



MINISTRY OF HEALTH
GOVERNMENT OF TONGA

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SITUATION REPORT

Tonga Measles Outbreak 2019

SITREP Number: 4
Date of Issue 6/11/2019

1. Summary of Situation

Background

An outbreak of measles in Tonga occurred following the return of a squad of Tongan rugby players from New Zealand where one player had developed the illness. A further 12 players developed measles on their return to Tonga. Samples from 6 of these cases were laboratory confirmed as measles. The outbreak has involved mainly teenagers from schools on Tongatapu as well as students from Vava'u High School. Cases are epidemiologically linked to the initial imported cases. The Ministry of Health Epidemic Task Force has been convened comprising public health, clinician and laboratory representatives to advise on the management of the outbreak.

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

2. Current Situation

As at 5th November, 177 cases of confirmed or suspected measles have been identified in Tonga. Clinicians have reported that most cases are experiencing a mild illness.

The attached charts outline the results of analysis of current case information. The epidemic curve reflects a propagated outbreak matching the incubation period for measles (Figure 1). Figure 1 demonstrates the cases in Vava'u high school students (in red) stemming from measles in two of the returned rugby players. Figure 2 demonstrates that while males predominate, consistent with the transmission of disease through the boys schools, females have contracted measles as the outbreak has gone on. Four cases have been reported in infants less than 12 month of age, one case in a two-year old child and two cases in children 5-9 years of age (Figure 3). Predominate symptoms include rash (98% of cases) and fever (82% of cases) (Figure 4). Cases in females have occurred mainly in the 15-19 age group followed by the 10-14 age group as for the males (Figure 5). Identifying vaccination history for cases has proved challenging. Of 177 cases, vaccination history has been found for 63 cases. Of these 63 cases, 43 (73%) have a two-dose history with MR vaccine and the remainder have a one dose history. The remaining cases are awaiting verification of vaccination histories.

There is currently no evidence to suggest that new lines of transmission have occurred.

Key events/ issues since last SITREP

- Fourteen cases have been reported from Vava'u, all in the 15-19 year age group and linked through the school. This is a co-educational high school and it is of note that 5 of the cases are in girls.
- Measles occurred in a touring Tongan Futsal team which travelled to New Zealand on 14th October where one of the team became unwell on 19th October and was subsequently diagnosed with measles. The team was staying in shared accommodation. While this case remained in NZ, the remainder of the squad went onto New Caledonia prior to their infectious period. Public health in New Caledonia administered post

exposure vaccination to 4 members of the squad who did not report a history of two doses of MCV. The other members described a two dose MCV vaccination history and were not vaccinated. By 1st November, 6 of the boys became unwell with measles including 4 boys with a reported two-dose vaccination history and 2 of the boys given PEP in New Caledonia. The unwell boys have remained in New Caledonia until the infectious period has passed while the remainder of the squad returned on 4th and 5th November. Public health action has been taken to quarantine and provide education. Full details of the squad and vaccination histories are being collated. Serology results for 5 of the cases show IgG+/IgM- while the other is IgG+/IgM equivocal. PCR results to follow.

- Given preliminary evidence of non-protective immunity in the teenage cohort, contacts of cases which have a two-dose history of vaccination with MCV may be considered at risk of measles and should be managed accordingly.
- Advice has been received from MFAT that goods requested to support the measles outbreak had been despatched and should arrive in Tonga 6-7th November.
- A supply of N95 masks and hand gel was received from WPRO.
- A supply of Capon swabs for sampling due to arrive from WHO DPS on 7th-8th November.
- Samples from 18 people suspected of having measles were sent to VIDRL on 29/10.
- 2500 doses of MR vaccine ordered through UNICEF arrived 29/10

Actions Taken:

- On Tongatapu, Health Officers and District Health Nurses continuing to follow-up of cases and contacts at home and complete details on case investigation forms and gather vaccination history.
- An information bulletin was distributed to Tonga Government Ministries, country Missions and relevant stakeholders on the measles outbreak
- IEC materials on measles have been translated and arrangements for printing are underway
- Discussion with Ministry of Education and Training regarding students undertaking external and final exams aimed at identifying ways of limiting mixing of students from different schools. Public health staff are on site to identify unwell students and provide health advice to teachers and students.
- A total of 1476 doses of MR vaccine have been used in response to the outbreak including post exposure prophylaxis, vaccination of HCW and vaccination of travellers including seasonal workers.
- Investigation and follow up of issues involving the Tongan Futsal team. Boys who have returned to Tonga have received a home visit and will be quarantined at home until 10th November.

Actions to be Completed:

- Further actions to ensure that travellers and touring sporting teams/ groups as well as seasonal workers are vaccinated for measles as necessary before departure.
- Collection of further samples from cases to explore evidence of waning immunity/ seroconversion failure/ missed vaccination particularly those outside the teenage male group. Consultation with WHO, UNICEF and experts to further explore this issue.
- Review of vaccine stocks given increased demand for vaccination.

