2 May 2020

Director-General

Ministry of Health

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Dear Ashley

Thank you for the invitation to review the revised indicators prepared by the NCCS team. I met with Astrid, Michael and Toby on Thursday to review them together and they also updated me on progress against the recommendations from my audit.

I was pleased to see work to further increase PHU capacity underway and an outbreak preparedness plan in development between NCCS and PHUs. The draft preparedness plan is clear, flexible and PHU centred. The proposed improvements to information systems were in progress. Your team are to be congratulated on achieving a high level of support among PHUs for adopting the NCTS. If all PHUs adopted the NCTS as a single national platform there would be tremendous benefits for both case-contact management and assessing system performance.

My response to the proposed changes follows. These comments correspond to the numbered/lettered item(s) in the attached table:

* **Process measures** (timeliness and completeness numbered 1-8 and 10, 11 in the attached table). I agree with the additional process indicators added by NCCS team. Together these make an informative dashboard of progress through the ‘end to end’ system. Of the various measures, number 1 is the most informative.
* **Capacity** (A) is a crucial system characteristic for safe decision making during outbreaks. Indeed it forms the basis of the draft preparedness plan. If it is felt to be static (i.e. not influenced by staff leave) then it does not need to be monitored as such but it will need be known at the PHU and national level.
* **Number, distribution of close contacts per case, and characteristics of contacts (B).** Agree with your team’s approach that this is not a performance indicator but essential data to understand capacity at various alert levels and to guide quality improvement. These should be part of program evaluation and addressed in reports to clinical governance and CTAC.
* **Testing coverage** (number 9) is the ideal measurement, as it makes clear any gaps in case finding which in turn impact contact tracing. However I’m aware that data is not available at present. The moving average of tests performed and positivity rate are acceptable interim measures. I am aware from news reports that the Ministry is currently working on a surveillance plan which will no doubt address the timeliness and coverage of testing. If the plan includes an active case finding component you will certainly be able to estimate the coverage statistic.
* **Outcome measures** (C, D, E) these are perhaps the most helpful measures as they provide a clear understanding of the success of contact tracing. Good performance against the outcome measures could allow relaxation of the process measures or the definition of a close contact. I strongly encourage your team to work through the technical issues in measurement to get these more informative statistics:
  + **Proportion of close contacts with confirmed or suspected covid-19 at the time of tracing (target <20%).** I should correct the comment in my report that poor performance reflects slow contact tracing. Rather it reflects the timeliness of the system as a whole and this includes factors outside PHU/NCCS control like time from symptom onset to testing. The indicator should be measurable but might require some sensible criteria to exclude complex clusters where transmission direction is unknown.
  + **Proportion of close contacts with covid-19 over 14 day follow up.** This parameter informs the definition of a close contact i.e. if too high close contact definition is too narrow, if too low too many people are being isolated unnecessarily. This will be a particularly important parameter to track, especially if a Bluetooth app is introduced, as a check on its accuracy. Again a sensible exclusion criteria might be required to exclude complex clusters.
  + **Proportion of contacts of Covid-19 positive contacts who become Covid-19 positive (target <1%).** This measures secondary transmission, the event that the case identification - contact tracing system seeks to prevent. I think this should be able to be measured in the NCTS but again may require some application of exclusion criteria.
* **System level measures** (timeliness and accuracy of reports, time for implementing change, acceptability – F - I). These should be part of program evaluation and addressed in reports to clinical governance and CTAC.

The discussions I had with your team on Thursday clarified the intent of some of the outcome measures. After they have a chance to look at the data structure I’d be happy to give advice on some sensible exclusion criteria to address the Public Health subgroup’s concerns.

Yours sincerely

Ayesha Verrall