COVID-19 Road Map for St Helena
Health Considerations

Background

St Helena has now reduced its quarantine period progressively from fourteen to ten to seven days. To inform the next stage on the road to "Living with COVID-19" the Executive Council has asked for a paper identifying from the Health and Social Care Portfolio the core factors to be taken into account when coming to a decision about whether to reduce the quarantine period further or to go directly to a full lifting of quarantine requirements.

We have reviewed information from three areas (New Zealand, Montserrat and The Falklands Islands) which have all recently acquired community COVID-19 outbreaks from a previously COVID-19 naïve position (St Helena's current status) to inform this analysis and recommendation.

Data source (in descending order)

- Government data where available
- WHO data if government data not available
- World of Data
- World O Meter

	St Helena	The Falklands	New Zealand
Population	4439	3669	5,127,100
COVID-19 cases	44	1687	1,143,146
COVID-19 deaths	0	0	1098*
Deaths per million population	0	0	214***
Vaccination rate (1st/2nd dose	90%+/90%+	60%/65%**	5-11: 55%/25% 12+: 96%/95%

*The vast majority of deaths overall were in the over 70s, but this did not apply to the Maori population, in which most deaths were under 60. The Maori have a high prevalence of diabetes and obesity.

**Very difficult to find any figures. None on government web pages [I suspect the rate is 90+ given the lack of hospitalised cases and deaths]

*** This would equate to just under one death on St Helena

What the numbers mean

COVID-19 deaths are defined as any death occurring within 28 days of a positive COVID test. Many of those whose deaths are attributed to COVID-19 under this definition will die of another cause unrelated to COVID-19 (e.g. if you are knocked down and killed by a bus the day after a

positive test you will be recorded as a COVID-19 death). Although this methodology leads to an overestimate in the number of COVID-19 deaths it does allow like for like comparison between different countries.

COVID-19 cases are defined as individuals who test positive for COVID-19. This definition underestimates the number of COVID-19 cases as those who are asymptomatic are not usually tested and individuals with mild disease may not report their symptoms and will therefore not be tested.

So in the case of the New Zealand data the official figures are the most pessimistic, as they include only confirmed cases (which will be less than half the true cases), and deaths of any cause within 28 days of a COVID-19 diagnosis (of which less than half will have died as a result of COVID-19). So effectively we are looking at about 500 deaths out of >2 million cases (1 per 4000 infected individuals).

Commentary on the Falklands and Montserrat data (informed by telephone conversations with both UKOTs)

In the Falklands the outbreak appears to have spread initially from cases in the military to nurseries, junior schools, secondary schools then to the population. The spread in the community started in advance of the planned date for the cessation of quarantine.

In Montserrat there is a strong anti-vaccination culture with a consequent low vaccination rate. One of the four recent deaths (May 2022) was in a 21 year old who died from a pulmonary embolus. She was not vaccinated. This death emphasises the importance of venothromboembolism prophylaxis and vaccination.

Based on the Falkland and Montserrat experience it is therefore now not a matter of if COVID-19 enters the community on St Helena but when. It would seem prudent for us to control the introduction of COVID-19 when we are at a maximal state of readiness and when we have a variant with low virulence rather than react to it once enters by chance.

- **Virulence**: how severe the disease is
- **Contagious**: how easily the disease spreads from one individual to another
- **Co-morbidities**: the simultaneous presence of two or more diseases or medical conditions in a patient, e.g. diabetes and high blood pressure

Health related factors supporting a decision to lift the quarantine requirement

We have identified five factors which we believe will inform the decision to go from seven days quarantine to a complete lifting of the quarantine:

- The state of readiness of the health and social care system
- The Omicron variant virulence
- The extension of vaccination and rolling out the booster programme
- The reduced number of vulnerable people in the community
- The forthcoming school holidays (08/08/22 – 02/09/22)

The state of readiness of the health and social care system

Work has been underway for some time to ensure that the health and social care system is at its maximal state of readiness for an outbreak of COVID-19. This readiness is being addressed under several headings. (Critical factors required to successfully deal with an outbreak under each section have been indicated including where we are with progressing them):

Medical staffing (core requirements to open up Bradleys)

- Five general practitioners in post: recruitment in progress
- Two intensivists/anaesthetists in post: recruitment in progress

Nursing staffing

- Up to establishment: recruitment in progress
- Nursing staff trained in the use of O_2 delivery systems: in progress

PPE (audit and rationalisation of stores underway): the preliminary results indicate a good stock of appropriate PPE for:

- Health and Social Care and emergency staff:
- Police
- Fire
- Ambulance
- Sea Rescue

