

10 FEB 2020

[REDACTED]  
[REDACTED]  
Ref: H202000162

Dear [REDACTED]

**Response to your request for official information**

Thank you for your request of 15 January 2020 under the Official Information Act 1982 (the Act) for:

*"I would be most grateful if you could provide me with copies of expert advice provided to the Ministry and its Public Health Directorate in relation to the laboratory diagnosis of pertussis, over the period 2015 to 2019.  
The request is made under the terms of the Official Information Act 1982.  
I am specifically interested in advice provided by Clinical Microbiologists, either in their personal capacities or through the New Zealand Microbiology Network relating to the sensitivity and specificity of PCR, culture and serology for Bordetella pertussis. I am concerned that some of this advice may have overstated the utility of PCR and understated that of culture and serology, and that it may merit further examination of the evidence on which it is based."*

Two documents have been identified within scope of your request. Appendix 1 is a letter from the New Zealand Microbiology Network (NZMN) to the Ministry of Health (the Ministry) regarding *Bordetella pertussis* serology. Appendix 2 is an email between Ministry officials regarding feedback from the NZMN and the Ministry's response to the feedback. Mobile numbers have been withheld from these documents under section 9(2)(a) of the Act, to protect privacy of natural persons.

I trust this information fulfils your request. You have the right, under section 28 of the Act, to ask the Ombudsman to review any decisions made under this request.

Please note that this response, with your personal details removed, may be published on the Ministry website.

Yours sincerely



Deborah Woodley  
**Deputy Director-General**  
**Population Health and Prevention**



26 September 2018

Dear Caroline

**Re: Value of *Bordetella pertussis* serology**

The New Zealand Microbiology Network's (NZMN) has been discussing the usefulness of *Bordetella pertussis* serology for acute care diagnostic purposes and surveillance.

As you are aware the NZMN is a group comprising of clinical microbiologists representing all diagnostic laboratories, private and public, representatives of the Ministry of Health, Public Health, MPI and ESR.

NZ experiences, predictably, outbreaks of whooping cough in regular intervals, occurring approximately every 3-5 years. These outbreaks have a great impact on acute care settings as well as having high morbidity and mortality rates among the very young unvaccinated or partially vaccinated infants. The NZMN feels it is paramount to have robust diagnostic pathways to identify cases in a timely fashion and instigate appropriate clinical management of individual cases as well as initiation of relevant public health measures to protect susceptible individuals.

In the acute setting, the most rapid diagnosis with greatest sensitivity and specificity can be achieved with *B. pertussis* molecular methods. A number of *B. pertussis* PCRs are limited by the fact that they either use insertion sequences (multi-copy genes) as targets making them sensitive but less specific or they use single copy genes increasing their specificity but lessening sensitivity. It is generally recommended that laboratories use a molecular testing strategy that includes *B. paraptussis* or *B. holmseii* targets to increase the certainty around a *B. pertussis* PCR result.

Pertussis serology poses different problems. It is not useful in the acute setting as antibody production will take a minimum of 10-14 days to take effect. In children serological testing is considered unhelpful and in adults the interpretation of serological profiles is influenced

and complicated by prior vaccination, prior infection and the non-standardisation of commercial assays. Serology is now no longer accepted as confirmation of whooping cough in several countries but may establish probability of disease in adults. Overestimation burden of disease is likely when basing a diagnosis on serological results.

The NZMN recommends the following

1. Pertussis serology should remain to be excluded on the “confirmation pathway” and should be removed from the “probable pathway”
2. Pertussis serology should not be performed in the acute care setting as a diagnostic tool.
3. Pertussis serology may have a place in surveillance and should be interpreted with caution. This service is best placed in a reference laboratory setting and should only be performed in very narrowly defined circumstances.

Thanks for considering our proposal. We look forward to your response.

Yours sincerely



**Dr. Anja M Werno MD PhD FRCPA**

Chair NZMN  
Chief of Pathology and Laboratories  
Clinical Microbiologist  
Canterbury Health Laboratories  
Email: [anja.werno@cdhb.health.nz](mailto:anja.werno@cdhb.health.nz)

s 9(2)(a)





Sent by: Tomasz  
Kiedrzynski/MOH

26/11/2018 05:59 p.m.

To: Caroline McElroy/MOH@MOH,  
cc: Laurence Holding/MOH@MOH,  
bcc:

Subject: Re: Fw: Feedback from NZMN regarding the mumps letter

Sorry, I hadn't finished the message below!

**Dr Tom Kiedrzynski**

Principal Advisor | Communicable Diseases | Public Health Group | Ministry of Health | New Zealand  
s 9(2)(a) | D: (04) 816 3964 E: [Tomasz.Kiedrzynski@moh.govt.nz](mailto:Tomasz.Kiedrzynski@moh.govt.nz)



*Surveillance, response and control of infectious diseases*

Tomasz Kiedrzynski Mumps--after further discussions... 26/11/2018 05:41:23 p.m.