Next SITREP due to be issued at: 12/11/2019

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

Date: 6/11/2019

Abbreviations:

HCW	Health care worker	RT-PCR	Polymerase chain reaction
IEC	Information Education Communication	TCT	Tupou College Tofoa
MCV	Measles containing vaccine	THS	Tonga High School
MFAT	New Zealand Ministry of Foreign Affairs and Trade	TCA	Tonga College 'Atele
MR	Measles rubella vaccine	SIA	Supplementary Immunisation Activities
NFP	National Focal Point	VIDRL	Victorian Infectious Diseases Reference Laboratory
PEP	Post exposure prophylaxis	WPRO	WHO Regional Office for the Western Pacific

Charts
Figure 1

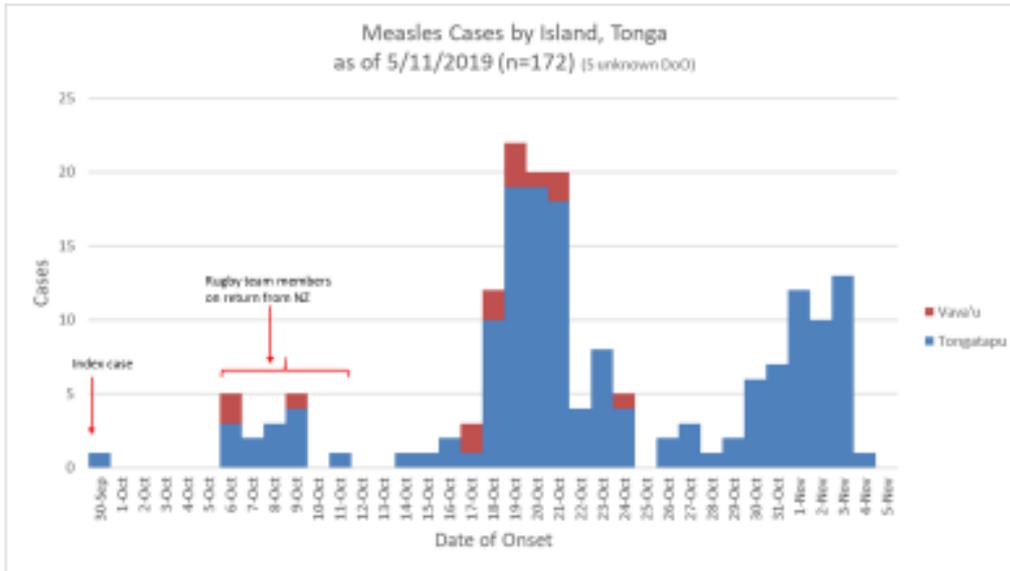


Figure 2

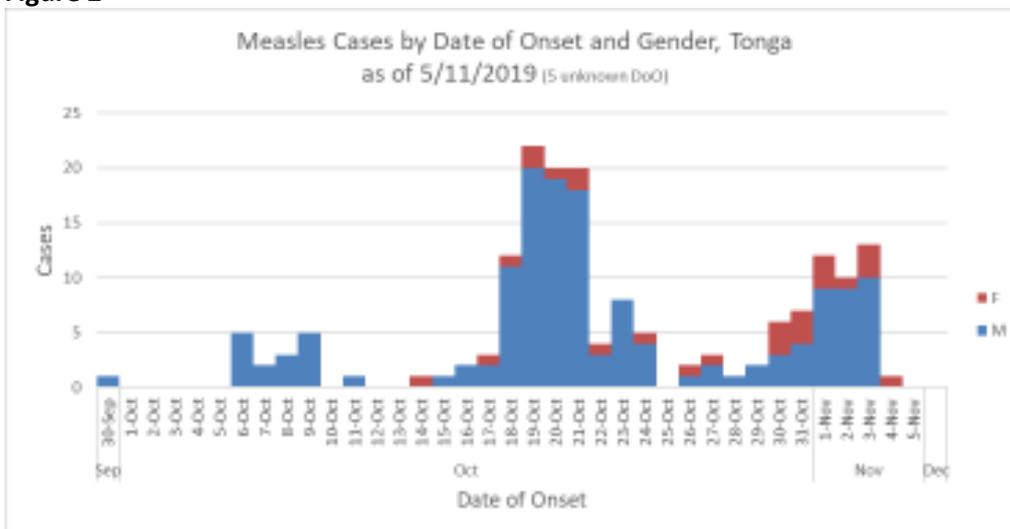


Figure 3

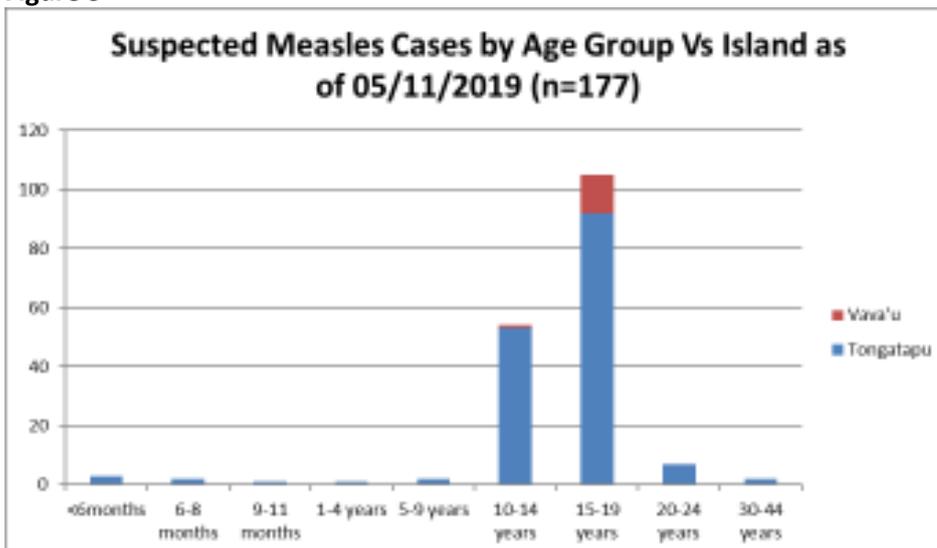


Figure 4

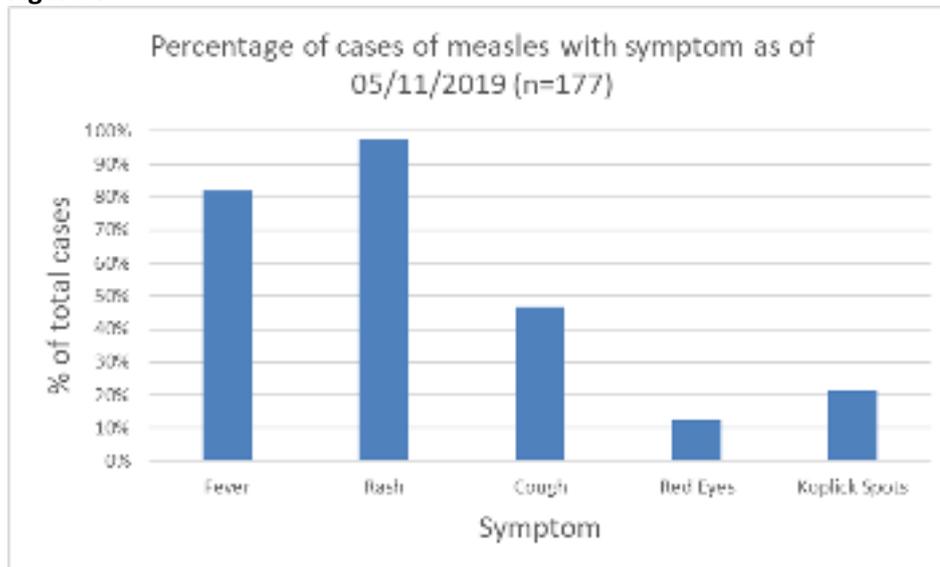


Figure 5

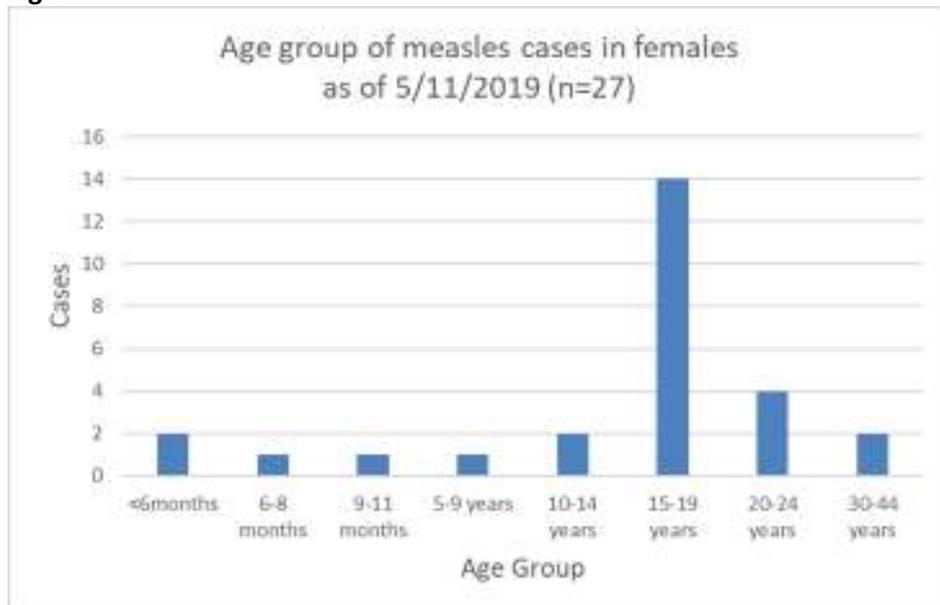


Figure 6

