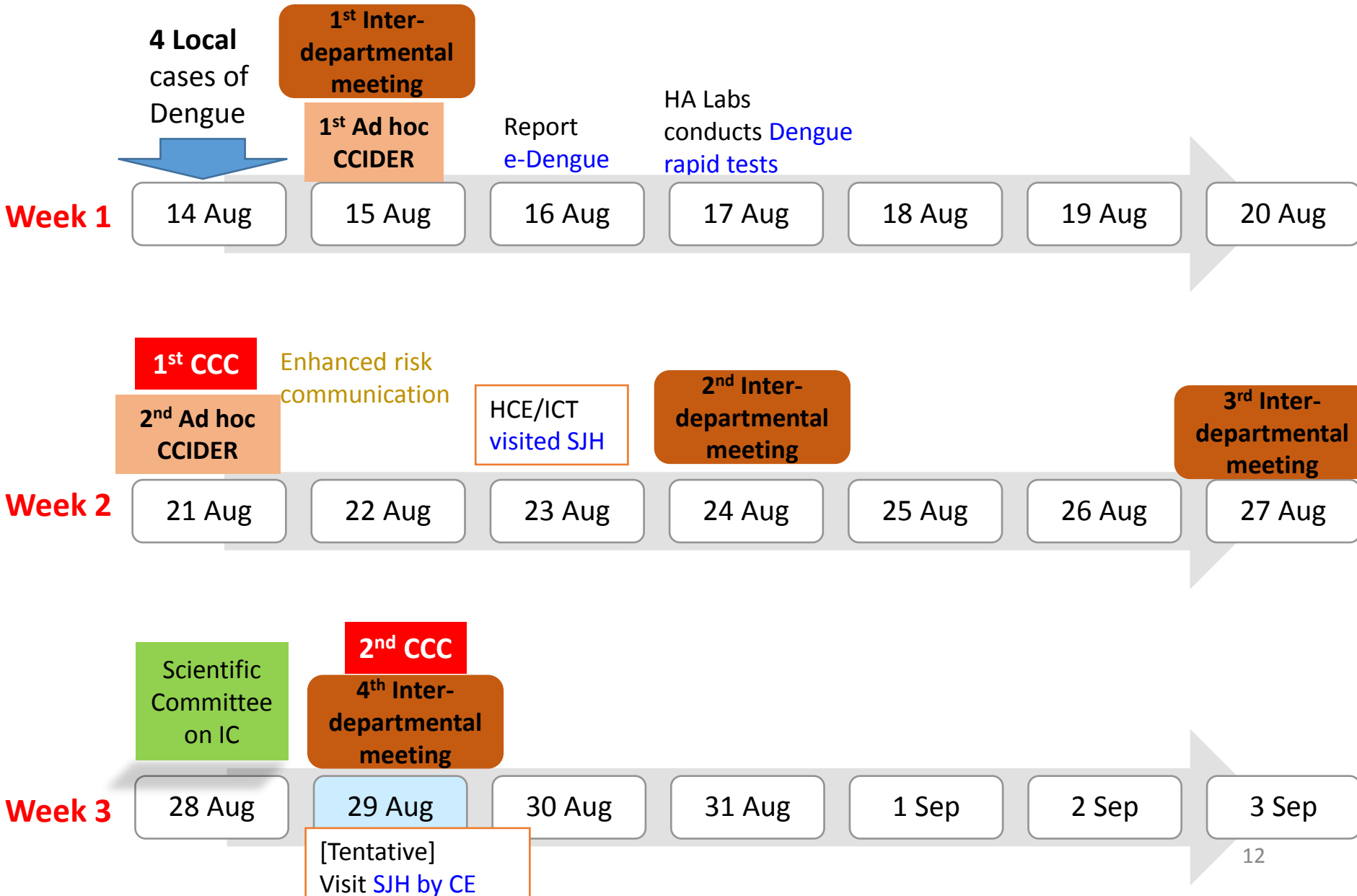
Hospital Authority Operation Plan for DF

Epidemiological scenarios for Dengue Fever (DF)	Sporadic	Epidemic	Endemic
Vector Control [BSS]	<ul style="list-style-type: none"> • Monitor and intensify HA's mosquito control program 		
Infection Control measures [CICO & ICTs]	<ul style="list-style-type: none"> • Mosquito free environment for patients till fever subsided. • HCWs comply with standard precautions in patient care activities. • Organize cluster forums to update staff on relevant information 		
Port health measures [DH & PHO]	<ul style="list-style-type: none"> • Communicate with PHO who work with FEHD on the anti-mosquito measures ; provide health education material to travellers at BCPs 		
Communication [Corp Comm; ICTs]	<ul style="list-style-type: none"> • Timely promulgate health advice and share information to public; staff and media • Regularly review and update situations and streamline communication strategy 		

