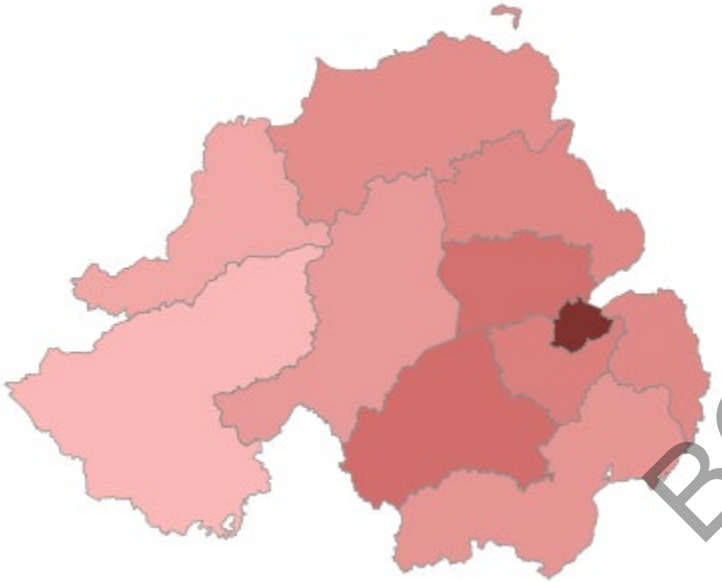
COVID19 in an aging population

Dr Louise McCorry

Infectious Diseases/Medical Virology



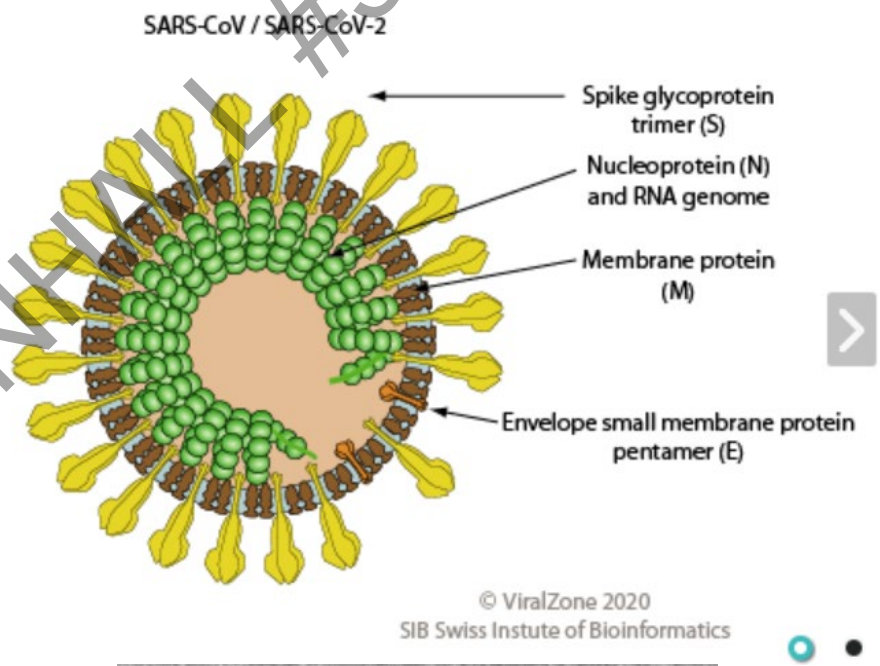
BGS COVID TOWNHALL #3

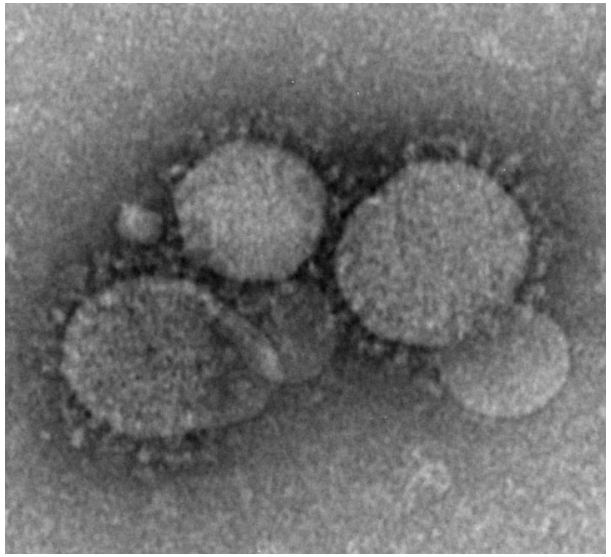
Aims

- Short background
- NI statistics- age adjusted information
- Prevention of infection (ie: Shielding)
- Re-testing and interpretation
- Treatment

SARS-CoV-2

- RNA virus SS positive sense
- Part of the beta coronavirus family
- Enveloped
- Host receptor- ACE2





Important Definitions

- SARS-CoV-2: coronavirus causing current pandemic
- SARS-CoV-2 infection: ongoing viral replication in the body that can be detected in
  - Asymptomatic persons
  - Presymptomatic persons (1-3 days prior to symptom onset)
  - Symptomatic persons
  - Post-symptomatic persons
- COVID-19: the disease caused by infection with SARS-CoV-2, which can vary in severity
  - Mild: usually no need for inpatient care
  - Moderate: requires admission for care and typically presents as pneumonia
  - Severe: requires intensive care and typically includes respiratory failure

