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Update on the Current Dengue Situation

1. Despite our high standards of public health, Singapore is experiencing its worst ever outbreak of dengue fever, at least since the 1980s. As at 17 September this year, the number of dengue cases has reached a high of 10,237, including 318 Dengue Haemorrhagic Fever (DHF) cases. There were 697 dengue cases in the week ending 17 September, a new peak. To date, 8 people have died from dengue fever and DHF this year, the same figure as the whole of last year.
2. Over the last two years, in response to the dengue threat, the National Environment Agency has stepped up its efforts to control breeding of the Aedes mosquito which transmits the disease. NEA stepped up its inspection programme from about 55,000 inspections a month last year to about 59,000 inspections a month this year. It also beefed up its manpower resources. By the end of September, NEA will have a total of 510 personnel for dengue operations, more than four times the manpower last year.
3. Efforts by the community have also played a significant role in preventing mosquito breeding. In April 2004, NEA launched the Mozzie Attack programme in partnership with grassroots organisations and CDCs. By June 2005, all 84 CCCs had their own Mozzie Attack programmes. And the number of dengue prevention volunteers under the Mozzie Attack Programme has doubled to 4,000 this year.
4. These collective efforts have been effective in keeping down mosquito breeding. In fact, the total number of breeding sites found in NEA inspections actually fell to an average of 1,100 a month this year, down from 1,600 a month last year. Most of this reduction is because fewer breeding spots are being found in homes. I hope residents will continue to do their part to control mosquito breeding.

Understanding the Problem

5. Yet despite all these measures, we still have a serious problem. Even though we have reduced mosquito breeding, the number of dengue cases in Singapore has continued to rise. In fact there is a resurgence of dengue worldwide in the tropics, and many countries in South-East Asia including Indonesia, Malaysia and Vietnam have reported much higher levels of the disease in 2005.
6. Singaporeans are naturally concerned about the rise in dengue cases. We do not fully understand why this is happening. There are many possible factors, including rising temperatures, increased strength of the virus, increased biting rates of mosquitoes, lower immunity especially of the younger population, or the interplay of several of these factors. Possibly mosquitoes are breeding in non-traditional sites that we have not yet discovered.
7. We have formed a panel of international and local experts on dengue to study the

sudden upsurge in dengue, and advise the Government on the best strategy to deal with the problem. The panel will also enhance the existing research programmes on the disease.

Breaking the Cycle of Transmission

8. It will take time for us to fully understand the full reasons for the rise in dengue cases in Singapore. Meanwhile, we need to take urgent action to avoid a public health problem and clogging up our hospitals.

9. Whatever the deeper causes, one thing is clear: dengue can only be transmitted through the Aedes mosquito. So there are two things that we must do to break the cycle of transmission. First, we need to further reduce the mosquito population. Second, we need to isolate dengue patients from mosquitoes, thus preventing people infected with the disease from being the source of further infections. Both measures require the combined efforts of the Government and Singaporeans.

Immediate Action Against Mosquitoes

10. Our immediate task is to reduce the mosquito population to levels that pose little threat to people. We will continue with our localised efforts to track clusters of dengue cases. But we will also move beyond these localised efforts with an anti-mosquito blitz in all constituencies.

11. The blitz started last weekend in Ang Mo Kio, Hougang, Marsiling and Yishun. 700 volunteers from NEA, PUB, SCDF, HDB, and LTA, together with the Singapore Pest Management Association and Singapore SOKA Association, combed the estates thoroughly to search for and destroy breeding habitats. We chose four estates that have experienced more dengue cases this year in order to find out the state of mosquito breeding and if there are new types of breeding habitats of the Aedes mosquitoes that have previously not been detected. During the two-day operation, the volunteers covered the common areas of over 1,600 blocks of flats including common corridors, perimeter drains, open grounds, bin centre rooftops, pump rooms, and playgrounds. A total of 172 breeding sites were found and destroyed, which is about 1 breeding site for every 10 blocks of flats checked. Of the breeding sites found, 29% involved breeding in flower pot trays and water containers in corridors, 26% in discarded receptacles in open areas, 39% in outdoor areas such as perimeter drains, bin centre rooftops, and 6% in tree holes. This shows that we need to do more to promote household responsibility, deter littering, and to bring about better housekeeping in our estates. We need to make collective efforts to keep our neighbourhoods free from mosquito breeding.

12. During the 2-day exercise, there were 16 occasions when we detected mosquitoes and carried out fogging. I understand that there are some doubts about the efficacy of fogging. However, according to WHO, thermal fogging is still an effective means for killing adult mosquitoes, and complements searching for and destroying all possible mosquito breeding sites.