Enhanced Measures in HA

- Collaborate with CHP to monitor and get prepared for the contingency response to dengue fever

Chronology



1. Activation of e-Dengue for Enhanced Surveillance

- To facilitate prompt monitoring and review of suspected cases for early public health investigation
- e-Dengue has been activated since 16 Aug 2018 12:00
- Clinicians are required to notify CHP and HAHO via e-Dengue when a laboratory test request for dengue fever is made

The screenshot displays the 'eDengue for Dengue Fever' web application. At the top, there is a navigation menu with tabs for '1 Clinical', '2 Investigation', '3 Enquiry', '4 Booking', '5 DT', '6 Report', '7 Doc./Post', '8 Other System', '9 Info', and '0 Admin'. Below the menu, a patient information header shows '韓櫻請勿用' (Please do not use), 'CDIS TEST ONLY, PLEASE DONT USE HON YING', and patient details: 'M 16y', 'DOB: 23-Apr-2000', 'M738161(7)', 'PAE', 'SC', 'Adm: 03-Mar-2011', and 'HN11000026(2)'. The main form area is titled 'eDengue for Dengue Fever' and includes sections for 'Reporting Criteria', 'Condition' (Satisfactory, Stable, Serious, Critical), 'Ventilated' (Yes/No), 'ECMO Service applied' (Yes/No), 'ICU admission date', 'ICU discharge date', and 'ICU discharge destination'. A 'Lab results related to dengue fever since 3 months prior to case reporting' table is present, with columns for 'Result Ready Date', 'Request Hosp', 'Performing Lab', 'Specimen', 'Lab Test Name', and 'Lab Result'. The 'Signs and Symptoms' section contains checkboxes for 'Fever', 'Arthralgia', 'Retro-orbital pain', 'Diarrhoea', 'Myalgia', 'Shock', 'Headache', 'Malaise', 'Skin rash', 'Vomiting', and 'Haemorrhagic manifestations', each with an 'Onset Date' field.