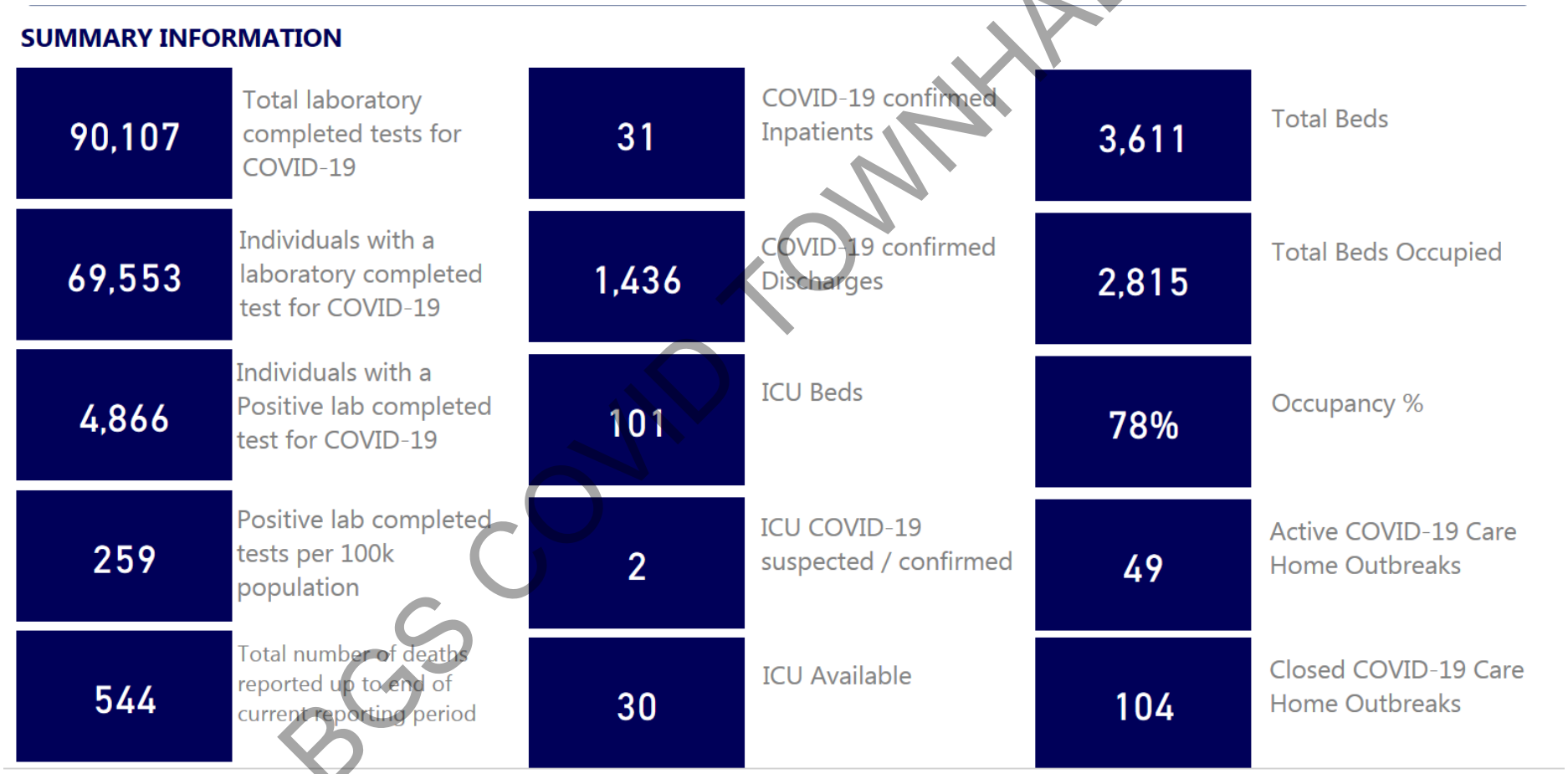
Cheng. Ann Intern Med. 2020:[Epub].

