

## Tuvalu takes concerted action against rubella and measles

### Background

The Tuvalu Ministry of Health introduced rubella vaccine to its routine immunization schedule in 2005, with a two-dose schedule of measles/rubella (MR) vaccine being given at 12 and 18 months of age. While rubella (and congenital rubella syndrome) has not been a problem in Tuvalu in recent years, there have been rubella outbreaks in other Pacific Islands (e.g. Tonga and Samoa) and the Ministry of Health is introducing the rubella vaccine now to protect children and women of childbearing age.

The introduction of the vaccine also provided an opportunity for Tuvalu to strengthen protection against measles outbreaks and meet current World Health Organization (WHO) goals for eliminating measles in the Western Pacific region. Until 2005, Tuvalu had only a single-dose measles vaccine schedule, using regular supplementary immunization activities (SIA) to provide the second dose. The last measles vaccine SIA was carried out in 2001 and targeted children of 9 months to 5 years.

To ensure high immunity to measles and rubella (especially the latter in women of childbearing age), the MR vaccine was introduced in conjunction with an immunization campaign that targeted males and females over a wide age range from 1 to 34 years of age. Males were included in the campaign as they are often the source of infection for pregnant women. The campaign was carried out from August to September 2005. To protect vaccine recipients and health workers, auto-disable syringes and safety boxes, which were bundled for distribution before the SIA, were used.

### Implementing the SIA

Senior Nurses from the eight outer islands and Funafuti were trained to carry out the MR campaign at a workshop in mid-July 2005. The workshop was followed by live radio programmes alerting listeners to the purpose of the campaign and providing background information.

School-age children (5 to 15 year-olds) were given their vaccinations at school to ensure high immunization coverage. Nursing staff worked closely with school principals and teachers to coordinate the process with classes being called in starting from the lower classes first. The turnout was excellent, greatly aided by the teachers who supervised the students at each site.

Once all the children in schools had been fully vaccinated, the nurses continued on to villages, going from house to house and office to office, searching for those in the target age group. People who were missed on the first visit were followed up and asked to come to the Maternal Child Health clinic for their injection. It was an enormous task for health workers and took from a few days to a week to complete, depending on the population of the island.

**High coverage**

Excellent coverage was achieved in the MR campaign with 99% of 1 to 5 year-olds, 98% of 6 to 15 year-olds and 92% of 16 to 34 year-olds being vaccinated (results for each island are shown in the table).

Approximately 5,400 injections were given, which produced approximately 54 filled safety boxes. These were destroyed by incineration on Funafuti and the outer islands. Nursing staff did not receive any reports of adverse events from immunization although a woman who was vaccinated was later found to be pregnant. The risk of side effects from rubella vaccination is considered extremely low, but as a precaution, this mother is being closely followed-up.

Around 250 Tuvaluan men and women were off-island (seafarers, students, families) and missed the SIA. Targeting these individuals will be difficult. However, women who did not receive the MR vaccine because they were pregnant, will be followed up post-partum to ensure all women in Tuvalu are immune to rubella virus.

**Future immunization plans**

Ministry of Health staff are well informed and aware of the new immunization schedule and following the successful SIA and implementation of the revised schedule with a second dose of MR vaccine, Tuvalu should not require any future MR SIA. As long as high immunization coverage can be maintained through the routine immunization programme, Tuvalu should now be protected from outbreaks of measles and rubella.

**Ministry grateful for support**

The Ministry of Health expressed its sincere appreciation to Rotary International District 2650 of Japan and WHO for providing financial assistance both for vaccine and supplies and the operational costs of introducing the rubella vaccine. The Ministry also acknowledged the collective efforts of health care providers for their tremendous support in conducting the MR campaign and thanked the public for their cooperation, urging them to keep up these collaborative efforts to protect Tuvalu's future generations.

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Table: Percentage of island populations vaccinated during Tuvalu MR SIA campaign according to age group

Island	1 - 5 yr			6 - 15 yr			16 - 34 yr			Total
	vaccinated	target	coverage	vaccinated	target	coverage	vaccinated	target	coverage	
Nanumea	77	78	99%	165	165	100%	106	115	92%	97%
Nanumaga	81	81	100%	127	127	100%	98	104	94%	98%
Niutao	71	71	100%	144	144	100%	112	120	93%	98%
Nui	65	65	100%	144	144	100%	129	134	96%	99%
Vaitupu	134	134	100%	533	533	100%	488	496	98%	99%
Nukufetau	56	56	100%	132	132	100%	82	84	98%	99%
Funafuti	556	568	98%	956	995	96%	1004	1146	88%	93%
Nukulaelea	44	44	100%	77	77	100%	53	58	91%	97%
Niulakita	8	9	89%	12	12	100%	15	16	94%	95%
<b>Total</b>	<b>1092</b>	<b>1106</b>	<b>99%</b>	<b>2290</b>	<b>2329</b>	<b>98%</b>	<b>2087</b>	<b>2273</b>	<b>92%</b>	<b>96%</b>