

Measles epidemic in Davao City: 2017-2018

Cleo Fe Tabada,¹ Clarence Xlasi Ladrero²

¹Regional Epidemiology Surveillance Unit, Department of Health Region XI, JP Laurel Ave, Davao City

²Hospital Research and Publication Office, Southern Philippines Medical Center, JP Laurel Ave, Davao City, Philippines

Correspondence

Cleo Fe Tabada,
cleofe0916@gmail.com

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Diseases of epidemic potential are on surveillance using the Philippine Integrated Disease Surveillance and Response (PIDSR) system maintained by the Department of Health (DOH) regional offices. Southern Philippines Medical Center (SPMC) contributes data to this system through the Regional Epidemiology Surveillance Unit of Region XI (RESU XI), which releases summary surveillance reports on a weekly basis. The report itself is a count of patients with disease signs or symptoms, suspected disease conditions, specific clinical diagnoses, or laboratory-confirmed diagnoses. Per DOH policy, a single notification of a measles diagnosis needs confirmation and investigation. An increasing number of cases warrants the initiation of outbreak response immunizations (ORI) by the local government, even before an epidemic is formally declared. Serologic confirmation of measles is performed at the Research Institute for Tropical Medicine (RITM) in Muntinlupa, Alabang.

By the end of 2016, Davao City had a 67% immunization coverage for all prescribed antigens—including measles—among children aged 12 months and younger. The number of patients with measles diagnosis reported to the RESU XI had been low from January to October of 2017. From 2 to 14 November 2017, SPMC reported 7 patients clinically diagnosed to have measles. All seven patients came from one *barangay* in Davao City. The number of reported cases and involved areas in Davao City increased during the succeeding weeks and peaked on 3 February 2018.

From 2 November 2017 to 25 June 2018, a total of 882 patients were reported to have measles in Davao City. Only 79/882 (8%) patients had laboratory confirmation of measles. The patients' ages ranged from 17 days to 87 years. There were 237/882 (27%) patients aged less than 9 months who were not eligible for measles vaccination but were diagnosed to have the infection. Thirty-six (4%) of the reported patients died. Of the patients who died, 16 were not eligible for measles immunization.

Right after the report from SPMC in early November 2017, RESU XI met with the local health unit personnel of the affected *barangay* to alert them of the alarming number of measles cases from the area. A team, composed of *barangay* health workers and personnel from Davao City Epidemiological Surveillance Unit (Davao CESU) and RESU XI, went to different *puroks* within the affected *barangay* to conduct investigation and monitoring for additional cases. The local health unit has already been performing catch-up immunizations with measles containing vaccines (MCV) for 9 to 24-month-old children as part of its regular immunization program. In response to the increasing number of reported cases of measles, the District Health Officer of the affected *barangay* ordered the immediate expansion of the catch-up MCV immunization coverage to include infants aged 6 to 8 months.

On 21 December 2017, due to the increasing reports of cases and deaths, now involving other areas in the city, DOH Region XI deployed nurses to conduct ORI in Davao City for four days.¹ The City Health Office of Davao City formally declared a measles outbreak within the city on 22 January 2018.² Two more batches of nurses were deployed to more areas in the city from 15 January to 16 February 2018 to intensify the ORI initiated in December 2017.^{3 4} By this time, increasing number of cases were also reported in provinces surrounding Davao City. This prompted the respective areas to also initiate ORI for measles and intensify their catch-up immunizations for all other antigens.⁵ The number of cases started to drastically decline on 18 February 2018.

On 9 May 2018, the DOH started a Mindanao-wide supplemental immunization activity (SIA) for all antigens to include children aged 6 to 59 months, regardless of immunization status.^{6 7} By 30 June 2018, after the SIA, Davao City had 83% immunization coverage among children aged 5 years and younger.

