COVID-19
Mobilisation Plan 2

27 March 2020

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Introduction

This is the second iteration of the NHS Borders COVID-19 Mobilisation Plan.

The plans have been based on modelling undertaken locally by NHS Borders staff based on work previously undertaken and published by Imperial College.[1]

The model and underpinning assumptions have been shared with colleagues at Scottish Government to ensure these are consistent with assumptions made at a national level. Once feedback is received the plans will be reviewed and amended if required.

It should be noted that these plans are constantly being reviewed and updated as more information becomes available.

Ventilators and Escalation for COVID-19

NHS Borders current ventilator capacity is 5 Draeger Evita ITU vents. In order to quadruple our ventilator capacity we have made the following assessment:

Scenario	Patient Capacity	Comment	Recommendation / Solution
Current	5	-	-
Increase to 2 – 3 times normal capacity	10 – 15	• Would require use of anaesthetic machines as ventilators • Not ideal as need high flows of oxygen, require soda lime and have a big footprint for a small bed space	If possible switch to additional 4 new ITU ventilators
Increase to 4 times normal capacity	20	• Would require use of old anaesthetic machines and transport ventilators • significant risk to patients • Only takes us to 18.	Will require an additional 5 new ITU ventilators.

[1] *Ferguson NM et al. Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand. WHO Collaborating Centre for Infectious Disease Modelling; MRC Centre for Global Infectious Disease Analysis; Abdul Latif Jameel Institute for Disease and Emergency Analytics; Imperial College Covid 19 Response Team. March 2020*

Based on the above assessment, in order to quadruple ITU provision in NHS Borders within a 4 week window we would require 9 new ventilators as a minimum or 15 to provide an optimum solution.

HOWEVER PLEASE NOTE: as highlighted in our original mobilisation plan we have identified a possible issue with providing an adequate supply of oxygen per minute to meet predicted demand within Borders General Hospital. The key problem is the **rate** of oxygen flow into the piped supply may be insufficient.

There is plenty of oxygen in the liquid oxygen store. However, getting it out of the liquid oxygen store to the patients in the hospital is **severely limited**. We have highlighted this to Health Facilities and this has been confirmed as a severe rate limiting problem.

While we have had reassurances from BOC on how they will increase manufacture and supply to the hospital an initial assessment of the rate of supply from the oxygen store to the patients via our piped oxygen may have a limit that may significantly restrict the number of patients to whom we could sustain high flow oxygen therapy. Please see summary below:

> *Our piped supply provides a maximum of 750 litres/min. This is similar to many hospitals our size.*
>
> *We estimate our O2 consumption from ventilators at 10 to 15l/min.*
>
> *Our anaesthetic machines use 50 litres/min.*
> *If we do ventilate up to 18 patients, we will use about 390l/min.*
>
> *This would only leave enough flow for a further additional 45 patients across the remainder of the hospital (at 10 litres per minute per patient).*

We are currently scoping this in more detail and checking our capacity and assumptions on patient demand for Oxygen. We have been assured by Health Facilities Scotland that our assumptions are correct. There may be some ability to increase flow by 10 – 15% but supply will be critical.

IF we are required to use an anaesthetic machine as a ventilator each would use 30-50 litres of oxygen per minute compared to 10 – 15 for a ventilator. Given that the O2 flow for the entire hospital is approx. 750 litres per minute this will significantly impact on other areas that are requiring this resource.

Exceeding 11 ventilated patients with our current equipment poses a significant threat to the rest of the hospital to be able to deliver care to more than a small number of patients. There just will not be enough oxygen. We need more ventilators to meet the demand safely without harming other less sick patients

This means that we need more ITU ventilators as they use less oxygen. The anaesthetic machines use 6 times as much for one patient: potentially depriving 5 people of treatment.

We have some assurances that we can take some steps to improve performance but we are limited to 750 litres of oxygen per minute. Each ventilator uses 10 litres per minute. Each anaesthetic machine uses 60 litres per minute.

Each clinically unwell ward patient requires 10 litres per minute. Each less clinically unwell ward patient requires 5 litres per minute. If we ventilate all the patients we can with the kit we have we will use 390 litres per minute. That leaves enough oxygen to treat only 45 other patients in THE entire hospital. If we replace the anaesthetic machines (that can't be modified) to ventilators we will use 150 litres per minute.

As a result, NHS Borders is requesting ideally **15 new additional ventilators** and a minimum of 9 in order to quadruple capacity.

We have a limited supply rate of oxygen and a very small number of ITU ventilators per head of population (less than 5 per 100,000). We consider these 2 factors to be of sufficient importance to prioritise allocation of additional ventilator capacity.

We are currently in discussions with Scottish Government around these issues.

Scaling Up General Bed Capacity

Our first mobilisation plan had been based on modelling on NHS Borders worst case scenarios articulated through Pandemic flu plans during 2012 and over a 15 week period. Early indications were that at the peak period we would require an additional 300 beds approximately.

As highlighted above, further modelling has been undertaken:

i. Daily predictor of cases based on actual cases with daily increase predictor
ii. 20-week modelling based on Imperial College assumptions and variable potential population infection rates

Both models assume an exponential increase until mid-April, based on an indicative 1.15 daily increase in demand. The daily predictor model provides an indication of beds required up to that point. The second model has therefore been constructed to give guidance on the following over a 20 week period:

- Hospital admissions and daily bed occupancy
- ICU admissions and bed occupancy
- Deaths

The models also allow us to predict numbers contacting NHS24 and transferred to the COVID-19 Hub and Assessment Centre.