Slide credit: clinicaloptions.com

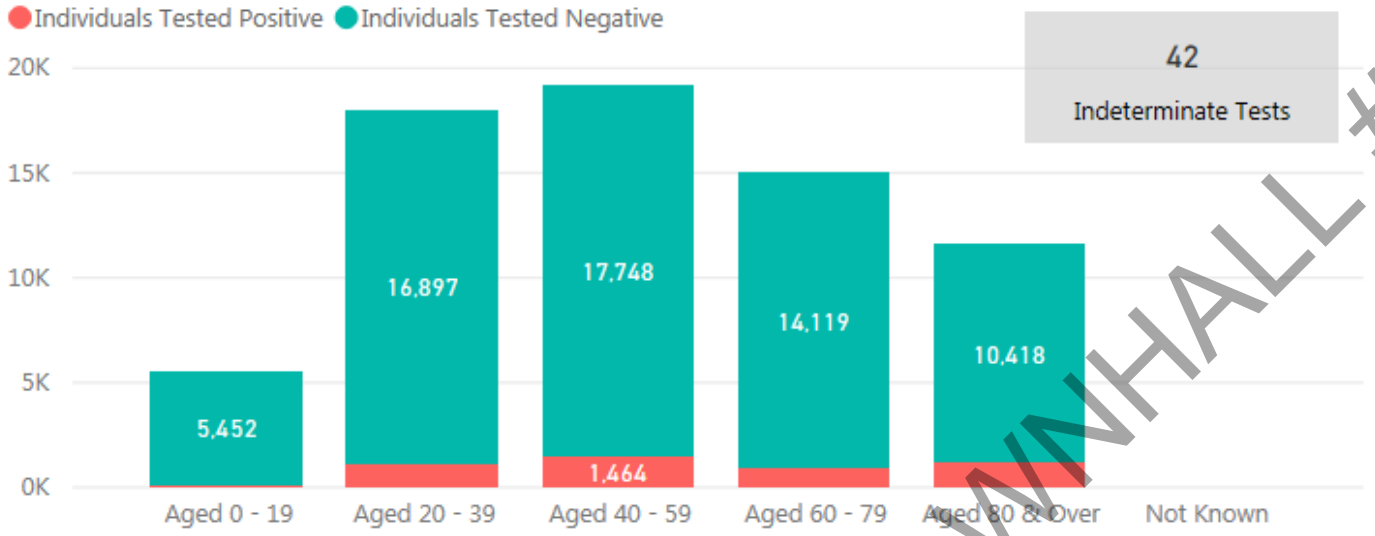
NI stats

AS OF 20/06/20

Dashboard

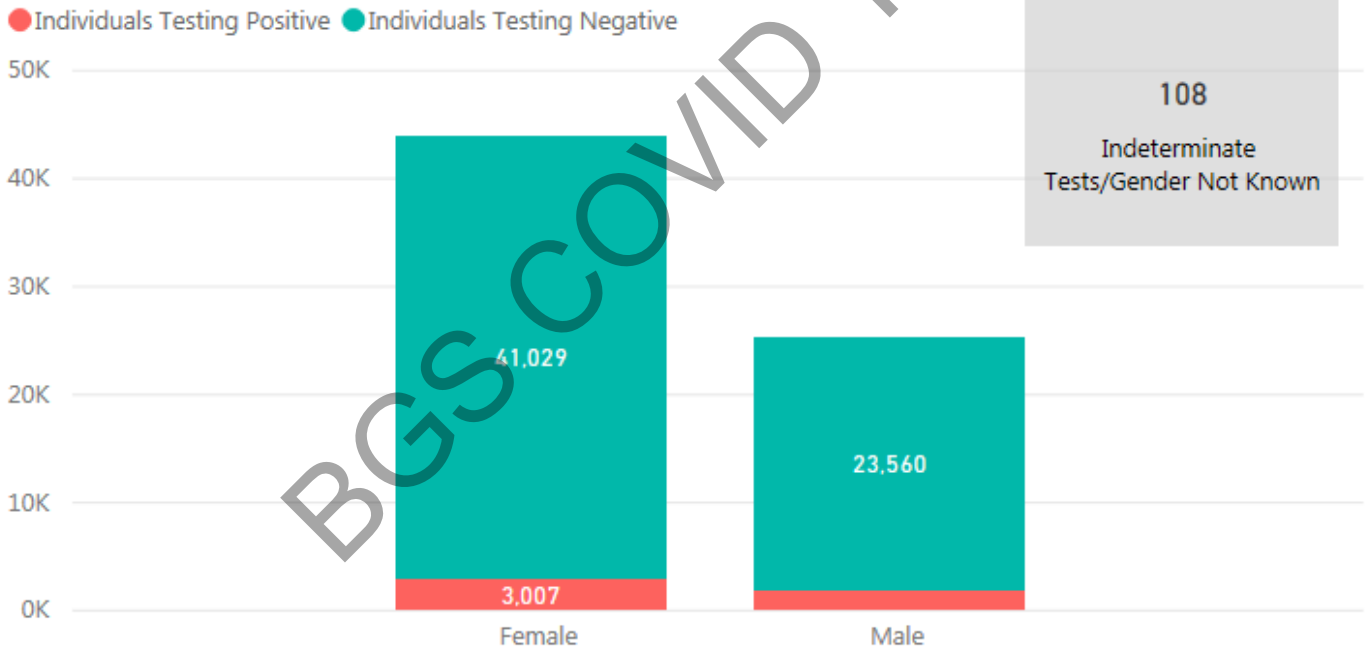


Individuals with a Laboratory Completed Test for SARS-COV2 Virus by Age Group



