



### Anti-mosquito measures

#### Purpose

The information provided below is to help the management of hospitals/clinics in preventing and controlling the breeding of mosquitoes – *Aedes albopictus*.

#### Mosquito problems

2. Mosquitoes cause great nuisance to man. Moreover, some of the species pose threats to human health as vectors of diseases like dengue fever. Dengue fever is a severe mosquito-borne disease characterised by high fever, headache, rash, joint and muscular pain. *Aedes albopictus*, which is a vector of dengue fever and dengue haemorrhagic fever, is prevalent locally. They breed in rural and urban areas and their breeding sites can be grouped generally into two categories: the artificial receptacles like containers, discarded tyres, lunch boxes, cans, clogged surface channels; and naturally occurring habitats, e.g. tree holes, bamboo stumps and leaf axils.

#### Anti-mosquito programme

3. To control and prevent mosquito problems in general and spread of dengue fever in hospitals/clinics, carefully planned anti-mosquito programme is needed for each individual hospital. As participation is important for the success of the programme, staff of hospitals are encouraged to take part in the mosquito control.

#### Objectives

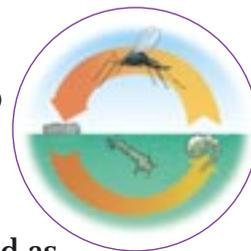
4. The anti-mosquito programme aims to achieve the following objectives-
  - i) To encourage staff of hospitals/clinics to participate in preventing and controlling mosquito breeding in hospitals;
  - ii) To eliminate breeding sites for mosquitoes especially containers; and
  - iii) To arouse and maintain the awareness of staff of hospitals/clinics on the potential risk of dengue fever transmission.

#### Target areas

5. The whole hospital/clinic building/compound should be the target area of the programme.

## Working schedule

6. As it takes an average of 7 days for eggs of mosquitoes to develop into adult mosquitoes, the inspection cycle should be a 7-day cycle.



## Programme coordination

7. A staff of the management of the hospital/clinic should be designated as the coordinator for implementation of the programme and liaison with staff of the Food and Environmental Hygiene Department.

## Mosquito control measures

8. Some of the commonly found potential breeding places for mosquitoes in hospitals/clinic buildings/compounds and the ways of elimination are given in the tables below:

### i) Aesthetic problems

| Breeding place                       | Cause of problem  | Control action                                    | Remark  |
|--------------------------------------|---|---|---|
| Tree holes and bamboo stumps         | Natural water receptacles.                                  | Fill with sand, mud or concrete as appropriate.   |   |
| Leaf axils of plant                  | Natural water receptacles.                                  | Remove water accumulated.                         | Plants with small leaves or small leaf axils should be grown. |
| Saucers for ornamental potted plants | Excessive watering causes accumulation of water in saucers. | Drain away water immediately after watering.      | Avoid using saucers for potted plants.                        |
| Flower vases                         | Water kept in vases provide breeding places for mosquitoes. | Water in vases should be changed at least weekly. |   |



## ii) Structural problems

| Breeding place                             | Cause of problem   | Control action  | Remark   |
|--|--|---|--|
| Roof gutters and surface drainage channels | <ol style="list-style-type: none"> <li>Structurally deficient roof gutters and surface drainage channels hold water readily.</li> <li>Choked with refuse or leaves.</li> </ol> | <ol style="list-style-type: none"> <li>They should be repaired.</li> <li>Clear leaves and debris regularly, at least weekly.</li> </ol> |  |
| Uneven floor                               | Collect water during scrubbing of floor or rain water if the floor is open.  | Regular sweeping, at least weekly, is required for removing the water until structural improvement has been made.                       |  |
| Sand traps, gully traps and drain holes    | The design and choking of the traps/holes causes collection of water.  | <ol style="list-style-type: none"> <li>Clear refuse and debris at least weekly.</li> <li>Apply larvicide to water.</li> </ol>           |  |

## iii) Hygienic problem

| Breeding place                                | Cause of problem  | Control action  | Remark  |
|---|---|---|---|
| Junk  | Rain water and water from cleansing of floor trapped by junk. | Keep in junk collection areas with cover.   | Scrubbing junk collection areas only when the junk has been cleared.                |
| Discarded bottles, cans and empty lunch boxes | Collect rainwater readily.                                    | Keep in containers with well-fitted cover.  |   |
| Rubbish                                       | Trapping water.   | Keep in disposable plastic bags which should then be tied up at the openings and kept in containers with cover. |  |

#### iv) Other problems

| Breeding place   | Cause of problem  | Control action  | Remark  |
|--|---|---|---|
| Disused tyres as anti-bumping device   | Rain water and water from car washing trapped by tyres. | Puncture with big holes.  | Preferably, anti-bumping device should be replaced by marking on the floor. |
| Water storage containers   | Containers placed outdoors collect rain water readily.  | Cover with lid.<br> | Water storage should be replaced by water pipe with tap.                    |
| Water trays of refrigerators with automatic-defrosting and air conditioner trays | Water may be accumulated in trays.                      | Water in trays should be removed weekly or properly drained away.                                     | They are usually overlooked during mosquito surveys.                        |

9. In general larviciding must only be carried out if the breeding sources or potential breeding grounds are inaccessible or could not be eliminated within one week.

#### Action checklist

10. To enhance the monitoring of the mosquito control work, a checklist on the breeding place for mosquitoes and action taken could be prepared for the programme by making reference to those mentioned in paragraph 8 above.
11. The management of hospital/clinic could appoint a pest control company for providing services on mosquito control and prevention in the hospital/clinic building/compound. Advice on mosquito prevention could be obtained from the Food and Environmental Hygiene Department.