

From: ["Wieler, Lothar" <WielerLH@rki.de>](mailto:Wieler,Lothar@rki.de)  
To: [nCoV-Lage <nCoV-Lage@rki.de>](mailto:nCoV-Lage@rki.de)  
Date: 5/20/2020 5:06:43 AM  
Subject: Fwd: Quarantine period for contacts (or incoming international travelers)

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Diese Diskussion führen wir schon länger in der STAG-IH.  
Es besteht klar der Wunsch die Quarantäne zu verkürzen, ich bin hier aber unsicher. Sollten wir nochmal diskutieren in der Lage.

LHW

Dear David and all,

During the VC yesterday, we discussed quarantine period and isolation period together.  
To me, it was a little confusing, as we did not separate the two periods clearly during our discussion.

1.  
To determine the isolation period,  
we have to know the infectious period of symptomatic patients.

In theory, if a patient is no longer infectious from day 5,  
then, we can release him from isolation from day 5, even if he still has symptoms.

As we do not know the infectious period for COVID-19 patient,  
a proxy for it would be the duration of live virus isolation.  
--> up to 10 days.

2.  
Quarantine period for contacts or incoming international travelers,  
we assume the contacts/travelers become infectious (= infectors) once they develop symptoms.

But, the infectiousness of the infectors may not be the same (on the day of symptom onset).

And the risk of transmission from a infector will depend on

- (1) how quickly can we isolate her,
- (2) how infectious is she when we detect her

(1) it usually takes 3-5 day for contact tracing --> case detection and isolation

(2) the infectiousness may be higher in contacts with shorter incubation period than those with longer incubation period.

(Exposure to high inoculation --> shorter incubation period --> severe disease --> highly infectious)

It would be interesting to know what is the longest incubation period of index cases for clusters of COVID-19 outbreaks.

3.

Now, thought experiment (see the hypothetical figures below)

For a National Public Health Agency,

the risk they will face when they resume international travel will depend on

(1) distribution of incubation periods of the travelers (Fig 1)

(2) infectiousness of travelers when they develop symptoms (Fig 2)

(1)X(2)= Fig 3.

Considering all these, I think we can shorten the QURANTINE PERIOD to 7 days.

And to make it sure, we need the data on the longest incubation period of index cases for clusters of COVID-19 outbreaks.

Fig 1

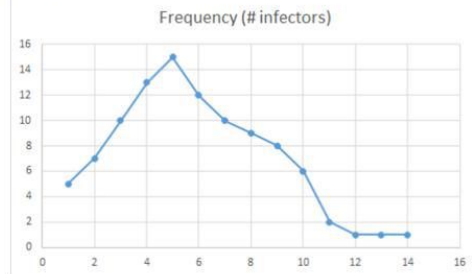


Fig 2

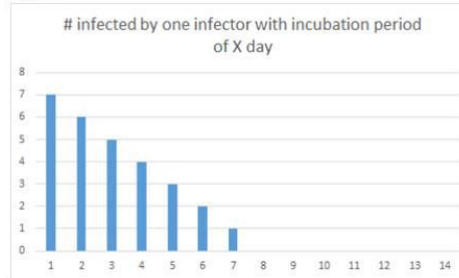
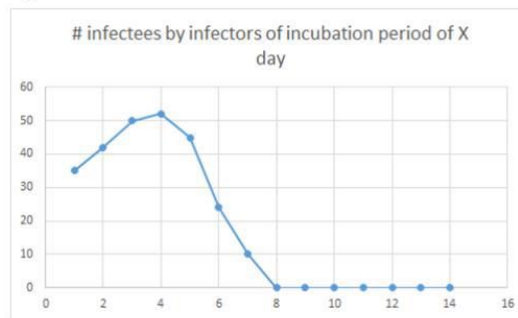


Fig3



Oh Myoung-don, M.D.  
Professor,  
Department of Internal Medicine  
Seoul National University College of Medicine  
Seoul National University Hospital

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