13. This 'carpet-combing' blitz has helped to reduce the breeding sources of mosquitoes, and to better understand the breeding habits of Aedes mosquitoes. No new types of breeding habitats were found during the blitz. There were also some 2,000 potential breeding sites identified over the two days, which will be monitored and removed permanently if possible. The information gathered in this exercise will be shared with all the Town Councils (TCs). NEA will be carrying another 'carpet-combing' operation next weekend and plans to cover all the estates within the next 6 weeks. An in-depth analysis will be carried out on all the findings, in consultation with the expert panel.

Additional Government Measures Against Mosquitoes

14. Beyond the blitz, we must sustain our efforts against mosquitoes. Keeping Singapore mosquito-free cannot be a one-off effort. The Government has thus committed an additional \$30 million towards measures in the fight against dengue.

Sir, let me now inform the House of the measures that Government is taking.

Dedicated Pest Control Operators for Town Councils

15. Following the blitz and information provided on the breeding sites, NEA will proceed to work with Town Councils to put in place a better and more comprehensive system to prevent mosquito breeding. Already, three TCs, namely Hong Kah, Jurong and Sembawang, have programmes dedicated specifically to controlling mosquitoes. NEA is currently assisting other Town Councils to put in place such dedicated mosquito programmes islandwide through the Pest Control Operators (PCOs) by October. These PCOs will have to submit reports to the TCs and NEA. Having dedicated PCOs will also build up institutional local knowledge of mosquito breeding habitats. This should help bring down the number of breeding sites in common areas in our housing estates such as perimeter drains, linkway roof gutters, bin centres and pump rooms. We are also asking all TCs to appoint a dedicated Environmental Control Officer (ECO) on their staff. The ECO will be responsible for all public health programmes including dengue prevention.

Waterlogged Public Areas and Drains

16. In addition, the Government will clear waterlogged public areas to break the cycle of breeding. We will be cleaning our drains more frequently as drains are one of the breeding habitats of mosquitoes. Often stagnant water accumulates in drains which are clogged with dead leaves and litter, creating places for mosquitoes to breed. We need to establish a new, permanent regime of maintenance and cleanliness of our common areas and drains.

Structural Design and Maintenance

17. The Government is also looking into longer-term measures that will help keep the

incidence of dengue low. We will study infrastructure issues to avoid having structures that collect and retain water which allows mosquito breeding. We will review the design of perimeter and car park drains and other common areas in HDB estates.

Every Singaporean Must Play His Part

18. Singaporeans play an equally important part in sustaining the fight against dengue. The Government cannot do it alone. We need to make a national effort, with the public showing community spirit and responsibility to ensure the health of our fellow Singaporeans.

The Campaign Against Dengue

19. To stop Aedes mosquitoes from breeding, we have to deny them any stagnant water. But NEA officers cannot inspect every home in Singapore. The Aedes mosquito can breed anywhere with clean stagnant water, such as flower-pot plates, pails, and containers such as empty plastic cups or plastic bags that collect rainwater. In fact, a spot of water the size of a 20-cent coin is all it takes for the mosquito to breed.

20. So for the sake of your own health, and the health of your fellow Singaporeans, I ask all members of the public to be alert and regularly check your homes for potential breeding areas both indoors and outdoors. I am heartened to note that fewer households have been found breeding mosquitoes this year, for all types of homes. This shows that people are already taking measures against mosquitoes. We should continue with such measures, and do even more.

21. To teach Singaporeans simple steps to follow to protect their households from mosquito breeding, we launched the Campaign Against Dengue yesterday. As part of the campaign, grassroots and Dengue Prevention Volunteers from all 84 constituencies were mobilised to conduct door-to-door visits to HDB blocks, private apartments and houses nationwide. During the visits, residents were given 'Ten-Minute Mozzie Wipeout' pamphlets in the four official languages. The pamphlet provides tips on dengue prevention in the form of a simple ten minute five-step routine to prevent mosquito breeding. This campaign will continue for the next few weeks for those households that have not yet been visited.

22. I ask everyone to perform this 'Ten-Minute Mozzie Wipeout' to protect their families from dengue. What each and every one of us can do in just 10 minutes a day will go a long way towards preventing mosquito breeding in Singapore. For example, flat owners should cover their bamboo pole holders when not in use. If they have plants in their homes, they should change the water in vases and flower bowls every other day. They can also put granular insecticide into vases and flower bowls to kill mosquito larvae.

23. Working adults should also be alert to potential mosquito breeding sites at their work place. This includes construction work sites and workers' dormitories. We will

produce a pamphlet on how workers can check for and remove common potential breeding sites in the workplace in the four official languages plus other languages for foreign workers.

24. Business owners can play a part too in preventing mosquito breeding. For instance, hawkers, florists, and other businesses with many water receptacles should regularly inspect these containers to stop mosquito breeding.