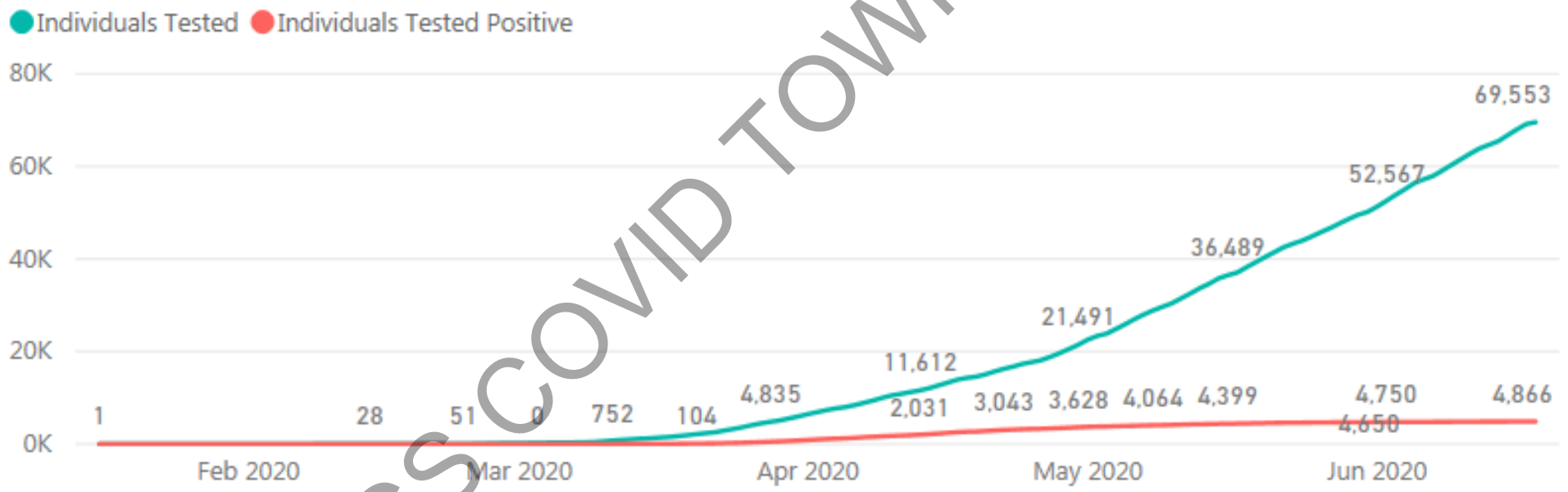
42
Indeterminate Tests

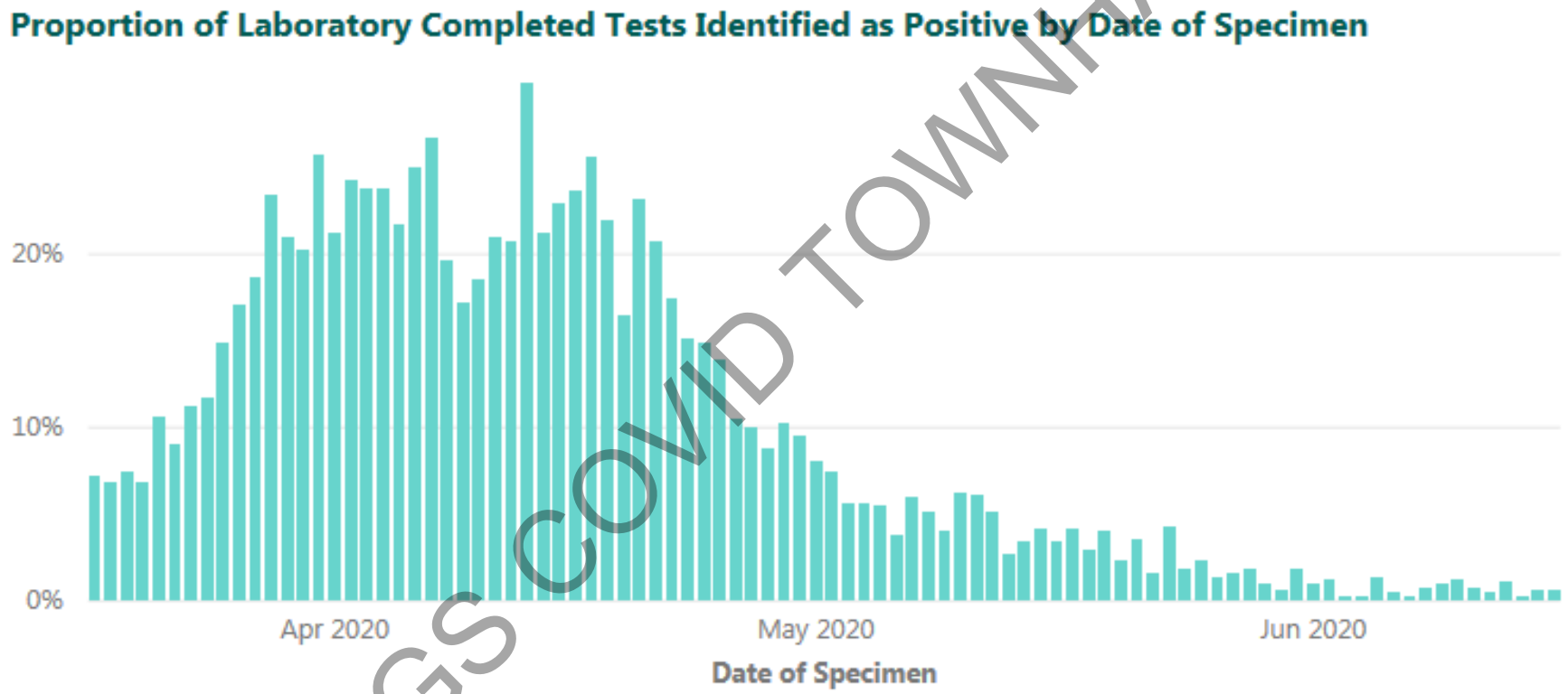
Individuals with a Laboratory Completed Test for SARS-COV2 Virus by Gender