From: Tomasz Kiedrzynski/MOH  
To: Caroline McElroy/MOH@MOH,  
Cc: Laurence Holding/MOH@MOH  
Date: 26/11/2018 05:41 p.m.  
Subject: Re: Fw: Feedback from NZMN regarding the mumps letter

Hi Caroline,

Mumps--after further discussions with ESR and NZMN members, ESR have agreed with these changes. They have been (finaly) done on the mumps webpage.

Pertussis--we already mention on our website that 1 - PCR should be considered the diagnostic method of choice, and 2 - that serology is not recommended. "The sensitivity and specificity of serology is low. Serology cannot be used as a confirmatory test. Therefore the use of serology is not recommended, except for public health purpose after consultation between the Medical Officer of Health and the local microbiologist. Serology can then sometimes be used late in the course of illness, generally when the patient is no longer infectious."

As well, for the probable case definition we mention the following:

Probable: A clinically compatible illness where the cough is lasting longer than 2 weeks. However in situations where serology has been requested after consultation between the Medical Officer of Health and the local microbiologist, a clinically compatible illness with laboratory suggestive evidence will also be considered as probable.

This is quite in line with what they recommend in the letter if we want to keep possibly using serology for surveillance purposes.

What NZMN want is that serology be hosted by a reference lab and deleted from diagnostic labs. We have started the discussion with ESR regarding whether this has any value, but haven't received any firm answer yet. A way forward may be to ask MosH if for them serology is useful.

Sorry--no more progress than that for pertussis as it hasn't been on top of our priorities.

Kind regards

Tom

**Dr Tom Kiedrzyński**

Principal Advisor | Communicable Diseases | Public Health Group | Ministry of Health | New Zealand  
 s 9(2)(a) | D: (04) 816 3964 E: [Tomasz.Kiedrzyński@moh.govt.nz](mailto:Tomasz.Kiedrzyński@moh.govt.nz)



*Surveillance, response and control of infectious diseases*

Caroline McElnay any progress re this please? I woul... 19/11/2018 11:21:28 a.m.

From: Caroline McElnay/MOH  
 To: Tomasz Kiedrzyński/MOH@MOH,  
 Cc: Laurence Holding/MOH@MOH  
 Date: 19/11/2018 11:21 a.m.  
 Subject: Fw: Feedback from NZMN regarding the mumps letter

any progress re this please?  
 I would like to close off and get back to NZMN on mumps and pertussis

Dr Caroline McElnay  
 Director of Public Health  
 Population Health and Prevention  
 Ministry of Health

DDI: 04 816 2232  
 s 9(2)(a)

<http://www.health.govt.nz>  
[mailto:Caroline\\_McElnay@moh.govt.nz](mailto:Caroline_McElnay@moh.govt.nz)

----- Forwarded by Caroline McElnay/MOH on 19/11/2018 11:20 a.m. -----

From: Tomasz Kiedrzyński/MOH  
 To: Caroline McElnay/MOH@MOH,  
 Date: 03/09/2018 02:47 p.m.  
 Subject: Feedback from NZMN regarding the mumps letter

Hi Caroline,

FYI, from the NZMN minutes of the last FTF meeting on 30 July: this is the feedback regarding the mumps letter we have sent to the NZMN. I'll be further discussing mumps testing with ESR as the content of the letter regarding IgM testing was based on their advice.

• NZMN letter to MoH re: mumps IgM testing. Dr McElnay has responded to the NZMN's letter which recommended the CDC manual be altered to remove references to IgM mumps antibody testing and paired sera. The Ministry of Health agree

NZMN to wait for further feedback from the Ministry of Health



<p>that IgG is not a useful test but use of the IgM mumps test is still under consideration.</p> <p>Members expressed disappointment in this response but Dr Kiedrzynski said that the issue was still under further consideration at the Ministry. NZMN to await further feedback from MoH before proceeding further. Dr Nesdale said that Public Health only want the test to exist if it provides a useful result. Laboratories could consider stopping the test, leaving ESR to do it, where required, and LabPLUS providing a service to the Pacific Islands.</p> <p>Members agreed that a letter should be sent to Dr Caroline McElnay at the Ministry of Health regarding pertussis serology too.</p>	<p>regarding mumps IgM testing.</p> <p>Dr Werno to write to the Ministry about the usefulness of pertussis serology.</p>
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Kind regards

Tom

**Dr Tom Kiedrzynski**

Principal Advisor | Communicable Diseases | Public Health Group | Ministry of Health | New Zealand  
 s 9(2)(a) | D: (04) 816 3964 E: [Tomasz.Kiedrzynski@moh.govt.nz](mailto:Tomasz.Kiedrzynski@moh.govt.nz)



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 Let's track the flu, so we can help you <https://www.flutracking.net>

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