Oxygen capacity

- The Bradleys O_2 plant will need to be commissioned: in progress
- The Bradleys O2 plant will need to be piped to ICU: in progress
- Electrical surge protection for Bradleys: surge protectors are being procured for Bradleys and the Jamestown sites
- Second line fail over after UPS (e.g. a back-up generator): A review of the contingencies for local or mains power failures for Bradleys and the Jamestown sites is underway
- Additional regulators for free standing O_2 cylinders (15 on Island): 60 requested from FCDO, delivery date to be confirmed
- Remote monitoring of O_2 failure: review in progress

- Oxygen delivery to the patient
    - Ventilators (x6): in Bradley's: on Island
    - HFNO (x6 Airvo + x6 on ventilators): In Bradleys: on Island
    - CPAP (x3 VIVO Breas Medical): In Bradleys: on Island
    - O_2 face mask/low flow Nasal O_2: In stock, number to be confirmed (contingency to clean and store used masks for reuse if required): in progress
    - Disposables for the above equipment: in stock, numbers to be confirmed (contingency to clean and store used disposables for reuse if required): in progress
    -
- Drug treatment
    - Dexamethasone: good stock on Island, further stock on order, arrival date to be confirmed
    - LMWH: good stock on Island, further stock on order, arrival date to be confirmed
    - Antivirals: We have all that we have been able to source. Further stocks have been allocated and we are awaiting shipping details.
    - Hand gel: good stock on the Island: further stock on order (there is likely to be stock in the commercial sector for public and commercial use)

- Venothromboembolism prophylaxis
    - TED stockings: these are used routinely in the hospital. we are awaiting confirmation of the stock on the Island and will order further stock if required
    - LMWH: these are used routinely in the hospital. we are awaiting confirmation of the stock on the Island and will order further stock if required
    - (CTPA): we have a CT scanner on the Island and are awaiting the arrival of a radiographer who can undertake these contrast images

- Shielding the vulnerable
    - Definition of the vulnerable: An updated definition of "vulnerable" has been drawn up based on the UK definition (Annex 1). There are probably ~ 100 vulnerable patients on Island using this new definition. The definitive list is in preparation.
    - Use of antivirals for vulnerable patients: Dr Moss is drawing up guidance
    - Oximeters for monitoring of community cases: x50 on order from the FCDO (shipping details awaited) and x400 ordered from our suppliers (shipping details awaited)
    - Pre-shift testing of care home staff: Dr Moss to advise on protocol
    - Management of first cases in care home outbreak: We will undertake site visits and draw up plans

- Testing
    - PCR: x500 tests on the Island: we will be using LFT predominantly
    - Lateral Flow Tests: ~x10,000 tests on the Island and 50,000 ordered from the FCDO (shipping details for first 25,000 waited)
    - Testing strategy: work in progress

- Communication with the public: work in progress

PPE for the public: there is no plan to provide PPE to the public or commercial sector

This work is on-going and regular updates will be made on progress.

The Omicron variant virulence

We have previously discussed that the Omicron variant is the least virulent of the major SARS-COV2 variants we have encountered to date. Although highly contagious and therefore spreading through communities faster than previous strains, it had led to fewer hospitalisations for severe disease and fewer deaths. The New Zealand data when superimposed on the St Helena context would have resulted in about one death. The Falklands data is even more reassuring with no deaths to date and about half the population infected.

Omicron is still the dominant variant in the world and we should make the most of the prevalence of this less virulent variant when making a decision about lifting quarantine. New variants of SARS-COV2 are appearing all the time, but the vast majority of these are less effective than Omicron (because they are intrinsically less fit, transmit less easily, or kill the host too quickly). Natural selection will tend to favour variants that are more transmissible and less deadly, but it is possible that a more virulent variant might become widespread (especially if there is passage through an animal reservoir); this is well recognised with influenza. It is likely that infection with any one variant will provide significant future protection against other variants (especially if combined with immunisation). There is therefore an argument that (given that SARS CoV2 will reach St Helena at some point), widespread infection with the Omicron variant might be preferable to a potential future variant.

SARS-COV2 infection: a person who has been infected with the SARS-COV2 virus

COVID-19: the disease caused by infection with the SARS-COV2 virus. To be diagnosed with COVID-19 an individual would have to test positive for SARS-COV2 ***and*** have at least one of the symptoms associated with COVID-19:

- continuous cough
- high temperature, fever or chills
- loss of, or change in, your normal sense of taste or smell
- shortness of breath
- unexplained tiredness, lack of energy
- muscle aches or pains that are not due to exercise

- not wanting to eat or not feeling hungry
- headache that is unusual or longer lasting than usual
- sore throat, stuffy or runny nose
- diarrhoea, feeling sick or being sick

https://www.gov.uk/guidance/people-with-symptoms-of-a-respiratory-infection-including-COVID-19-19

Upwards of 50% of those infected with SARS-COV2 will have no symptoms and would therefore not be defined as having COVID-19.