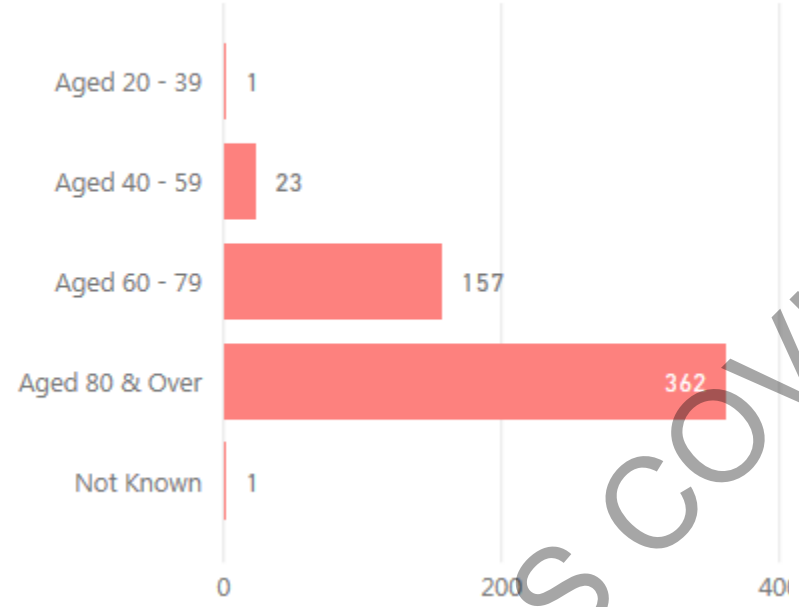
108
Indeterminate Tests/Gender Not Known

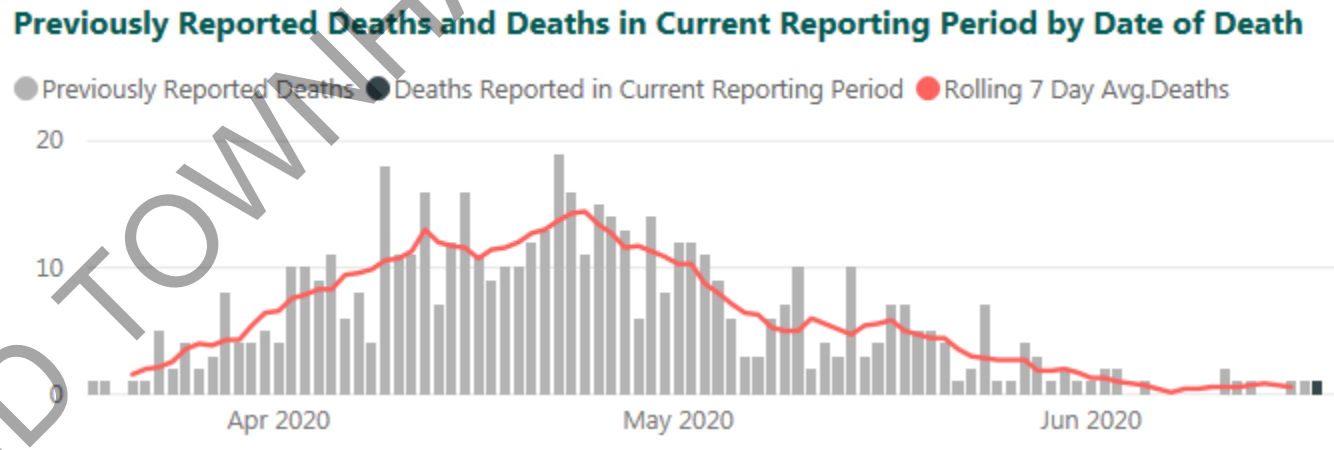
Cumulative Individuals with Laboratory Completed Test for SARS-COV2 Virus by Date of Specimen