2. Enhanced Laboratory Services

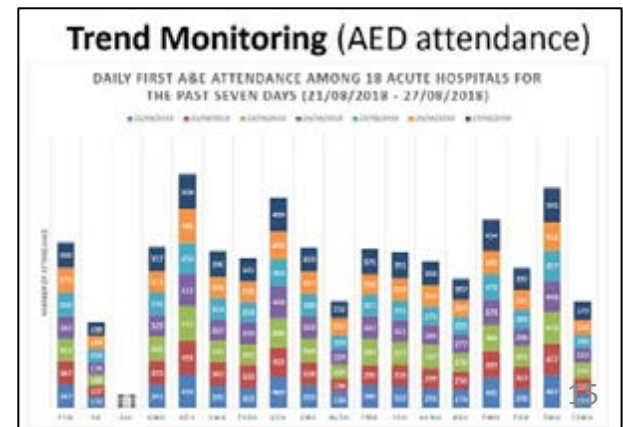
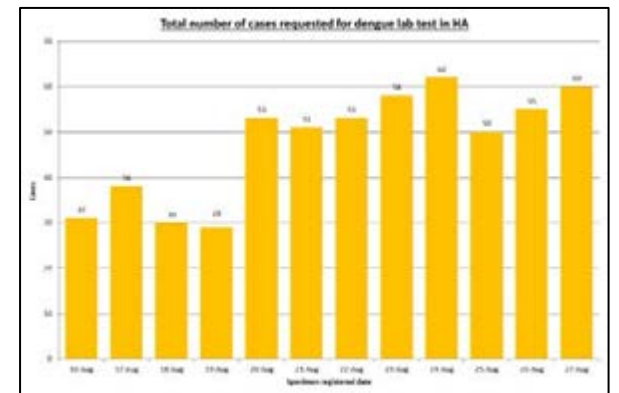
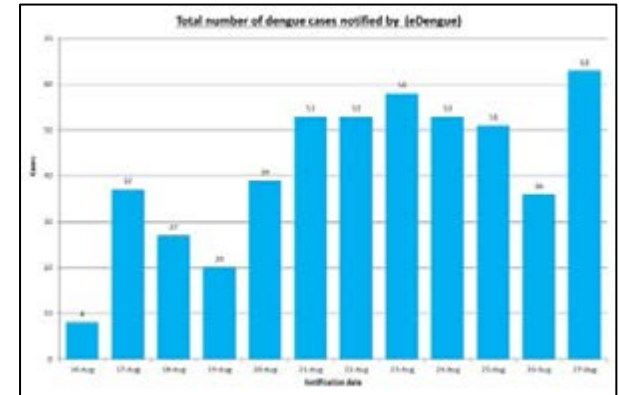
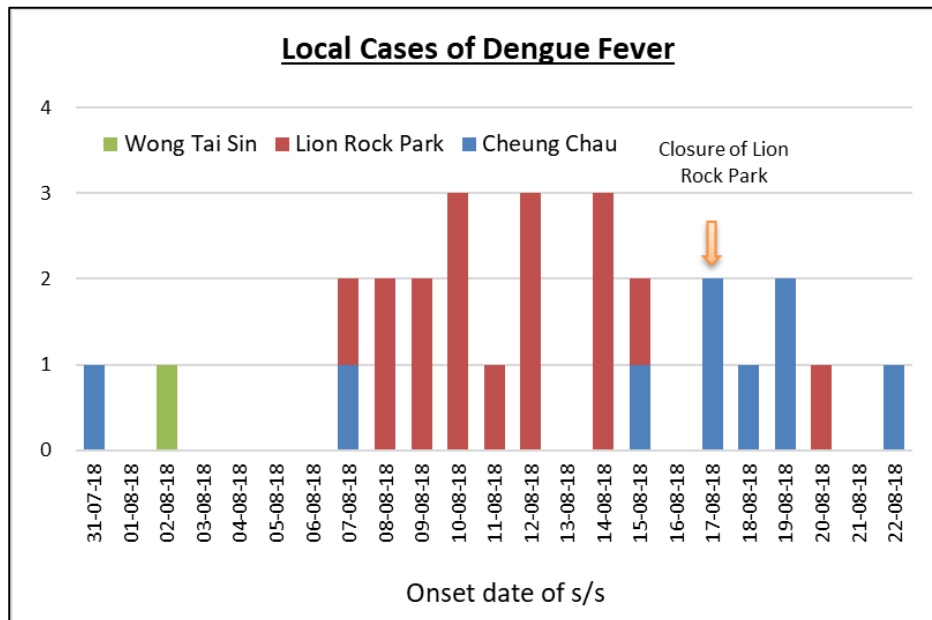
- To facilitate clinical diagnosis
- Testing service has been extended to seven-day-a-week
- HA laboratories have provided rapid test for dengue fever since 17 August 2018
- Result turn-around-time (TAT) within 24 hours
- Ensure reagent supply to cope with the expanding capacity



Rapid test to detect both dengue virus NS1 antigen and differential IgG / IgM antibodies to dengue virus

Situation Monitoring

- Local confirmed cases
- Daily number of e-Dengue notifications
- Daily number of laboratory request
- Daily number of A&E attendance
- Daily number of local case hospitalized



Mosquito-free Environment

- Standard Precautions
- Mosquito may acquire infection when they feed on a viraemic person resulting in local spread of the virus
- Confirmed dengue case should be hospitalized during viraemic phase and is required to stay in a vector-free (mosquito-free) environment

遇到下列情況，必須遵守

標準防護措施

Standard Precautions
must be taken in the following situations

接觸血液、體液、分泌物、排泄物、黏膜或傷口
必須戴上手套

Wear Gloves
when handling blood, body fluids, secretions, excretions, mucous membrane or non-intact skin

若有可能接觸濺出血液或體液
必須戴上口罩、眼罩及穿上保護衣

Wear a Mask, Protective Eyewear and a Gown
to protect yourself from splashed blood or body fluids

切勿套回已使用的針咀

No Recapping

小心處理針咀及利器

Handle Sharps Carefully

接觸血液、體液、分泌物、排泄物、黏膜、傷口，或除手套後
應立即潔手

Perform Hand Hygiene Immediately
after taking off gloves or handling blood, body fluids, secretions, excretions, mucous membrane or non-intact skin



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3. Admission and Discharge Arrangement

Criteria for hospital admission:

- **Still have fever and/or compatible symptom(s)*:**
 - **CHP (on public health ground):** will call back the patient and arrange the admission through the HA cluster coordinator without going through the AED (under isolation order)
 - **HA Physicians (on clinical ground):** may call back and admit the patient based on lab result, such as low platelet count

Criteria for hospital discharge:

- **Fever and compatible symptom(s)* subsided**
- Isolation order lifted by CHP

Sick leave for confirmed DF staff:

- During the febrile or symptomatic period, i.e. the period required to admit to hospital as instructed by CHP.

