Chief Medical Officer Directorate
Chief Medical Officer and Deputy Chief Medical Officer
Dr Gregor Smith
Interim Chief Medical Officer for Scotland

Scottish Government
Riaghaltas na h-Alba
gov.scot

E: cmo@gov.scot

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Dear Mr Wishart,

Thank you for your letter dated 3 June 2020, following up on an issue raised during the Scottish Affairs Committee evidence session which I attended alongside Professor's Andrew Morris and Sheila Rowan on 21 May 2020. I have set out detailed responses to the questions you ask on testing in care homes below.

What does the scientific evidence suggest about the relationship between the number of tests taking place in care homes and Scotland's R number? Is the scientific consensus consistent with the assertion that increasing testing in care homes would contribute to bringing down Scotland's R number?

The reproduction number (R) is the average number of secondary infections produced by one infected person. Testing of people in any setting establishes the prevalence (the number of infected people in the population) and incidence (the number of new infections per day). They are different estimates of the status of the epidemic, which are complimentary for understanding the epidemic. As Sir Patrick Vallance states https://www.gov.uk/government/news/government-publishes-latest-r-number "R should always be considered alongside the number of people currently infected. If R equals 1 with 100,000 people currently infected, it is a very different situation to R equals 1 with 1000 people currently infected." Inherently, in this statement, having a lower number of infected people, does not necessarily indicate the R number will be lower although these situations would have very different implication for demands on healthcare and the expected numbers of resulting mortalities, despite having an identical R number.

The R number is calculated by a range of independent modelling groups based in universities, as well as by Scottish Government analysts, and these estimates are presented to the Science Pandemic Influenza Modelling group (SPIM) for discussion. SPI-M is a sub group of the Scientific Advisory Group for Emergencies (SAGE) and provides expert advice on scientific matters relating to the UK's response to an influenza pandemic or other emerging human infectious disease threats. SPI-M's advice is based on different modelling approaches and epidemiology data such as: deaths, ICU number and in some insistences, positive cases from testing. There is a tendency for the models which estimate the R number

in Scotland and the UK as a whole, to not use case testing data as there is systemic bias towards sampling the most symptomatic and therefore most likely infected and infectious people, therefore they are not a good representative sample of the average number of new infections resulting from an infected individual for the whole population.

Testing, and therefore understanding the number of infectious people, in its own, will not lead to a reduction in transmission or estimates of the R number. Measures resulting from testing such as isolation or increased biosecurity of someone who is a positive case, would reduce the transmission to susceptible people. Additionally, increased observation measures of positive cases may lead to earlier interventions which could result in lower numbers of deaths or ICU admissions, which then lead to reduction in these data, and as a result would lead to a lower R number being estimated.

Beyond testing, what other measures are necessary to protect people in care homes and bring down the number of deaths from Covid-19? Have these been implemented in Scotland?

PPE
From the start the Scottish Government has created supply lines to ensure that homes have equitable access to PPE.

Testing of staff
From early in the crisis symptomatic Care Staff were offered testing for symptoms on an equal footing with NHS staff.

Guidance
Both the Scottish Government and Health Protection Scotland have issued iterative guidance to support care home staff and providers in preventing and managing an outbreak. This guidance has been strengthened over repeated iterations. Specifically, this guidance has recommended:

- Closing to all but essential visitors to a home.
- Managing residents in their own rooms and avoiding the use of communal areas.
- Use of PPE and IPC measures.
- Recognition of some of the softer symptoms.
- Staff not moving between homes.
- Testing residents before discharge from hospital.

Testing of Outbreaks
When a resident in a care home displays symptoms, we organise testing for all residents and staff to trace and limit the extent of the outbreak. Where staff in one provider (e.g. HC-ONE) have also been working in another home in the same company, we test that second home to ensure infection rates have not spread. This practice (working between different homes) has been discouraged.

Testing of asymptomatic homes
We are embarking on weekly testing of staff in asymptomatic homes to try and identify staff who may carry infection before they infect other staff and residents.

Sick Pay
The Government has requested providers to provide full pay for staff who have to self-isolate and has promised full pay to ensure that staff are not tempted to return to work when they have mild symptoms and may still spread the infection.

Staffing levels
To support homes where staff test positive and require to self-isolate, we have worked with the care an NHS sectors to identify staff who have volunteered to return to work to help out as well identifying responsibility for supporting care homes.

Legislation
The Scottish Government has put in place legislation to ensure that if a home in private ownership cannot provide safe care to its residents then the Government through the Health and Social care partnerships can take over the running of the home to ensure that lives are not endangered.

Directors of Public Health
Directors of Public Health have been charged with providing oversight to care homes and ensuring that the governance, safety and support for care homes is adequate.

Clinical Oversight
Additionally Nurse Directors, Medical Directors, Chief Social Workers and Directors of public health (and specialist Geriatric Medicine support where possible) have been required to provide clinical support to care homes, supported by guidance to ensure that staffing levels, IPC and clinical care is adequate for homes and their residents with daily multidisciplinary team discussions).

I hope you and the Committee find this response helpful.

Yours sincerely,

Dr Gregor Smith
Interim Chief Medical Officer for Scotland