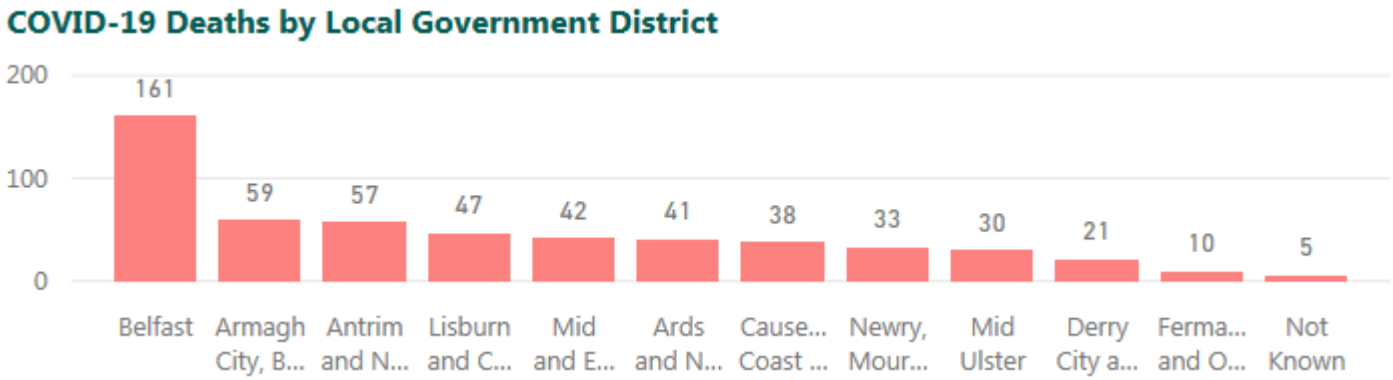




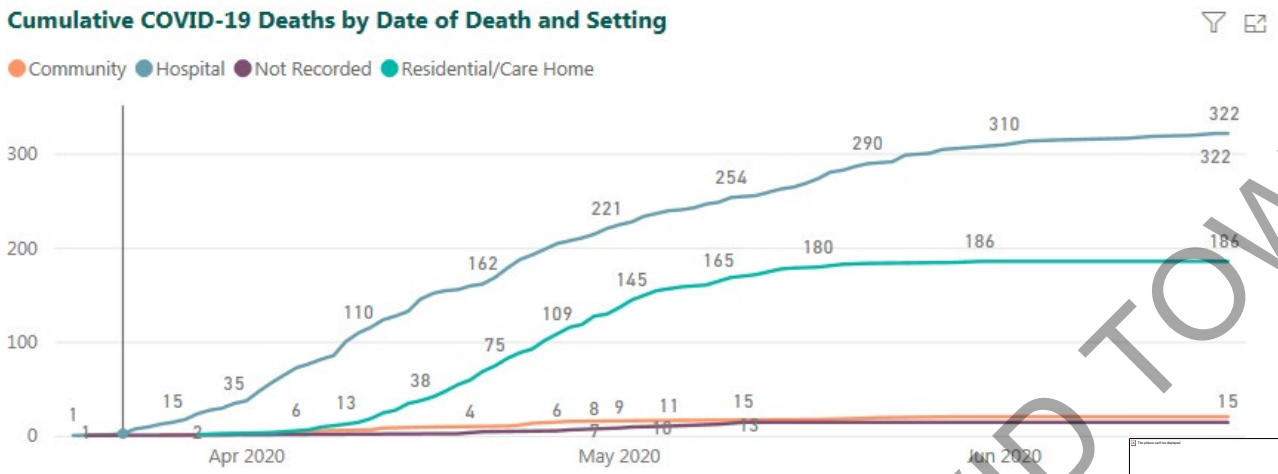
Deaths







Death by setting



Shielding

- 20/06/20 letter from CMO
- Can see people outside/ socially distant

- ***8 June*** *those who are shielding can now spend time outside with people from their own household or one person from another household whilst ensuring that social distancing is observed.*

Dear

UPDATE ON SHIELDING ADVICE

This letter contains an important update on the advice to people who are shielding or who are caring for someone who is shielding.

I am writing to you because you are someone who has been advised to shield, or you are caring for someone who has been advised to shield. We gave this advice to people with certain medical conditions which make them extremely clinically vulnerable to Covid -19.

I know that this has been a very challenging time for you and that it will not always have been easy to comply with the advice.

Updated shielding

1. If you wish to spend time outdoors (though not in other buildings, households, or enclosed spaces) you should take extra care to minimise contact with others by keeping 2 metres apart.

2. If you choose to spend time outdoors, this can be with members of your own household. If you live alone, you can spend time outdoors with one person from another household (ideally the same person each time).