The extension of vaccination and rolling out the booster programme

It is now well established that vaccination for SARS-COV2 confers significant protection from severe illness, hospitalisation and death. We should ensure that the vaccination and booster programme covers the maximum number of the 5+ population, particularly those who are in care facilities, the vulnerable and health and social care workers.

Work is underway to plan the next stage of the vaccination and booster programme. We are currently considering offering flu vaccination at the same session. Although flu vaccination does not confer any immunity from SARS-COV2 it does reduce the risk of contracting flu and SARS-COV2 at the same time.

Current vaccination uptake on St Helena (at 22/05/2022)

5-11 age group (1st dose/2nd dose/booster): 76%/0%/0%
12-17 age group (1st dose/2nd dose/booster): 95%/84%/0%
18+ age group (1st dose/2nd dose/booster): 98%/97%/83%

We have received 400 doses of the 5-11 vaccine on the 22/05/22 flight and are planning to complete the 1st dose vaccinations for this age group between 7-9th June 2022.

We have 864 doses of the adult vaccine with an updated expiry of Sept 2022. This will allow us to offer those who have not had a 1st or 2nd dose the opportunity to have those doses (including those in residential care) and also to offer those who are defined as vulnerable and those aged 75+ a booster dose. We will be discussing the details of this with Dr Moss.

The reduced number of people thought to be vulnerable to Omicron

It is important to understand that the definition of a vulnerable individual in relation to the SARS-COV2 pandemic relates to those individuals whose medical condition(s) increase the risk that

they will develop severe clinical features as a result of COVID-19 or will die due to COVID-19 when compared to the average individual in the population.

In March 2020 when the pandemic was declared we knew very little about the disease, how it spread and how to effectively manage it. There were no vaccines and no specific treatments known. We therefore designated the presence of many common medical conditions as defining an individual as vulnerable. With an increased understanding of the disease, the introduction of vaccines and the emergence of Omicron as a less virulent strain most of those who were previously defined as vulnerable due to an increased risk of contracting a more severe form of the disease are now no more at risk that an average person with no co-morbidities (assuming that they have been vaccinated).

The new shorter list of conditions (Annex 1) which designate an individual as vulnerable means that there are fewer vulnerable individuals in the community. We are currently drawing up a register of these individuals and will be giving them advice about what to do if they contract SARS-COV2. This lower number of vulnerable individuals will also mean that the supplies of antivirals we have will go further.

The forthcoming school holidays (08/08/22 – 02/09/22)

If the spread of SARS-COV2 through nurseries and schools in The Falklands were to be replicated in St Helena then lifting quarantine at the beginning of an extended school break would reduce the risk of a rapid rise in cases. Children rarely get serious illness so this strategy would be intended to minimise the number of cases in the community at any one time during an outbreak.

Proposed timetable for lifting of quarantine (subject to review of the potential benefits of an intermediate quarantine stage):

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
				Jul 29	**30**	31
Aug 1	2	3	4	5	6	7
8	9	10	11	12	**13**	14
15	16	17	18	19	20	21
22	23	24	25	26	**27**	28
29	30	31	Sep 1	2	3	4
5						

The first day of the August/September school holiday is 6th August 2022. This is also the last day of the seven day quarantine for the 30th July 2022 flight (assuming exit testing is negative). The proposal is that we lift the quarantine requirement fully on that day. Children will be on leave for four weeks during which there will be two flights and a number of yachts landing all of whom will have arrival testing and if that is negative they will have no quarantine restrictions. Advice

sheets will be given out advising on the symptoms to look out for and the number to call for testing.

If we are in the midst of an outbreak the week before the children return to school on 5th September 2022 a decision may be made to defer school opening.

The advantage of this approach (assuming all of the other three factors are optimised, Omicron the dominant strain, health being at the maximal state of readiness and the vaccination and booster programme being completed) is that it will be a positive decision based on a risk assessment rather than the alternative which would be to react when SARS-COV2 does arrive then be playing catch up. Starting at the beginning of the school holiday gives some potential mitigation against too rapid a spread (assuming that we follow the Falklands experience of SARS-COV2 starting off in schools).

We have asked for a telecom with the Falklands and Montserrat (10th June) so that we can update ourselves on what is happening there and also to understand the population demographics, given that there are several hundred Saints on the Falklands.

Recommendation

The Health and Social Care recommendation subject to us achieving the critical requirements defined above, or having in place sufficient mitigation if they cannot be met, is that we set a target date of 6th August for full lifting of the current quarantine period.

