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# Measles supplementary immunization activities in Solomon Islands and Vanuatu in 2006

The World Health Organization (WHO) has recommended that Solomon Islands and Vanuatu conduct supplementary immunization activities (SIA) against measles in 2006 to lessen the risk of a measles outbreak and help the Pacific Islands region maintain its "measles-free" status.

The measles virus has had a huge impact on both the people and history of the Pacific Islands. A measles epidemic in Fiji in 1875 nearly wiped out the indigenous population. Since then, until the late 1990s, circulations of the measles virus and measles outbreaks were common occurrences in the Pacific, with an average of four outbreaks every year. In the late 1990s, the nations of the Pacific collectively decided to interrupt the cycle of measles transmission within their region. The initial strategy was to conduct Pacific-wide coordinated mass measles vaccination campaigns in 1997 and 1998, targeting all children up to 15 years of age. This has been followed by either conducting regular measles SIA in countries that provide only one routine dose of measles vaccine, or by maintaining high two-dose measles vaccine coverage in the others, with supplemental measles SIA to fill gaps in coverage.

This strategy has been extremely successful. At the same time, an increasing measles-free buffer zone in the Pacific Rim countries of Australia, New Zealand and the United States of America has provided added protection by reducing the risk of virus importation. Up till 2003, there were only small limited measles outbreaks (French Polynesia and Guam) in the Pacific, which were controlled to a large extent through the existing high measles immunization coverage. However, the measles outbreak in the Marshall Islands in 2003 showed how fragile this protection can be if high levels of immunization are not maintained. It also demonstrated the enormous cost and impact of a measles outbreak.

Measles vaccine was introduced in both Solomon Islands and Vanuatu in 1982. Both countries are among the remaining Pacific nations that still have a single-dose measles immunization schedule (both at nine months of age). This alone places them at increased risk of a measles outbreak unless immunity gaps (due to either missed vaccination or lack of vaccine effect) are mopped up through the provision of a second dose of measles vaccine.

In addition, immunization coverage rates for the scheduled measles doses are less than ideal in these two countries. In 2004, first-dose measles coverage in Solomon Islands was 72%. Since the first dose of measles vaccine is given at 9 months when the vaccine's effectiveness is approximately 85%, vaccination coverage of 71% equates to an immunity level of approximately 60%. This means that one birth cohort of children with no protection against measles builds up approximately every two and a half years. The situation is similar, if not worse, in Vanuatu, with reported measles immunization coverage of less than 50% in recent years, offering minimal protection of the population, and a birth cohort of children susceptible to measles building up rapidly at a rate of roughly every two years.

Estimates of measles population immunity (based on vaccination coverage data reported by the WHO Regional Office for the Western Pacific and the United States Centers for Disease Control and Prevention (CDC)) suggest that by 2006 up to 20 000 children aged from one to five years in Solomon Islands will have no protection against measles virus. For Vanuatu, an estimated 17 000 children lack immunity to measles, which is on a similar scale to numbers in Solomon Islands, despite Vanuatu's smaller population. This is partly due to

non-immune children being spread over a wider age cohort (one to nine years) and is a result of poorer immunization coverage in the past.

Both Solomon Islands and Vanuatu have been protected in the past from measles outbreaks by a combination of SIA in 1997 and 2001, the increasing buffer against measles from neighbouring countries, particularly Australia and New Zealand, and to a certain extent good luck. However, measles virus circulation is still common in many countries in the immediate vicinity of Solomon Islands and Vanuatu, such as China, Indonesia, Japan, Malaysia, and Papua New Guinea. Extensive outbreaks are likely if virus importation occurs in either country, and on a considerably larger scale than was witnessed in the Marshall Islands in 2003.

The measles SIA in both Solomon Islands and Vanuatu are being supported under the Pacific Immunization Programme Strengthening (PIPS) initiative, which includes WHO, United Nations Children's Fund (UNICEF), CDC, Japan International Cooperation Agency (JICA), Australian Agency for International Development (AusAID), New Zealand International Aid and Development Agency (NZAID), Secretariat of the Pacific Community (SPC) and Rotary 2650.

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