* Symptoms compatible with dengue fever include headache, retro-orbital pain, myalgia, arthralgia, rash, haemorrhagic manifestations, leukopenia or thrombocytopenia.

4. Enhanced Mosquito Control Measures

- To eliminate every possible mosquito breeding site
- All hospitals increase the frequency of regular round of inspection for mosquito control to daily.
- Hospitals with confirmed local case of dengue fever will increase the frequency of fogging immediately to alternate days for 30 days followed by weekly fogging for another two weeks.
- In the work sites of capital projects, all HA contractors are required to apply larvicide oil twice and fogging once a week.



Larvicides are being distributed within hospital premises



Mosquito Prevention Station (防蚊加油站) at SJH

5. Blood and Blood Product Safety

Pre-donation

- All BTS frontline staff are reminded to **pay extra attention** during pre-donation interview for checking any recent emergence of infection symptoms (especially those for Dengue*) of the donors.

Post-donation

- Reinforce the importance of **early reporting** of infection/symptoms to the BTS when giving donors the post donation advice.

* high fever, severe headache, pain behind the eyes, muscle and joint pain, nausea, vomiting, swollen lymph nodes and rash

6. Designated Clinics

- In preparation for the overwhelming caseload in AED, COC(FM) has well-prepared for the activation of designated clinics

Stages of Operation of the Designated Clinics (Updated as at Aug 2018)

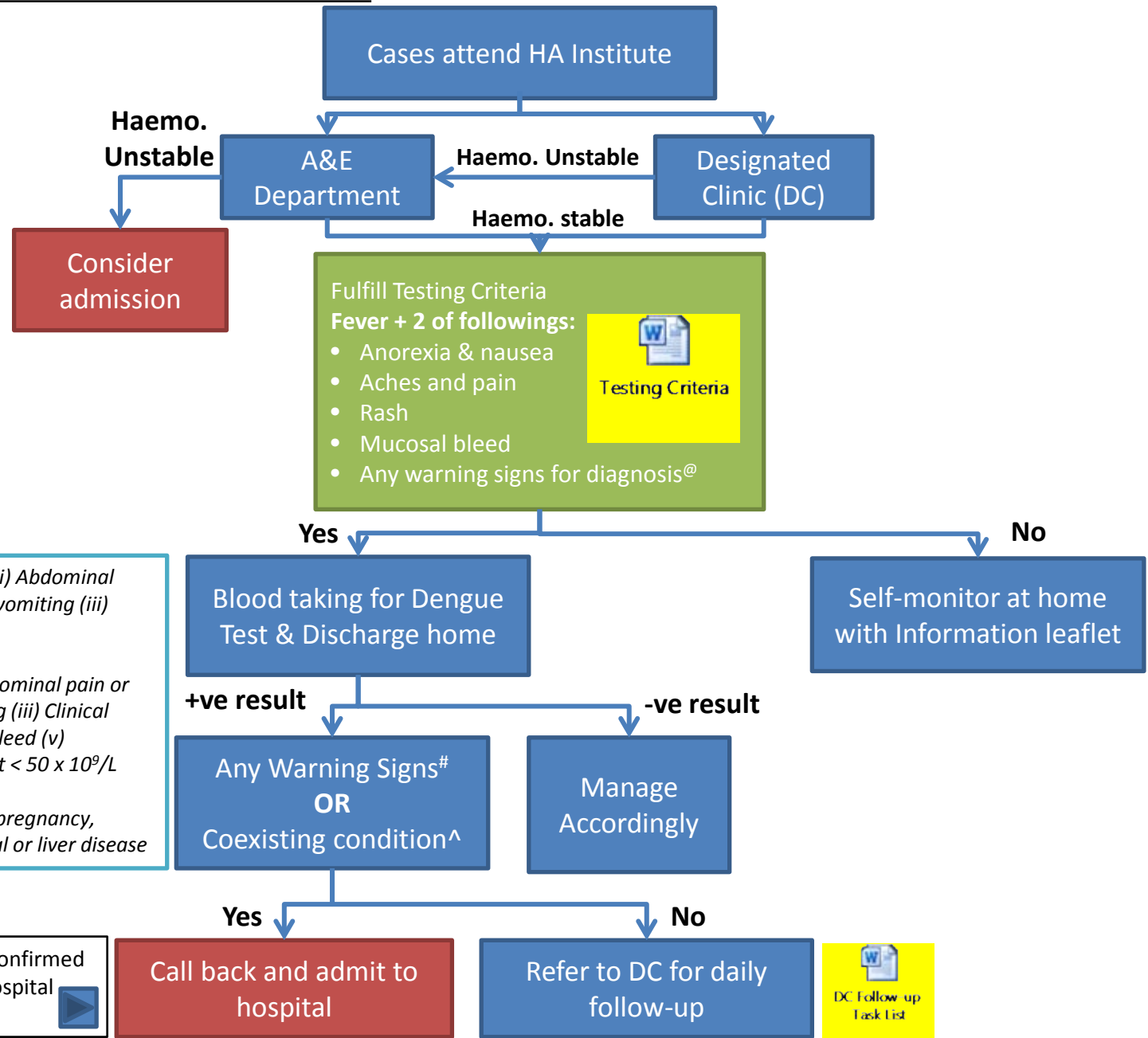
Cluster	District	Initial Stage	Operation Hours	Late Stage
HKEC	Eastern	Shau Kei Wan JC GOPC 1/F	2 sessions / day; 7 days / week	Shau Kei Wan JC GOPC 1/F
	Wan Chai			Violet Peel GOPC G/F
HKWC	Central & Western	Kennedy Town JC GOPC	2 sessions / day; 7 days / week	Kennedy Town JC GOPC
	Southern			Aberdeen JC GOPC
KCC	Kowloon City	Central Kowloon HC (Lee Kee Memorial Dispensary ¹)	2 sessions / day; 7 days / week	Central Kowloon HC (Lee Kee Memorial Dispensary ¹)
	Wong Tai Sin			East Kowloon GOPC
	Yau Tsim Mong			Yau Ma Tei JC GOPC
KEC	Kwun Tong	Kowloon Bay HC GOPC	2 sessions / day; 7 days / week	Kowloon Bay HC GOPC
	Sai Kung / Tseung Kwan O			Tseung Kwan O (Po Ning Road) GOPC
KWC	Sham Shui Po	South Kwai Chung JC GOPC	2 sessions / day; 7 days / week	Cheung Sha Wan JC GOPC
	Tsuen Wan & Kwai Tsing			South Kwai Chung JC GOPC
	Island			Mrs Wu York Yu GOPC
NTEC	Shatin	Fanling FMC 1/F	2 sessions / day; 7 days / week	North Lantau Hospital CHC
	Tai Po			Yuen Chau Kok GOPC
	North			Tai Po JC GOPC
NTWC	Tuen Mun	Yan Oi GOPC	2 sessions / day; 7 days / week	Fanling FMC 1/F
	Yuen Long / Tin Shui Wai			Yan Oi GOPC
		Total: 7		Total: 18