Annex 1

At Risk Patients

Patient cohorts considered at highest risk from COVID-19 and to be prioritised for treatment with nMABs

The following patient cohorts were determined by an independent advisory group commissioned by the Department of Health and Social Care (DHSC).

(For paediatric/adolescent patients (aged 12-17 years inclusive), paediatric multi-disciplinary team (MDT) assessment should be used to determine clinical capacity to benefit from the treatment.)

Cohort	Description
Down's syndrome	All patients with Down's syndrome
Patients with a solid cancer	Active metastatic cancer and active solid cancers (at any stage) All patients receiving chemotherapy within the last 3 months Patients receiving group B or C chemotherapy 3-12 months prior (see Appendix 3) Patients receiving radiotherapy within the last 6 months
Patients with a haematological diseases and stem cell transplant recipients	Allogeneic haematopoietic stem cell transplant (HSCT) recipients in the last 12 months or active graft vs host disease (GVHD) regardless of time from transplant (including HSCT for non-malignant diseases) Autologous HSCT recipients in the last 12 months (including HSCT for non-malignant diseases) Individuals with haematological malignancies who have ○ received chimaeric antigen receptor (CAR)-T cell therapy in the last 24 months, or ○ radiotherapy in the last 6 months Individuals with haematological malignancies receiving systemic anti-cancer treatment (SACT) within the last 12 months except patients with chronic phase chronic myeloid leukaemia (CML) in molecular response or first or second line tyrosine kinase inhibitors (TKI).

	All patients with myeloma (excluding MGUS) or chronic B-cell lymphoproliferative disorders (e.g. chronic lymphocytic leukaemia, follicular lymphoma) or myelodysplastic syndrome (MDS) who do not fit the criteria above. All patients with sickle cell disease. Individuals with non-malignant haematological disorder (e.g. aplastic anaemia or paroxysmal nocturnal haemoglobinuria) receiving B-cell depleting systemic treatment (e.g. anti-CD20, anti- thymocyte globulin [ATG] and alemtzumab) within the last 12 months.
Patients with renal disease	Renal transplant recipients (including those with failed transplants within the past 12 months), particularly those who: ○ Received B cell depleting therapy within the past 12 months (including alemtuzumab, rituximab [anti-CD20], anti-thymocyte globulin) ○ Have an additional substantial risk factor which would in isolation make them eligible for nMABs or oral antivirals ○ Not been vaccinated prior to transplantation Non-transplant patients who have received a comparable level of immunosuppression Patients with chronic kidney stage (CKD) 4 or 5 (an eGFR less than 30 ml/min/1.73m2) without immunosuppression
Patients with liver disease	Patients with cirrhosis Child's-Pugh class B and C (decompensated liver disease). Patients with a liver transplant Liver patients on immune suppressive therapy (including patients with and without liver cirrhosis) Patients with cirrhosis Child's-Pugh class A who are not on immune suppressive therapy (compensated liver disease)
Patients with immune-mediated inflammatory disorders (IMID)	IMID treated with rituximab or other B cell depleting therapy in the last 12 months IMID with active/unstable disease on corticosteroids, cyclophosphamide, tacrolimus, cyclosporin or mycophenolate. IMID with stable disease on either corticosteroids, cyclophosphamide, tacrolimus, cyclosporin or mycophenolate.

	IMID patients with active/unstable disease including those on biological monotherapy and on combination biologicals with thiopurine or methotrexate
Immune deficiencies	Common variable immunodeficiency (CVID) Undefined primary antibody deficiency on immunoglobulin (or eligible for Ig) Hyper-IgM syndromes Good's syndrome (thymoma plus B-cell deficiency) Severe Combined Immunodeficiency (SCID) Autoimmune polyglandular syndromes/autoimmune polyendocrinopathy, candidiasis, ectodermal dystrophy (APECED syndrome) Primary immunodeficiency associated with impaired type I interferon signalling X-linked agammaglobulinaemia (and other primary agammaglobulinaemias) Any patient with a secondary immunodeficiency receiving, or eligible for, immunoglobulin replacement therapy
HIV/AIDS	Patients with high levels of immune suppression, have uncontrolled/untreated HIV (high viral load) or present acutely with an AIDS defining diagnosis On treatment for HIV with CD4 <350 cells/mm3 and stable on HIV treatment or CD4>350 cells/mm3 and additional risk factors (e.g. age, diabetes, obesity, cardiovascular, liver or renal disease, homeless, those with alcohol-dependence)
Solid organ transplant recipients	All recipients of solid organ transplants not otherwise specified above
Rare neurological conditions	Multiple sclerosis Motor neurone disease Myasthenia gravis Huntington's disease