Health Report

Ministry of Health response to the increasing numbers of measles in New Zealand

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To:	Hon Julie Anne Genter, Associate Minister of Health		
Copy to:	Hon Dr David Clark, Minister of Health		

Contact for telephone discussion

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Action for Private Secretaries

Return the signed report to the Ministry of Health. **Date dispatched to MO:**

Ministry of Health response to the increasing numbers of measles in New Zealand

Purpose of report

This Health Report responds to your request for advice on managing the Auckland region measles outbreak and the Ministry of Health's plans to respond to the current outbreak and prevent future outbreaks.

Key points

- Since the beginning of 2019, there has been an increase in the number of cases of measles in New Zealand. As at 21 August 2019, there have been 716 cases. There have been three major outbreaks in three regions of New Zealand – in Waikato, in Canterbury, and currently in the Auckland region.
- There have been 584 cases to date in the Auckland region, with over two thirds occurring in South Auckland. The outbreak is mainly affecting young children (under 4 years) and young adults (20-29 year olds). It is occurring mainly in those who are unvaccinated or who do not know their vaccination status.
- The current focus in the Auckland region is to increase the immunity of the general population to protect against measles. Strategies to date include offering the first MMR vaccine at 12 months rather than at 15 months, active recall of children who are not immunised, messaging via social and traditional media on the need for immunisation and opportunistic vaccination provided at a number of locations.
- The Ministry of Health (the Ministry) has agreed to provide funding ($285,000) to Counties Manukau District Heath Board (CMDHB) to employ an additional five vaccinators to provide outreach and opportunistic vaccine services. These services commenced on Friday 23 August 2019.
- The Ministry will continue to work closely with CMDHB, Auckland Regional Public Health Service (ARPHS) as well as Auckland and Waitemata DHBs to identify other initiatives as part of a broader response that will increase the immunity of the Auckland population.
- The Ministry will also convene an expert advisory group on 10 September 2019 to discuss options on how to improve measles immunity in New Zealand. We will provide advice to you on the outcome of this meeting in late September.
- The Ministry is also undertaking a project to address low immunisation rates and the growing inequity in immunisation coverage that has been seen since early 2017. Improving immunisation coverage across all populations will mean that the New Zealand population will be protected against measles outbreaks in the long-term. The Ministry is developing an action plan to address this issue and will present it to you in late September.

Recommendations

The Ministry recommends that you:

a) **Note** the Ministry of Health has agreed to provide funding of $285,000 to CMDHB for 5 vaccinators and one whanau support worker to undertake outreach services and opportunistic vaccination in Middlemore hospital

b) **Note** the Ministry will provide advice to you in late September on the medium and long term options to address the increase in measles in New Zealand

Deborah Woodley	Hon Julie Anne Genter
Deputy Director-General	**Associate Minister of Health**
Population Health and Prevention	Date:

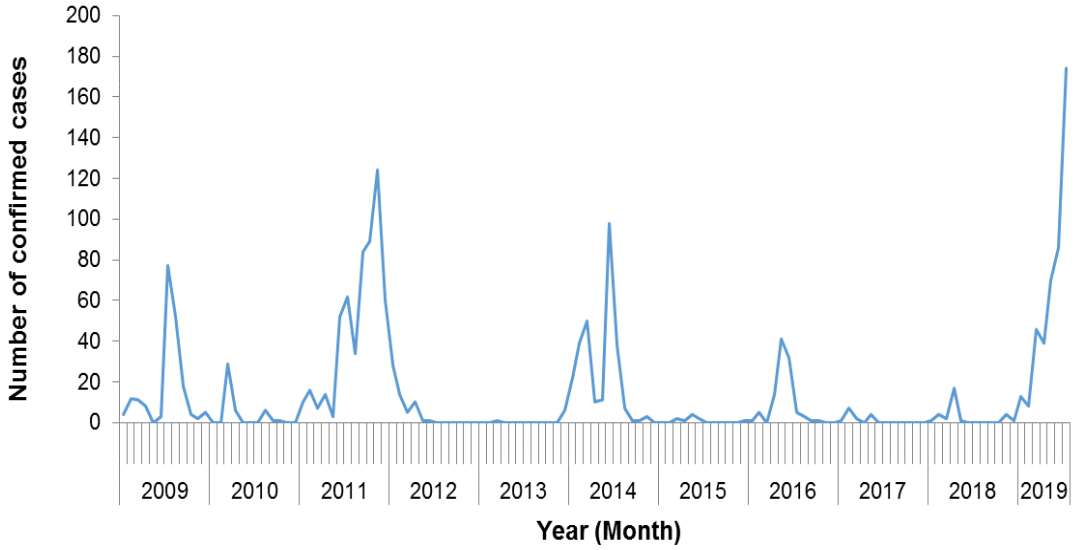
Background

1. Measles is a highly infectious viral disease that spreads rapidly amongst people who are not immune. In healthy people measles is rarely fatal especially if medical attention is sought early. However, measles can be associated with serious secondary complications which can be fatal in the very young, particularly those too young to be vaccinated, and immunocompromised patients.

2. The World Health Organization certified New Zealand as having achieved measles elimination in September 2017. This means that there have been no endemic cases of measles in New Zealand since 2012 – all cases of measles in New Zealand have been linked to travellers being infected overseas.

3. New Zealand experiences cycles of measles outbreaks approximately every two years. The last big outbreak was in 2014 and affected the Auckland region (Figure 1).

   Figure 1: Number of confirmed cases in New Zealand, 2009 – 2019 (to date)



4. Since the beginning of 2019, New Zealand has been experiencing another increase in measles numbers. As at 21 August 2019, there have been 716 confirmed cases of measles notified in New Zealand. There have been 3 major outbreaks in three regions of New Zealand – in Waikato, in Canterbury, and currently in the Auckland region. There have also been cases in other regions. All cases have been linked to an importation from overseas.

5. The current increase in measles in New Zealand reflects increases that are happening internationally.

Immunisation against measles.

6. Measles is a vaccine-preventable disease and immunisation is the best way to protect against getting measles. The current vaccine – the measles, mumps and rubella (MMR) vaccine - is highly effective in protecting against measles.

7. One dose of MMR provides 95 percent of people with protection against measles and the second dose provides 99 percent of people with protection. Measles is highly infectious and a very high level of immunity in the community (herd immunity) is needed to prevent

it spreading. To achieve herd immunity against measles 95 percent of the population needs to have either received the vaccine or have natural immunity through clinical exposure to measles (i.e. they have been infected with measles).

8. In New Zealand the MMR vaccine is part of the National Immunisation Schedule and is offered free at 15 months and at 4 years of age. The MMR vaccine is also free for those under 50 years who have not had two documented doses.

9. Historically, New Zealand measles immunisation coverage rates were low. An immunisation coverage survey undertaken in 2005 showed total immunisation coverage at age 2 years was 77 percent and 69 percent for Māori. After peaking in 2016 with 93 percent total immunisation coverage and 92% for Māori, immunisation rates in some regions have started to decrease since early 2017, particularly among Māori. At the end of June 2019, 91 percent of two-year olds were fully vaccinated. Immunisation rates for Māori were lower at 86 percent.

10. Low immunisation rates mean that younger children are vulnerable to the current measles outbreak.

11. There is also lower immunity to measles amongst 15 to 29-year olds. There were changes to the timing of the delivery of MMR between 1990 and 2001 which meant that some young people may not have received a second dose of MMR. In addition, the lower immunity in this age group may also be a result of the concerns about the safety of the MMR following fraudulent claims of a link between the vaccine and autism in 1998.

Managing the Auckland outbreak

12. There is currently a significant measles outbreak in Auckland which commenced in March 2019. As at 21 August 2019, there have been 584 confirmed cases of measles in this region – 400 of which have occurred in Counties Manukau DHB (CMDHB).

13. Laboratory analysis of measles cases shows that the outbreak in Auckland is actually several outbreaks caused by different genotypes of the virus. The Auckland outbreaks began in West Auckland but are now mainly occurring in South Auckland. In South Auckland, the cases have been mainly in the 0–4 and 20–29 year age groups and mainly amongst the Pacific population.

14. Fifty percent of cases have been hospitalised. This proportion is higher than previous New Zealand outbreaks where approximately 30 percent have been hospitalised. There are no clear reasons to account for this increase in hospitalisation.

15. The majority of cases have been in unvaccinated people or in those who don't know their vaccination status.

16. Contact tracing and case management remain the best approach to contain the spread of the disease when it is present in the community and this was the focus of the initial response by ARPHS at the beginning of the outbreak.