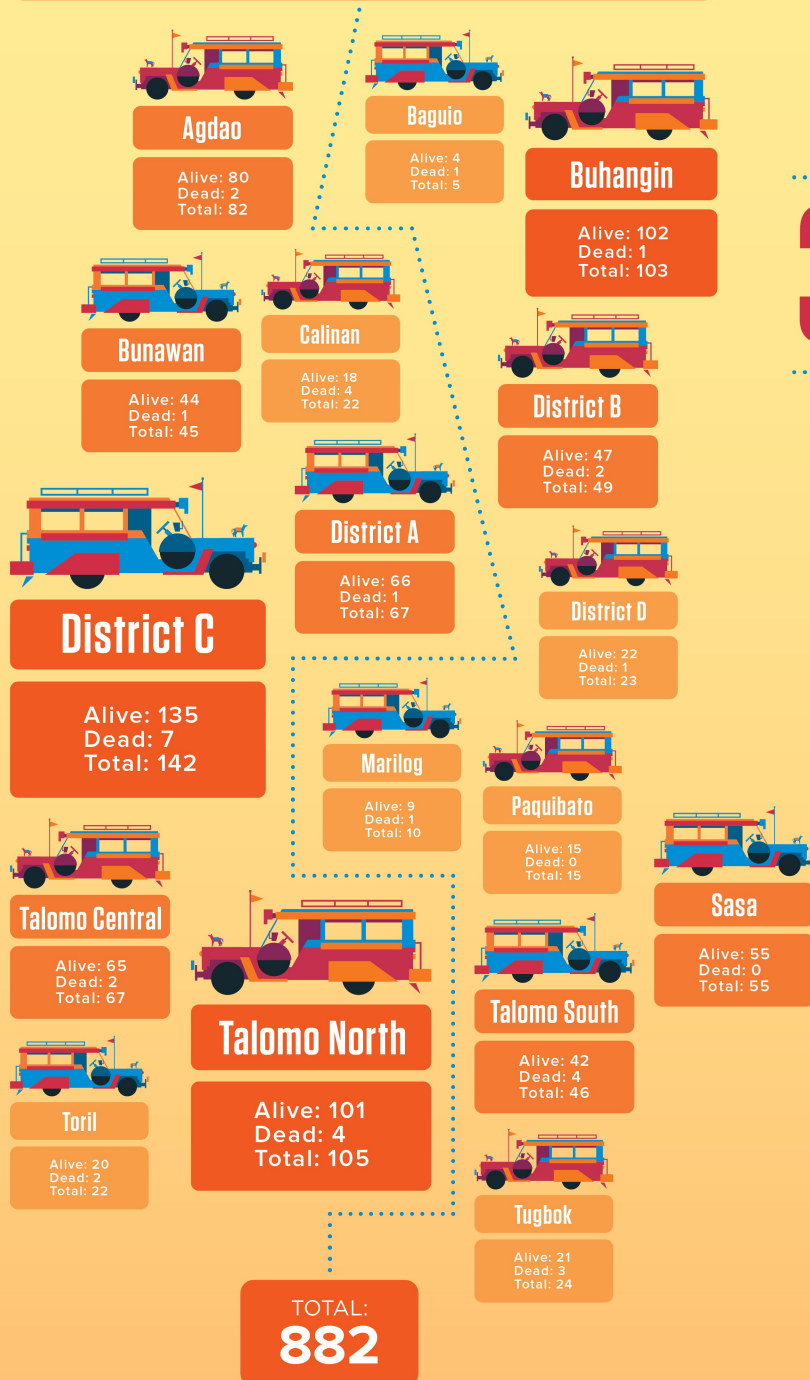
This epidemic of a preventable disease is ongoing. An appropriate response at the level of the first affected area in Davao City was immediately initiated, and subsequent support from the national and local governments led to a full-swing epidemic response in the succeeding weeks. From 18 February 2018 up to the last recorded weekly count as of this writing, there has been a fluctuating trend in measles incidence, generally leading towards a decrease in number



