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MINISTRY OF HEALTH
GOVERNMENT OF TONGA

SITUATION REPORT

Tonga Measles Outbreak 2019-20

SITREP Number: 14
Date of Issue 17/01/2020

1. Summary of Situation

Background

The outbreak of measles in Tonga began in early October 2019, following the return of a national youth team of Tongan rugby players from New Zealand. The index case developed measles while in New Zealand. Subsequently, a further 12 teammates developed laboratory-confirmed measles. The early outbreak involved mainly teenagers from associated schools on Tongatapu and Vava'u Islands. Since the initial two waves of the outbreak, cases were widely reported in all age groups but are now waning.

An inter-disciplinary Ministry of Health Epidemic Task Force (ETF) meets weekly to advise on management of the outbreak. In addition to routine outbreak response activities, a time-limited vaccination program targeting secondary school students and 6-11 months infants has been completed.

Note: Refer to earlier SITREPS for further detail of the initial cases and response.

2. Current Situation

There is ongoing transmission on the Islands of Tongatapu and Vava'u; the last case onsets on Ha'apai, 'Eua, and Niuatoputapu islands were 14/12/2019, 08/12/2019, 14/11/2019, respectively [Table 1].

Since the last situation report, 6 new measles case-patients were reported in Tongatapu and 3 cases were added retrospectively to the cumulative number of cases. They were 7 males and 2 females between the ages of 6 months and 19 years old.

As of 16 Jan 2020, 639 confirmed or suspected cases of measles have been identified in Tonga including 52 lab-confirmed cases. The majority, 561 (87.8%) cases have occurred on Tongatapu, and 66 (10.3 %) have occurred on Vava'u Island. Case presentations have been reported to be mild with 20 hospitalisations and no death. The majority of the cases have been managed by home isolation and all patients have been discharged. Given the duration of illness is typically less than 2 weeks, it is estimated that at least 99% of the 639 reported measles cases will have already recovered from their illnesses.

Figure 1 (below) shows the epidemic curve for the current outbreak in Tonga. Most of cases (blue) were reported from the Island of Tongatapu.

Figure 2 demonstrates the breakdown of cases by gender. Consistent with early transmission through male boarding schools, most cases have been among males, with the proportion of cases among females increasing as the outbreak progressed. A total of 105 cases have occurred in children aged less than 5 years, while cases among adolescents and

young people continue to form the majority of the cases in this outbreak - 500 (78%) cases occurring in people aged 10 to 24 years (Table 2 and Figure 3).

Key events/ issues since last SITREP

- Supplemental immunisation activities (SIAs) for measles have been underway since 10 Oct 2019, in conjunction with continued routine childhood vaccination. These efforts continue to target groups at greatest risk of measles infection as following:
 - Extended family contacts of suspected and confirmed cases
 - Adolescents and young adults aged 10 to 24 years
 - Outbound travellers aged 6 months to 24 years without documented evidence of 2 doses of measles-containing vaccine
 - Migrant workers
 - Infants 6-11 months-old for a 'zero' dose
 - Select other groups
- The first targeted mass vaccination campaign of 10 - 24-year-olds was conducted on 26 November 2019 and 17 December 2019 through 31 December 2019. A total of 22,791 persons were vaccinated during the campaign on the Islands of Tongatapu, 'Eua, Ha'apai, and Vava'u; those on Niua were vaccinated earlier.
- An additional vaccination campaign of less than 10 years old who were not included in previous campaign is conducting since 14 Jan 2020 up to date, covering 6050 vaccines were administered in Tongatapu
- A grand total of at least 33741 persons have been vaccinated through 16 January 2020.
- A three-person WHO and GOARN team is working with the Tonga MOH to support the measles outbreak
- Regular information sharing with the public regarding the outbreak epidemiology through: weekly situation reports; Q&A sheets for health care workers; communication conducted via radio station; and Facebook and SMS messaging regarding FAQ, home based care, self-isolation, and home quarantine

Ongoing and planned activities:

- Weekly ETF meetings to conduct continual risk assessment to guide outbreak response and prevention
- Vaccination efforts targeting priority groups to cover 6 month to 24 year old
- Extensive contact tracing and post-exposure vaccination of extended family contacts of cases as part of intensive case follow up
- Post-exposure prophylaxis for all susceptible contacts with priority on infants 6 to 11 month-olds and 10 to 24-year-olds
- Enhanced surveillance activities including: zero reporting, active case finding, and completion of minimal case report form (CRF) by outpatient clinic staff
- Complete verification of measles immunisation records for cases, with a focus on immunisation records for cases aged less than 10 years of age and provide a summary of MCV immunization coverage status
- Ensure collection of additional samples from each case-patient as the outbreak wanes and timely turnaround time of laboratory results
- Consider improving register record by using electronic system for better data management and historical data recording.
- Further investigation on waning immunity is discussed to determine causes for future outbreak prevention.
- Ministry of Health Epidemic Task Force (ETF) have agreed to uplift the decision and advice for MASS GATHERING in Tonga to return to normal situation.