17. Vaccination is not typically the first response for an outbreak of measles as it takes 14 days to develop immunity in response to the vaccine. The vaccine can provide some protection if someone is exposed to measles but needs to be administered within 72 hours of contact to offer this protection. People who have contracted measles are infectious for 5 days prior to developing symptoms which means most people are unknowingly exposed.

18. Adherence to routine immunisation programmes and high community immunity are therefore the best way to prevent disease outbreaks occurring. There is some evidence however that immunisation campaigns can help shorten the length of time an outbreak persists.

19. Despite intense efforts by the ARPHS and the DHBs to control the spread of measles, the number of new confirmed cases has accelerated over recent weeks. The focus of the region is now to increase the immunity of the general population to protect against measles.

20. The Auckland region have put in place a number of strategies to increase the population immunity against measles:

    a. lowering the age of the first MMR vaccine in the Auckland region from age 15 months to 12 months
    b. active recall of children who have not been vaccinated
    c. opportunistic vaccination of older children and young adults when attending primary care
    d. using outreach services to contact 'hard to reach' children
    e. opportunistic vaccination at large medical centres and after hours clinics in Counties Manukau
    f. public messaging on the outbreak about who is at risk and how to get vaccinated.

21. CMDHB has put together a proposal to improve the immunity to measles of their population. This proposal included funding an additional five vaccinator nurses to deliver outreach services and opportunistic vaccination in Middlemore hospital. The Ministry has agreed to fund these nurses, a total of $285,000.

22. The Ministry will work closely with CMDHB to identify other avenues to increase the immunity of their vulnerable populations, particularly the 20-29 year old group which is hard to reach through traditional methods.

23. The three Auckland Metro DHBs and ARPHS are working collaboratively to ensure public information management, agency communication and resource management activities are well coordinated. The Ministry is liaising closely and will provide further updates of any additional proposals as part of a broader response to the outbreak.

Managing measles in other regions

24. The Ministry is continuing with its national messaging about the importance of maintaining routine immunisation. We have re-enforced the importance of primary care recalling children who have missed their MMR vaccinations.

25. Public health units outside of Auckland are being encouraged to manage measles cases and their contacts as per protocol, with isolation, contact tracing and quarantine to stop the spread of disease. Cases outside of Auckland are all currently linked to travel to or from the Metropolitan Auckland area.

26. The Ministry has also updated its advice to primary care providers that they should consider vaccinating children from 12 months of age if they are travelling to Auckland.

27. Currently there are no issues or concerns with vaccine supply with 100 000 doses available in the National Store.

Improving measles immunity across the New Zealand population (medium term strategy)

28. In order to prevent any further measles outbreaks and to ensure that New Zealand does not lose its measles elimination status, immunity against measles needs to increase. There are two areas in which immunity needs to increase:
    a. In young children, in particular those under 4 years – this is the population that is most vulnerable to measles.
    b. In young adults, in those 15 to 29 years - this is the population where we have identified an immunity gap.
29. Within these groups, it will also be important to address any inequities in immunisation coverage.
30. The Ministry will be convening a meeting with an expert advisory group on 10 September 2019 to discuss the options on the best way to improve immunity across the New Zealand population.
31. The following options are being considered, aligned with recent advice from our National Verification Committee, initial review of international evidence and previous approaches suggested for improving measles immunity in New Zealand:
    a. improving the delivery of all routine childhood MMR immunisations to be on time i.e. given at the time they are due
    b. bringing the first MMR forward to 12 months nationwide and the second MMR forward to 15 months
    c. supplementary immunisation activities to address the known measles immunity gap
    d. traditional and social media communications campaign targeting key communities and health professionals in support of agreed approaches, this should include targeting travellers into and out of New Zealand.
32. Vaccine availability, impact on existing services and cost implications will be taken into consideration for all options.
33. Although the expert advisory group will be considering the introduction of a 12 month visit for the earlier administration of the first MMR, the Ministry has already commenced conversations on how this can be implemented. The Ministry will also be socialising the introduction of a 12 month old immunisation visit with key primary care players to ensure there is support for this from the sector.
34. Because it is a new vaccination visit, the timing for introducing a 12-month visit requires careful consideration as it has an impact on primary care providers, who deliver the majority of the childhood immunisations. A new event will require additional funding for primary care to administer the vaccine and patient management (including recalls) as well as for IT system changes, training for vaccinators, updating of vaccination resources (Immunisation Handbook, websites and fact sheets) and communications with parents, whānau and carers.
35. The Ministry will provide you with costed advice on options, along with feasible time frames for implementation by the end of September.