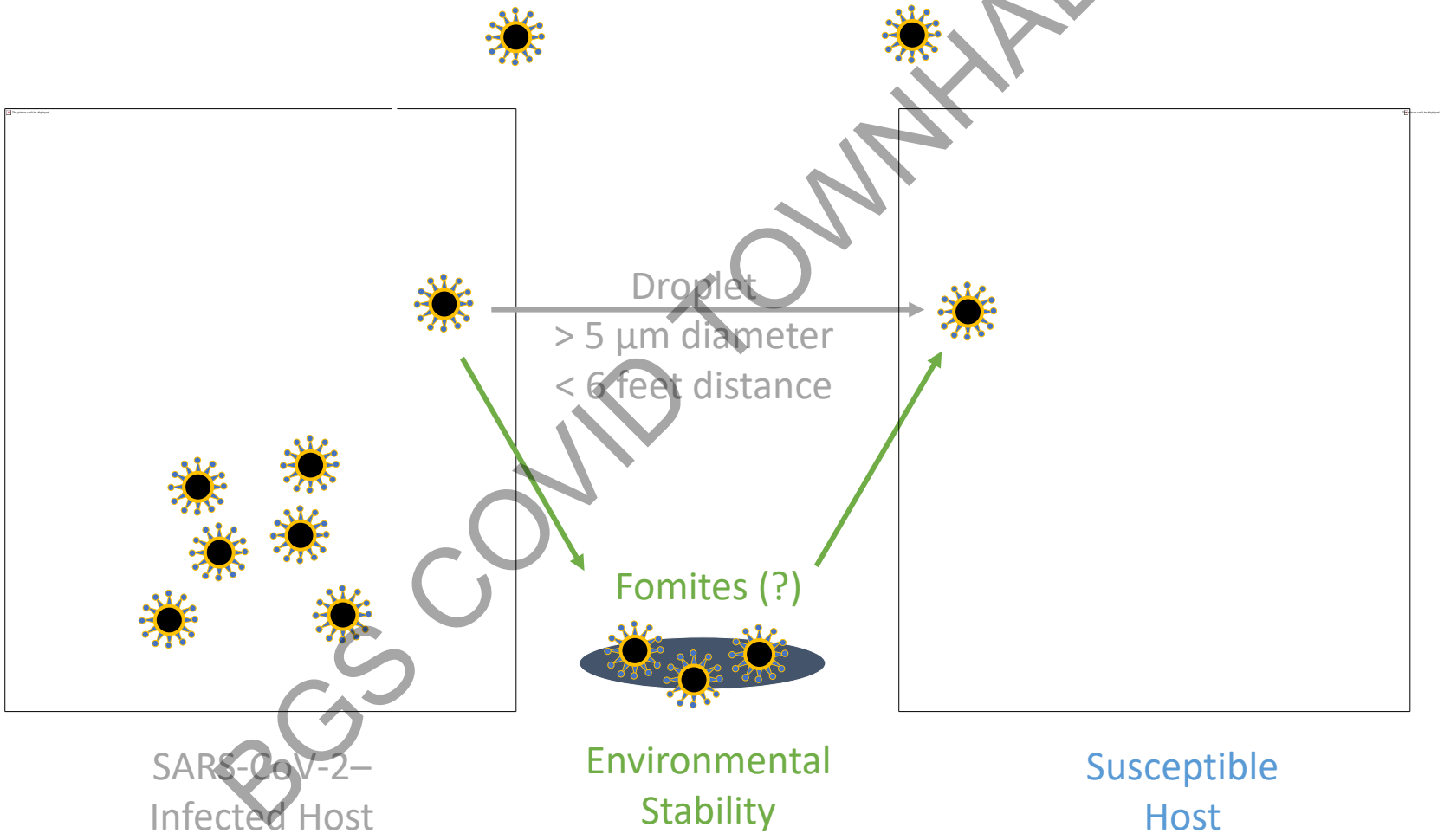
3. You should remain vigilant when leaving home: washing your hands regularly, maintaining social distance and avoiding gatherings of any size.

4. You should not attend any gatherings, including gatherings of friends and families in private spaces, for example, parties, weddings and religious services

5. You should strictly avoid contact with anyone who is displaying symptoms of COVID-19 (a new continuous cough, a high temperature, or a loss of, or change in, the sense of taste or smell).

What we know...

Proposed Routes of SARS-CoV-2 Transmission



Galbadage. Front Public Health. 2020;8:163.

Slide credit: clinicaloptions.com

Protecting our elderly

- No vaccine likely soon
  - Challenges
    - Spike protein
    - Clade development
- Immunity theory-
  - Spike protein
  - waning…?
  - Must be infected (or vaccinated)
  - OR herd immunity
    - 11% HCW locally thus far…
    - 4% in lab staff (ie not front facing)
    - Modelling suggests needs more like 80%

Retesting

- FAQs
  - False negatives and intermittent positives
  - Continued positive results after recovery of symptoms-what does this mean?
  - The question of viable virus and infectious-ness

NTS vs lower samples…

WHO: Interim Guidance on Laboratory Testing for SARS-CoV-2 in Suspected Symptomatic Human Cases

- Routine confirmation of SARS-CoV-2 infection is based on the detection of unique sequences of RNA by nucleic acid amplification tests such as RT-PCR
- 1 or more negative results do not rule out the possibility of SARS-CoV-2 infection

