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(Please note that "Information Only" reports do not require Integrated Impact Assessments, Legal or Finance Comments as no decision is being taken)

Title of meeting:	Cabinet
Subject:	Modelling potential future Covid-19 cases and impacts
Date of meeting:	19 th March 2021
Report by:	Matt Gummerson, Strategic Lead for Intelligence, Public Health
Wards affected:	All

1. **Requested by** Cllr Vernon-Jackson, Leader of Portsmouth City Council

2. **Purpose** To inform Cabinet of the potential for future surges in Covid-19 infections

3. Information Requested

- 3.1 At the time the roadmap for easing lockdown restrictions was announced ([Covid-19 Response - Spring 2021](#)), the Prime Minister set out four tests that will inform decisions about whether it is safe to move from one step to the next. One of these was that "infection rates to not risk a surge in hospitalisations which would put unsustainable pressure on the NHS". The lockdown release plans were however informed by modelling work undertaken nationally for SAGE which highlighted the likelihood of "an epidemic resurgence which results in a substantial number of hospitalisations and deaths" ([Sage minutes 18th February 2021](#)).
- 3.2 The Chief Medical Officer reiterated on 9th March 2021 in evidence to the Science and Technology Committee that the timetable for release already included significant risks of further surges later in the summer, and advised against any increases in pace of easing of restrictions, over and above the 'at the earliest' dates in the roadmap.
- 3.3 On behalf of the Local Resilience Forum (LRF), local Public Health Intelligence teams have been working during the pandemic to model the impact of Covid-19 on the Hampshire and Isle of Wight population. The latest iteration of this modelling attempts to build in the four stages of lockdown release and the roll-out of the vaccination programme, alongside assumptions about the level of risk across different ages in the population and the amount of contact with others that individuals are likely to have. The outputs from these models have been shared at appropriate levels through the LRF structure and with NHS partners to inform planning.
- 3.4 According to this local modelling, a further surge of some description is highly probable due to high levels of remaining susceptible population, who have not been

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infected or vaccinated, as Lockdown eases. This could easily create an environment with high case numbers amongst the younger age groups (still to be vaccinated/infected) alongside some people in the more vulnerable groups who have not had the vaccine or still become infected and hospitalised having been vaccinated.

- 3.5 It is anticipated that numbers of infections will begin to rise as soon as pupils return to school. Through a gradual approach to lockdown easing and a highly effective and rapidly rolled out vaccination programme, this further wave of cases could peak for the Portsmouth Hospitals University Trust catchment population around the end of May, at a level slightly higher than that experienced in early November 2020 during the second national Lockdown.
- 3.6 If social distancing relaxed further than government policy, or the effectiveness of the vaccine programme is reduced, this further wave of infections could rise more quickly, peaking in late April/early May at rates of infection more like those experienced in Portsmouth in mid-December 2020 when decisions to move the local area into tier 4 were made by the government. This could result in pressure on the local health system somewhere between the peaks seen in November 2020 and April 2020.
- 3.7 In both the scenarios described above, the further roll-out of the vaccination programme to the rest of the adult population, along with some ongoing non-pharmaceutical interventions, then sees infections fall away again during the remainder of the summer.
- 3.8 The scale and timing of further waves of Covid-19 are driven on *very uncertain modelling assumptions*, including:
- real world vaccine effectiveness against infection, variants and severe disease leading to hospitalisation
 - vaccine uptake in addition to rollout speed
 - extent to which our local populations will continue to effectively practice the social distancing practices asked of them by the government to reduce transmission
- 3.9 The further into the future projections are attempted the more uncertainty there is in the modelling outputs. Longer term scenarios (beyond the end of April) are currently highly uncertain and should only be considered as a range of possibilities. These modelling outputs are based on current understanding which is evolving rapidly around a number of pivotal modelling assumptions. They are therefore transitory in nature and there are inherent uncertainties in the modelling. They may be helpful for understanding the potential relativities in alternative scenarios but should not be relied upon as a source of projected absolute values for any output variables.
- 3.10 The Local Outbreak Management Plan (LOMP), which sets out how the Local Authority and its partners will continue to respond to the ongoing Covid-19 pandemic, is currently being refreshed. An updated LOMP will be published on the council website once it has been approved at the Local Outbreak Engagement Board on 22nd March 2021.

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Signed by (Director)

Appendices:**Background list of documents: Section 100D of the Local Government Act 1972**

The following documents disclose facts or matters, which have been relied upon to a material extent by the author in preparing this report:

Title of document	Location
SPI-M-O: Summary of modelling scenarios for easing restrictions	S1116_SPI-M-O_Summary_of_modelling_on_scenario_for_easing_restrictions.pdf (publishing.service.gov.uk)