

# National Public Health Emergency Team

13 May 2020

## Testing of Asymptomatic Close Contacts

### Action required

- For noting
- For discussion
- For decision

## Contact Tracing

- Contact tracing is an effective public health measure for the control of COVID-19. The prompt identification and management of the contacts of COVID-19 cases makes it possible to rapidly identify secondary cases that may arise after transmission from the primary or index case. This enables the interruption of further onward transmission. Contact tracing, in conjunction with robust testing and surveillance systems will be central to control strategies during de-escalation.

## Asymptomatic Transmission

- The proportion of pre-symptomatic transmission has been inferred through modelling and was estimated to be – in the presence of control measures – at around 48% and 62% in Singapore and China (Tianjin data), respectively [1]. Other studies have shown no significant difference in viral load in asymptomatic and symptomatic patients, indicating the potential of virus transmission from asymptomatic patients [2-4].

## ECDC<sup>1</sup>

- Immediately after a confirmed or probable case has been identified, one of the next steps listed as regards contact tracing for the public health authorities include:
  - *Based on national strategies, arranging for testing of symptomatic contacts (**and asymptomatic close contacts where resources allow**) for SARS-CoV-2*

## NPHET

- NPHET have previously referenced the testing of close contacts identified through the HSE contact management programme (CMP) as part of a future testing policy direction in the context of decreasing community transmission

## European countries

- Luxembourg – testing asymptomatic contacts, day 5 after last contact
- Slovakia – testing asymptomatic contacts, day 5 after last contact
- Denmark – testing asymptomatic contacts, day 4 and day 6 after last contact

## Expert Advisory Group (13 May 2020) – discussion

- More important that the speed of testing and commencement of contact tracing improves
- The impact of testing asymptomatic contacts on vulnerable groups (e.g. children)
- The test result should really influence decision making for the management of the ‘close contact’ in question
- If tested at mid-way (e.g. Day 5-7) through a 14 day incubation period and a ‘not detected’ result the difficulty of persuading a close contact to remain in isolation or inducing risk taking behaviour

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<sup>1</sup> ECDC Technical Report (31 March) Contact tracing: Public health management of persons, including healthcare workers, having had contact with COVID-19 cases in the European Union – second update 31 March 2020.

- Communication difficulties if [repeat] testing commences and there is no perceived benefit from the 'contacts' perspective
- The speed of testing and contact tracing must improve
- Evidence base is lacking

## Recommendation(s) for discussion

1. On the assumption that the close contact has remained asymptomatic – they are tested once on day 7 (after last contact), the rationale being that you are most likely to have become infected by then (not 100%)
  - If 'not detected' the contact must still remain in isolation for the remaining 7 days as per current public health advice
  - or**
  - If 'not detected' the contact is released from isolation and advised to remain vigilant for symptoms

**OR**
2. Tested on **Day 0** (as soon as identified as close contact)
  - If 'detected' it could identify the 'close contact' as the possible source of the infection.
  - If 'not detected' the close contact remains in isolation for 14 days as per public health advice and to remain vigilant for symptoms

**OR**
3. Tested on **Day 0** (as soon as identified as close contact) and on **day 7**
  - If 'not detected' on day 7 the contact is released from isolation and advised to remain vigilant for symptoms
4. Keep recommendation under review

## References

1. Ganyani T, Kremer C, Chen D, Torneri A, Faes C, Wallinga J, et al. Estimating the generation interval for COVID-19 based on symptom onset data. medRxiv. 2020:2020.03.05.20031815
2. Han Y, Yang H. The transmission and diagnosis of 2019 novel coronavirus infection disease (COVID-19): A Chinese perspective. Journal of Medical Virology.n/a(n/a).
3. Zou L, Ruan F, Huang M, Liang L, Huang H, Hong Z, et al. SARS-CoV-2 viral load in upper respiratory specimens of infected patients. New England Journal of Medicine. 2020;382(12):1177-9.
4. Cereda D, Tirani M, Rovida F, Demicheli V, Ajelli M, Poletti P, et al. The early phase of the COVID-19 outbreak in Lombardy, Italy 2020. Available from: <https://arxiv.org/abs/2003.09320v1>.