Next SITREP due to be issued at: 24/01/2020

Approved by: Dr Siale 'Akau'ola, Chief Executive Officer MOH

Date: 17/01/2020

Table 1. Tonga Measles Cases, 2019-2020/Date since last onset as of 16/01/2020

Division	Last Onset date	Days since Onset	Comment
Tongatapu	11/01/2020	5	Ongoing Transmission
Vava'u	08/1/2020	8	Ongoing Transmission
Ha'apai	14/12/2019	33	Monitoring
Eua	08/12/2019	39	Monitoring
Niuas	14/11/2019	63	Interrupted transmission

Figure 1: Measles cases in Tonga by island and date of onset as of 16 Jan 2020

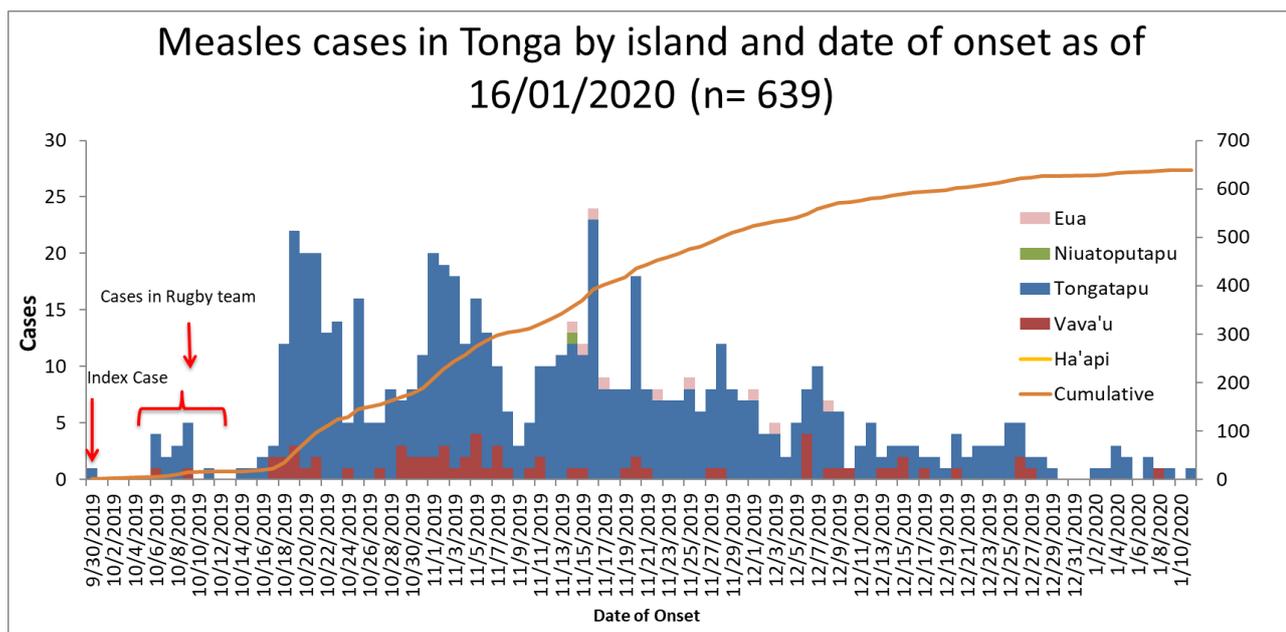


Figure 2: Measles cases in Tonga by onset date and gender as of 16/01/2020 (n=639)

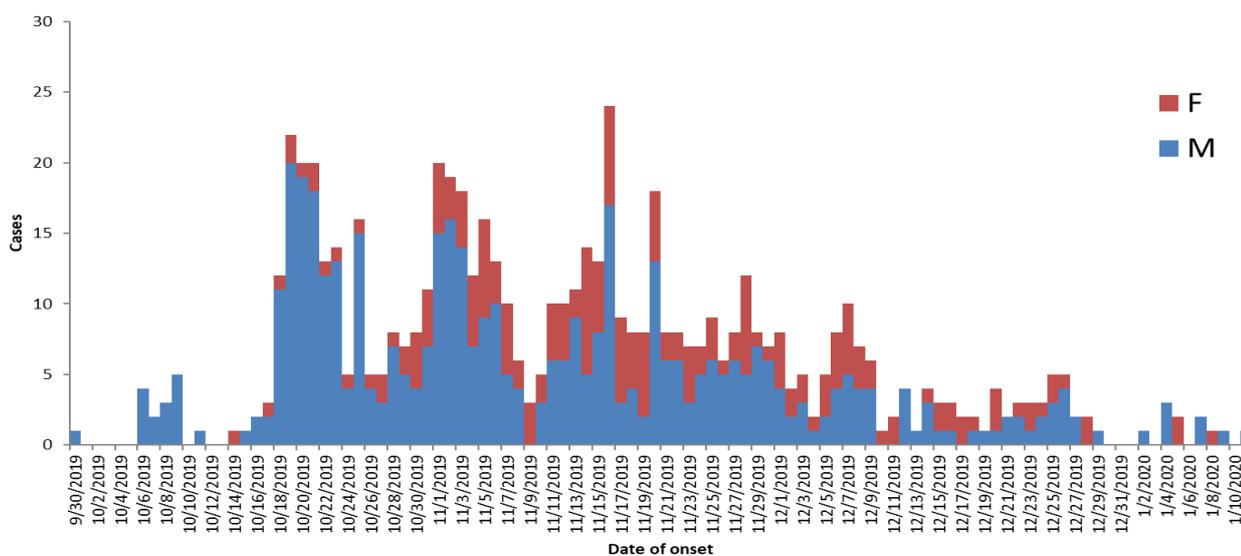


Table 2: Age distribution of cases in measles outbreak, Tonga, as of 16 January 2020

Age	Total
Less than 6 months	38
6 to 11 months	48
1 to 4 years	19
5 to 9 years	22
10 to 14 years	143
15 to 19 years	285
20 to 24 years	72
25 to 29 years	7
30 years and over	5
Total	639

Figure 3: Age distribution of cases by age group and gender in measles outbreak, Tonga 16 January 2020