25. Through this intensive campaign, we will raise our level of cleanliness and maintenance and keep it high. In order to prevent dengue in the long term, the good habits of the Ten-Minute Mozzie Wipeout must be part of our routine.

Advice for Those Going on Trips

26. Those who intend to be away from home for more than a week should also take measures to prevent water from stagnating in their homes, such as by covering up gully traps and toilet bowls. Pails and watering cans should be placed upside down so that they do not collect water. Water in flower vases and bowls should be removed. If you are going away for a long period, you should ask a family member or friend to check on your home regularly. If you own a property which is vacant, please do the same.

27. Some members of the public have expressed their concern about vacant properties that may be harbouring mosquitoes. The Government has the power under the law to enter vacant premises to check for mosquito breeding sites in order to protect public health. However, it will only do this under strict conditions and when the situation warrants it, such as when the owner cannot be located and there is a dengue cluster in the area. We will enter vacant premises even if we cannot contact the owner if there are strong indications that there is mosquito breeding in the premises, and if the owner did not leave behind a contact number for the authorities to make contact. So owners of vacant properties wishing to avoid such a situation should leave behind a contact number which the authorities can contact if necessary. In any case, I urge owners of vacant properties to ensure that their premises are free from mosquito breeding

Avoiding Littering

28. The public can also do its part to prevent mosquito breeding in public areas by not littering. Litter left in drains clogs up our drains and creates pools of stagnant water. Every day PUB clears up to 16 tonnes of litter, comprising plastic bags and bottles, from the booms across our rivers. Litter such as empty cans, drink cans, and plastic bags in common areas can also collect rainwater and become mosquito breeding places. In fact, one of the top breeding sites found during the last weekend's 'carpet combing' exercise was discarded containers.

Hotline and Website on Dengue

29. We also need everyone to be our eyes and ears for possible mosquito breeding

grounds. A dedicated 24/7 dengue hotline and a website, (www.dengue.gov.sg) have been set up in conjunction with the Campaign Against Dengue for people to alert us to possible mosquito breeding grounds. Many civic-minded Singaporeans and residents from all walks of life have called the hotline to alert us to potential breeding sites and matters relating to the dengue problem. To help non-English speakers also to remember the hotline number, we are providing two numbers, 1800-X-DENGUE and 1800-333-7777. People can also use the hotline and website to obtain advice and share ideas on dengue prevention.

Preventing People With Dengue From Infecting Others

30. The public also plays a role in preventing people with dengue from infecting others. If a female Aedes mosquito bites a dengue patient, the dengue virus will be transmitted from the patient to the mosquito. If this infected mosquito then bites other healthy people, it will pass the disease on to them. This is how dengue spreads. Therefore, all dengue patients, or suspected dengue patients, should take precautions to avoid being bitten by mosquitoes. How can they do so? They can apply mosquito repellent on themselves, wear long-sleeved clothing, sleep under mosquito nets and keep their rooms mosquito free. We have reminded all doctors to advise their patients to do this.

31. So dengue patients have a part to play in stopping the spread of the disease. If you are ill, and have symptoms such as fever, joint pains and nausea, please see your doctor early. If your doctor suspects that you have dengue, he will recommend what you must do to take care of yourself and to avoid transmitting the disease to others. Please heed his advice. This will help prevent your loved ones and others from becoming infected. Sir, again I hope that this will become part of our routine.

Conclusion

32. Sir, we can bring down the number of dengue cases in Singapore substantially, by denying the mosquito the conditions it needs to breed.

33. Our collective response to this challenge is to step up our level of cleanliness and environmental vigilance to make it more difficult for the mosquito to breed. On the Government's part, NEA and other agencies will continue to closely coordinate the ongoing efforts as well as the new initiatives. But the Government and the community must forge a stronger partnership to maintain a clean and healthy environment in Singapore.

34. I understand the anxiety Singaporeans must feel about the dengue situation. Fortunately, we do know how the disease is transmitted - through the Aedes mosquito. We thus need to take necessary precautions to prevent mosquito breeding. It only takes 10 minutes a day of five simple steps to protect your households from dengue and make all of us safer. And if we come down with the illness, we must take steps to ensure that our loved ones do not catch it from us. Tackling dengue requires concerted efforts from

us all, but it does not require drastic changes to our daily routines, so we should continue with our daily lives.

35. In engaging the public and the media, the government will continue to provide full facts and figures. We will give Singaporeans the information and the knowledge they need to combat dengue. At the same time, the public can feed us information by being our eyes and ears on the ground. We believe this partnership is the best approach for a successful campaign.

36. We must sustain our efforts against dengue to prevent another resurgence of the disease next year. All of us must play our part to keep Singapore dengue-free.

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