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MINISTRY OF HEALTH
GOVERNMENT OF TONGA

SITUATION REPORT

Tonga Measles Outbreak 2019-20

SITREP Number: 17
Date of Issue 06/02/2020

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 declining.

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 was conducted between October and December 2019. Additional immunization activities have been conducted in January and February to target the 1-9 year olds.

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

2. Current Situation

- As of 5th February 2020, 656 confirmed and suspected cases of measles have been reported in Tonga. Till date, 98 specimens have been tested for measles, of which 78 (79.6%) have been PCR laboratory confirmed.
- Of 656 cases, 578 (88.1%) cases occurred on Tongatapu and 66 (10.1 %) occurred on Vava'u Island. Figure 1 shows the epidemic curve for the current outbreak in Tonga.
- Ongoing transmission of measles virus in Tongatapu and Vava'u. Onset of illness for most recent case in Tongatapu was 1st February 2020. Onset of illness for last reported case in Vava'u was 8 Jan 2020 (28 days to-date). Islands of Ha'apai, Eua and Niua have interrupted transmission (Table 1).
- Throughout the course of the outbreak, most cases presented with mild symptoms, and were mostly managed by home isolation.
- Between October 2019 and 25th December 2019, there were 20 measles related hospitalisations. All cases recovered completely and were discharged. No deaths have been reported till date.
- Between 30th January and 5th February 2020, four additional cases were reported. Of these, clinical confirmation for two cases is pending. All reported cases were from the island of Tongatapu. The two suspect cases were females aged 15 and 24 years.
- Of the 656 cases, majority (452, 31.1%) of cases have been in males. This is consistent with early transmission occurring in male boarding schools.
- Figure 2 presents age and gender graph for all cases of measles in the current outbreak. Majority (435, 66.7%) cases occurred in persons aged 10 to 19 years (Figure 2 and Table 2).

- Vaccination records have been verified for 560/652 (85.9%) cases. In-depth results will be available following complete verification.

Key events/ issues since last SITREP

Note: Please refer to earlier SITREPS for detailed information on earlier supplementary immunization activities.

- Supplementary 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
- A total of 44 605 doses of measles containing vaccines were administered across the target age groups (6-11 months, 1-9 years, 10-24 years and ≥ 24 years) between October 2019 and January 2020. Additional campaigns particularly school-based vaccination campaigns to target children aged 1-9 years and 10-17 years to be conducted between 3rd-8th February 2020.
- Further analyses to understand SIA coverage by districts in underway, and will be used to guide next stages of vaccination activities in response to the ongoing measles outbreak.
- WHO/ GOARN epidemiologist continues to support the Tonga MOH for the measles outbreak.
- In order to ensure ongoing risk communication and communication engagement, additional strategies are being considered as Tonga MoH is actively undertaking preparedness activities to prevent and control cases of 2019 novel Coronavirus (nCoV) acute respiratory disease. Activities to target both outbreak-prone disease will be required.

Ongoing and planned activities:

- Weekly Epidemic Taskforce meetings to conduct continual risk assessment to guide outbreak response and prevention. These meetings have also been expanded to include 2019 novel Coronavirus outbreak preparedness activities.
- Vaccination efforts targeting priority groups to cover 6 months to 24-year-old.
- Active 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. Vaccination records have been verified for 560/652 (85.9%) cases.
- Ensure collection of additional samples from each case-patient as the outbreak wanes and timely turnaround time of laboratory results.
- Ongoing efforts to verify vaccination records for cases, retrospectively. 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.

Next SITREP due to be issued at: 14/02/2020

Approved by: Dr Reynold 'Ofanoa, Acting Chief Executive Officer MOH

Date: 6 February 2020

Table 1. Tonga Measles Cases, 2019-2020/Date since last onset as of 05/02/2020

Division	Last Onset date	Days since Onset	Comment
Tongatapu	01/02/2020	4	Ongoing Transmission
Vava'u	08/01/2020	28	Monitoring Transmission
Ha'apai	14/12/2019	53	Interrupted transmission
Eua	08/12/2019	59	Interrupted transmission
Niuas	14/11/2019	83	Interrupted transmission

Table 2: Age distribution of cases in measles outbreak, Tonga, 5 February 2020

Age	Total	Percentage of total
Less than 6 months	38	5.8
6 to 11 months	52	7.9
1 to 4 years	19	2.9
5 to 9 years	23	3.5
10 to 14 years	143	21.8
15 to 19 years	293	44.7
20 to 24 years	74	11.3
25 to 29 years	7	1.1
30 years and over	7	1.1
Total	656	100.0

Figure 1: Measles cases by island and date of illness onset, Tonga, 5 February 2020

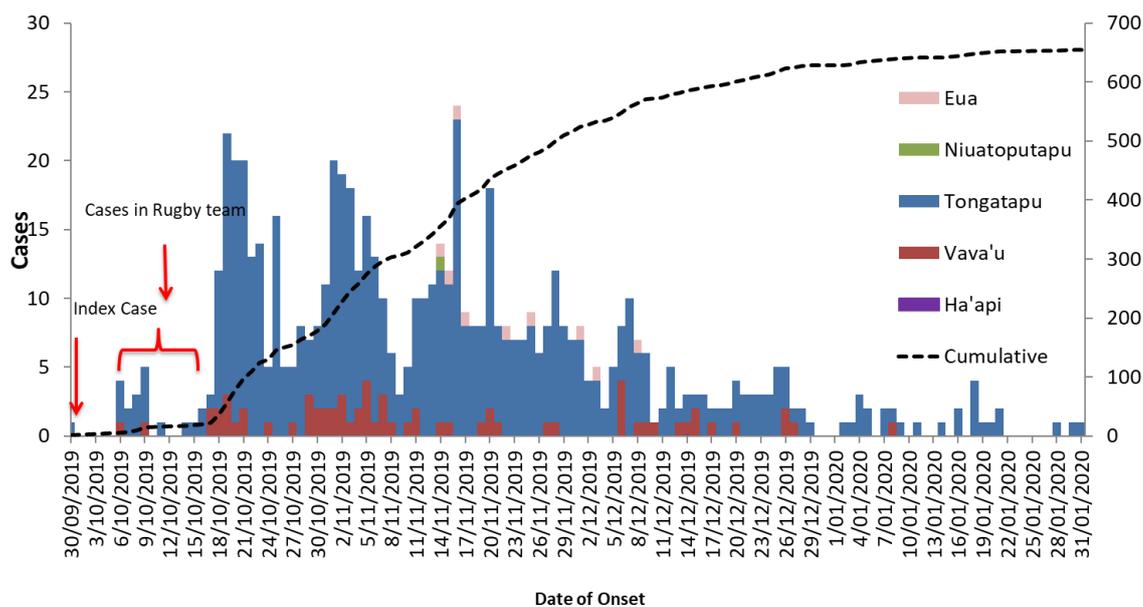


Figure 2: Distribution of cases by age group and gender during measles outbreak, Tonga, 5 February 2020