Remarks:

1) Lee Kee Memorial Dispensary will be the Designated Clinic when Central Kowloon Health Centre is under clinic repair works starting from Sep 2018.

Patient Management Flowchart:

When there are Outbreaks (Epidemic) of local confirmed DF cases with multiple foci in a season



@ Warning signs for diagnosis: (i) Abdominal pain or tenderness (ii) Persistent vomiting (iii) Clinical fluid accumulation

Warning signs includes: (i) Abdominal pain or tenderness (ii) Persistent vomiting (iii) Clinical fluid accumulation (iv) Mucosal bleed (v) Laboratory: HCT > 50% or platelet < 50 x 10⁹/L

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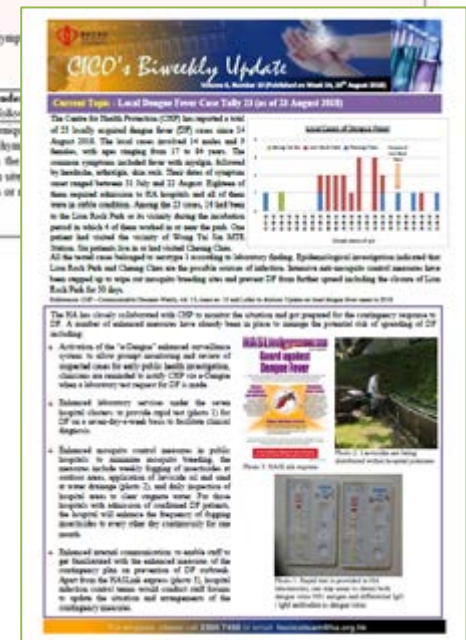
List of Cluster Coordinator for Confirmed Dengue Fever Case Required Hospital Admission refer from DC



7. Risk communication

- To enable staff to get familiarized with the enhanced measures of the contingency plan on prevention of DF outbreak

- Communication kit
- Infection control forums (dengue fever)
- Designated webpage
- HASLink express
- CICO's Biweekly Update



Thank You