MEASLES EPIDEMIC

IN DAVAO CITY: 2017-2018

NUMBER OF REPORTED CASES PER DISTRICT FROM
2 NOVEMBER 2017 TO 25 JUNE 2018

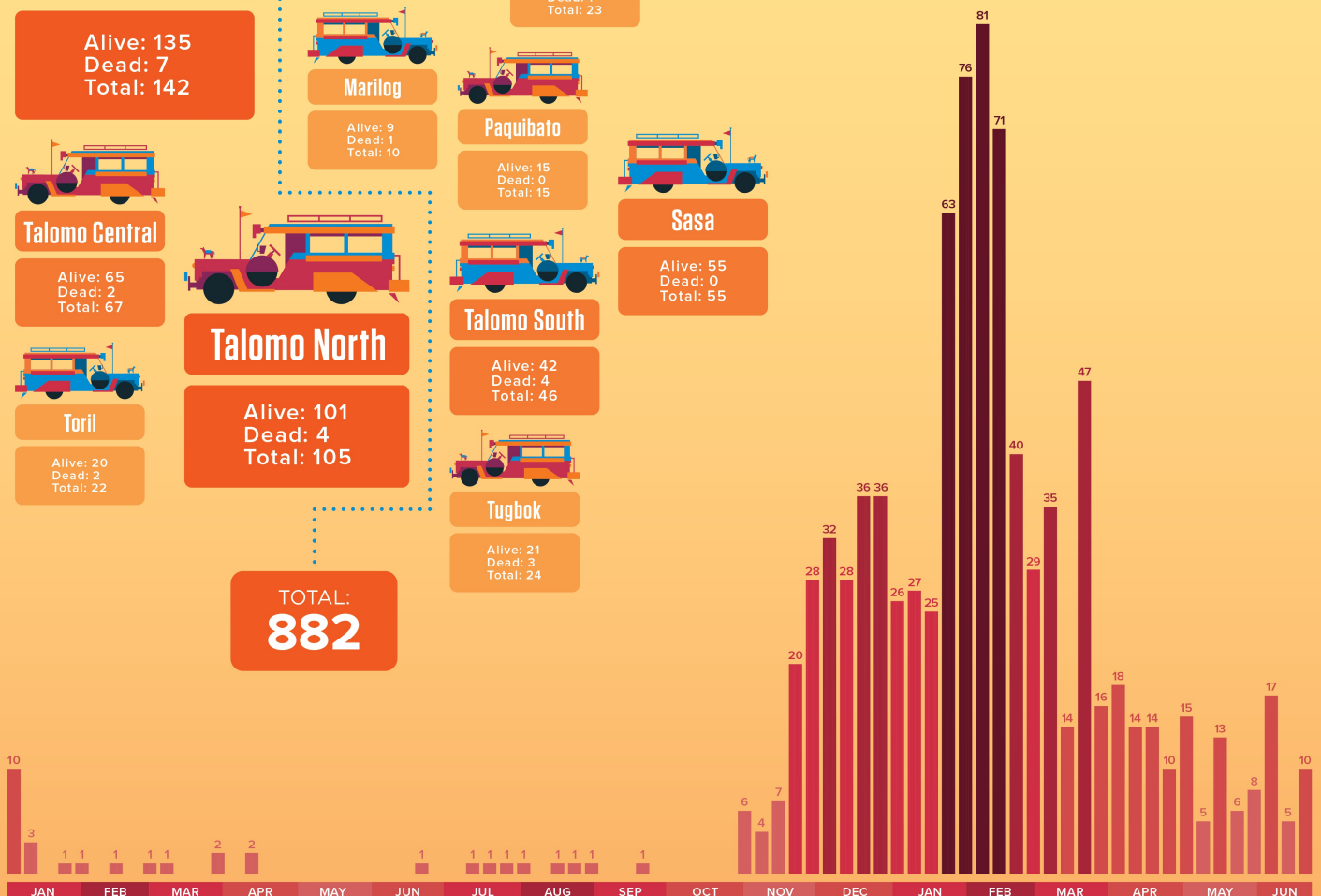


87 years old
AGE OF THE OLDEST PATIENT CLINICALLY DIAGNOSED WITH MEASLES DURING THE OUTBREAK

36 NUMBER OF PATIENTS CLINICALLY DIAGNOSED WITH MEASLES WHO DIED FROM NOVEMBER 2017 TO JUNE 2018

79 TOTAL NUMBER OF PATIENTS WITH LABORATORY-CONFIRMED MEASLES DURING THE OUTBREAK

17 days old
AGE OF THE YOUNGEST PATIENT CLINICALLY DIAGNOSED WITH MEASLES DURING THE OUTBREAK



WEEKLY NUMBER OF PATIENTS WITH MEASLES DIAGNOSIS REPORTED FROM JANUARY 2017 TO JUNE 2018

of reported cases. The coordinated efforts of the DOH personnel and local health units—to enhance the coverage and widen the scope of measles immunization—are expected to put this epidemic under control.

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SPMC JHCS OFFICE Hospital Research Office, Level 1 Outpatient Building, Southern Philippines Medical Center, JP Laurel Avenue, Davao City, Philippines
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