Addressing low immunisation rates (long term strategy)

36. There has been a decrease in immunisation coverage in New Zealand over the past 2 years with a resulting equity gap between Māori and the total population. Immunisation rates need to increase in order to ensure that New Zealand does not continue experiencing measles outbreaks or see an increase in other vaccine-preventable diseases such as pertussis.

37. The Ministry currently has a project underway to improve immunisation coverage.

38. The Ministry has identified several barriers to accessing immunisation within primary care, particularly for Māori and Pacific families. Barriers include:

    - cost of transport/ transport availability / clinic accessibility/ clinic hours
    - local clinics are not welcoming/culturally appropriate/comfortable or considerate of family needs
    - a lack of whanau focussed, culturally appropriate immunisation information
    - conflicting and overwhelming stories about vaccine safety/ adverse effects.

39. The Ministry is preparing an action plan to address the above barriers and improve immunisation coverage and address the inequities. We will provide an update to you on this action plan by the end September. The work in this area will also contribute to increasing measles immunity in the population.

40. In the meantime, the Ministry is writing to the Chief Executives of the DHBs with the lowest vaccination rates and highlighting the immunisation gaps. We will ask these DHBs to provide us with a clear plan, including monitoring and milestones.

41. The Ministry also wishes to explore opportunities for improving immunisation coverage, for example through using pharmacists, midwives, and Well-Child / Tamariki Ora providers. Pharmacy vaccinators have been used successfully to deliver influenza vaccines and assisted with the Northland meningococcal disease outbreak response. Further discussions with these health professionals and their professional bodies is required to ensure that any additional avenues for immunisation are streamlined alongside the more 'traditional' avenues (that is, through primary care).

42. A recent review on how to improve immunisation identified the need to target fathers, as well as mothers and grandmothers, as they are all key decision makers for immunisation. The Ministry will work with the Health Promotion Agency to ensure that immunisation resources are appropriate for a wider audience as well as being available in multiple languages.

43. The Ministry will need to ensure that all vaccinators can access the National Immunisation Register (NIR) especially remotely and address issues and concerns about fragmentation of care with general practice.

44. As previously advised, the NIR is an old IT system and will no longer be supported by the provider, Orion, after 2022. There will be opportunities with any new NIR to update the functionality to support access for a wider range of vaccinators and improve patient management (easier recalls for example).

Next steps

45. The following table outlines key deliverables to address the measles outbreak in the Auckland region as well as to improve immunity against measles in both the medium and long term.

Action	Timeframe
Addressing the Auckland outbreak (immediate actions)	
Supporting the Auckland region (particularly CMDHB) to plan and implement an immunisation response to the Auckland outbreak	Ongoing
CMDHB immunisation response	Commenced
CMDHB immunisation plan for their response (including how they will monitor uptake) (Note the response has commenced)	5 September 2019
Ministry sign off of CMDHB immunisation plan	Week beginning 9 September 2019
Improving measles immunity (medium term)	
Expert advisory group meeting	10 September 2019
Feedback to Minister on recommendations from expert advisory group	End September 2019
Planning for actions endorsed by expert advisory group s 9(2)(f)(iv)	End September 2019
Actions endorsed by expert advisory group implemented	Late 2019/ 2020 (based on available funding)
Improving immunisation coverage (long term strategy)	
Ministry letter to DHB CEOs regarding them of immunisation rates and requirement for a plan	Week beginning 2 September
DHB plans to improve immunisation rates submitted	20 October 2019
Ministry of Health action plan to improve immunisation coverage and address inequities	End September 2019

46. The Ministry has agreed to provide financial support for CMDHB to extend its outreach services and employ nurse vaccinators at Middlemore Hospital.

47. The Ministry will continue to work closely with CMDHB, ARPHS and the other Auckland DHBs to manage the measles outbreak in their region.

48. The Ministry recommends all people travelling to Auckland ensure they are protected against measles. This includes vaccinating children aged 12 months and older at least 2 weeks prior to departure.

49. The Ministry will provide you with further advice on medium and long term strategies by the end of September.

ENDS.