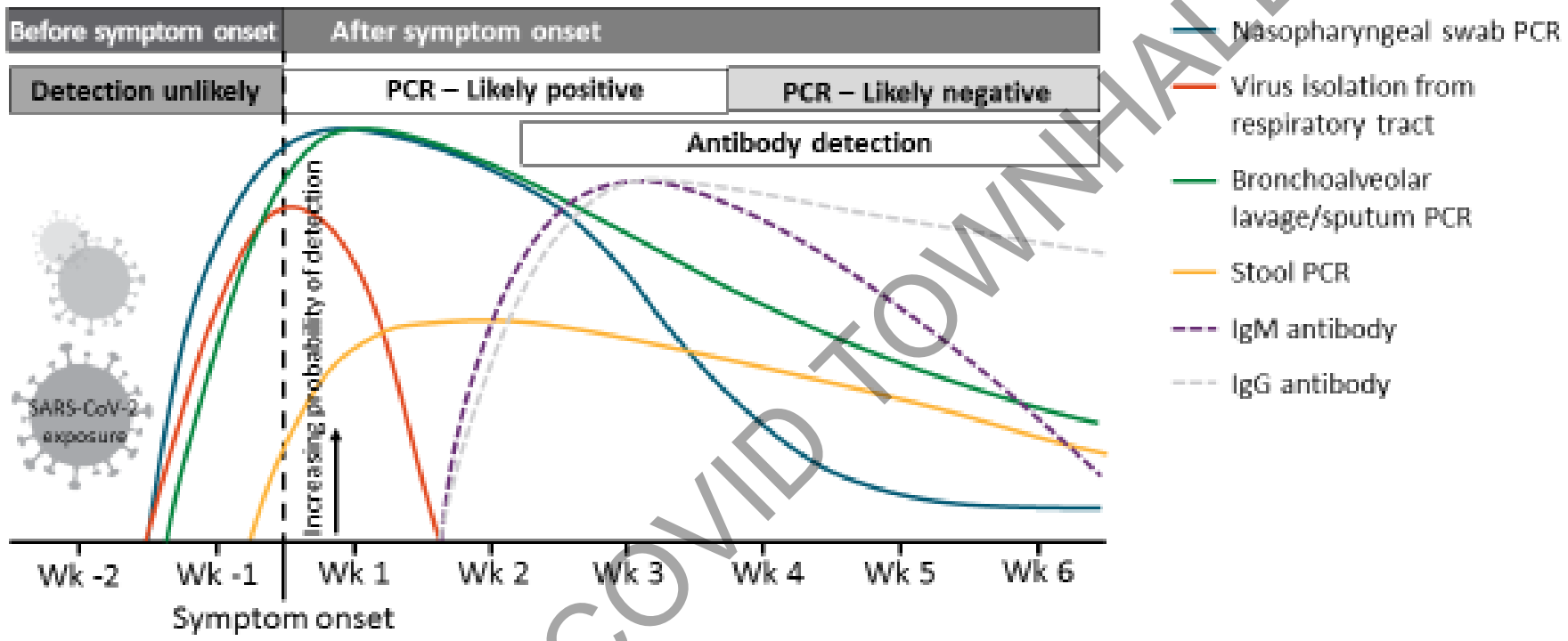
Factors Potentially Leading to Negative Result in an Infected Individual
Poor specimen quality
Timing of specimen collection (very early or late in infection)
Specimen was not handled appropriately
Technical reasons inherent in test (virus mutation or PCR inhibition)

"If a negative result is obtained from a patient with a high index of suspicion for COVID-19, particularly when only upper respiratory tract specimens were collected, additional specimens, including from the lower respiratory tract if possible, should be collected"

https://www.who.int/publications-detail/laboratory-testing-strategy-recommendations-for-covid-19-interim-guidance

Slide credit: clinicaloptions.com

Temporal Considerations for Diagnosis



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- **Shedding of infectious virus in hospitalized patients with coronavirus disease-2019 (COVID-19): duration and key determinants**
- Jeroen J.A. van Kampen M.D.,

BGS COVID TOWNHALL #3

Treatment

steroids

Dear Colleague

Thank you very much for your help with the RECOVERY trial to date. We are announcing the results of the dexamethasone comparison today and a copy of the statement is attached.

The results show that dexamethasone reduce 28-day mortality substantially among patients who received oxygen or ventilation at the time of randomisation. Among participants receiving oxygen alone, the risk of death was reduced by 20%, and among participants receiving ventilation the risk of death was reduced by 35%. (By contrast, among the participants not receiving oxygen at baseline there was no evidence of benefit.)

These results are incredibly important and have immediate applications globally for the many thousands of patients currently in hospital receiving oxygen, hence the statement today.

We would recommend that any participants currently receiving dexamethasone in the RECOVERY trial complete their course. In our opinion, such treatment should become standard of care for hospitalised patients with COVID-19 receiving oxygen, so please discuss this with your prescribing committees. A CAS alert will be sent to your hospital tomorrow.

Please may we ask you to complete the trial follow-up forms in a timely fashion. These results would not have been possible without your support and we are very grateful to you and your teams.

We look forward to continuing to collaborate with you on the other important questions which RECOVERY is still addressing.

With best wishes.

Yours sincerely,

Peter Horby PhD FRCP
Professor of Emerging Infectious Diseases & Global Health

Martin Landray PhD FRCP
Professor of Medicine & Epidemiology

Chief Investigators for the RECOVERY trial

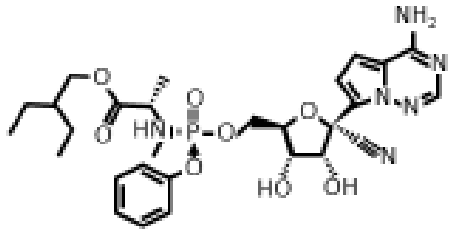
Remdesivir

FDA Emergency Use Authorization of Remdesivir for Severe COVID-19

- Remdesivir is a nucleoside analogue of ATP that inhibits SARS-CoV-2 RNA polymerase by competing with ATP for inclusion into nascent RNA→ delayed chain termination during viral RNA replication

The FDA Emergency Use Authorization (EUA)

"…permits the emergency use of the unapproved product remdesivir for treatment of suspected or laboratory confirmed coronavirus disease 2019 (COVID-19) in adults and children hospitalized with severe disease. Severe disease is defined as patients with an oxygen saturation (SpO_2) ≤ 94% on room air or requiring supplemental oxygen or requiring mechanical ventilation or requiring extracorporeal membrane oxygenation (ECMO)"



Remdesivir EUA Provider Fact Sheet.

Slide credit: clinicaloptions.com

Any the wiser?