Further detail relating to the 20-week model and assumptions can be found at Appendix 1
The impact of suppression measures introduced in late March are likely to manifest 14 days later. The *Ferguson NM et al* paper suggests 5 days from symptoms to hospitalisation, therefore we could expect to see a reduction in hospital admissions and ITU from mid to late-April.

Hospital Bed Demand

Based on the local modelling work, and assuming that suppression measures introduced in late March are successful, our modelling is now predicting a need for approximately 150 additional beds for COVID-19+ patients by mid-April, please note we have note modelled Paediatric or Maternity requirements at this stage. Beyond this point, it is unclear whether demand for COVID-19+ beds will increase or decrease.
However, this figure does not take into account the challenges of accommodating (isolating) suspected COVID-19 patients.
One scenario therefore indicates a maximum requirement for 300-350 beds for COVID-19+ and COVID-19 suspected patients. This is our current planning assumption which underpins our mobilisation plans.

There has been a 28% reduction in occupied bed days for non-COVID-19 general medical patients since 19th March 2020. If sustained, this could release approximately 30 existing general medical beds.

Currently NHS Borders has identified it can surge to just over 200 general hospital beds for COVID-19+ patients. This requires NHS Borders to take significant steps in order to free up this capacity. These are outlined below:

COVID-19 In-Patient Bed Plan

Name of Ward	Area	Core Beds	Surge Capacity	Total No. Beds Available	Description	Current Status	Predicted T/line for being ready	Staffing
CV1	*MKU*	8	2	10	Was an inpatient ward that has been released by relocating capacity to a mental health inpatient ward. Initially open to 8 beds but has potential to surge up by 2 beds. This is an assessment area and awaiting result area for COVID-19.	Open	Complete	27.18 Registered 20.04 HCSW
CV2	*BSU*	14	2	16	IP ward that has been released by relocating capacity to another area within the hospital. Potential to surge by another 2 (4 bedded bays to 5 bedded bays)	Open	Complete	
CV3	*Ward 14*	30	0	30	IP ward that has been released by relocating to another area and patients being discharged to community settings.	Ready for use	Complete	16.79 Registered 25.97 HCSW
CV4	*Ward 17*	22	1	23	Maternity Unit that has been released by relocating to another area in the hospital.	Ready for use	Complete	15.58 Registered 15.58 HCSW

CV5	*AHP*		0	25	Currently being utilised as an OPD area for AHPs. This was an inpatient ward prior to this. The area would require differing amounts of renovation dependent on clinical requirement.	In progres s.	Late April	15.62 Registered 20.78 HCSW
CV6	*Ward 12*	29	0	29	IP ward that has been released by relocating to another area and patients being discharged to community settings.	Ready for use	Complete	16.79 Registered 25.97 HCSW
PSAU IP	*PSAU*	12	12	12	This area is currently a Day of Surgery/Day Case ward. Relocate "urgent" day of surgery patients. Would be ready immediately	Ready for use.	Complete	Covered Ward 7 & 9
COVID-19 HDU	*DPU*	8	2	10	Currently a Day Surgery Unit. Eight recovery areas will be used initially and we will surge into theatre providing 2 spaces when required.	Ready for use.	Complete	TBC
Cauldshiels		15	11	26	Area released by Mental Health. Large area made up of single rooms and 2 good sized community lounges. The single rooms would provide the flexibility for Palliative Care. Some estates and facilities work would be required in the community areas to make ward area and equipment.	Current ly 8 spaces open.	Surge to 20 31st March, Surgery to 26 7th April	16.79 Registered 31.17 HCSW
Lindean		6	6	12	Area released by Mental Health. Minimal capital and facilities work required to make it ready.	Ready for use	Complete	10.39 Registered 10.39 HCSW
AAU		12		12	Currently used as an Assessment and Ambulatory area. This has been relocated to outpatients and ED. The unit comprises of 6 good sized single rooms. Plan would be to use as single then to surge up making each room a double. Minimal capital and facilities work required to make ward ready.	Ready for use	30th March 2020	10.39 Registered 10.30 HCSW
OPD A				25	Currently an out-patient area and would be established as a nightingale ward. Capital and facilities work would	Not yet started.		15.58 Registered 15.58 HCSW

					be required to make this area ward ready.			
				230				

In addition to work to scale up the number of beds available we have assessed the workforce requirements to staff these additional beds. Based on our current assessment we will be able to staff these areas but at a minimum staffing level offering as safe as possible basic care.

It should be noted that not all of these 230 beds will have access to piped oxygen and access to oxygen cylinders will be dependent on supply. In order to scale up to the 230 beds NHS Borders has had to purchase additional beds and other essential equipment.

Further Hospital Capacity

As highlighted earlier our planning assumption at present is that at the influenza peak we will require 300 – 350 beds for COVID-19+ and COVID-19 suspected patients.

In light of this we are actively working up scenarios and options around how to increase capacity to that which our modelling shows we will need. These include:

- Creation of additional capacity through reducing the inpatient footprint for non COVID-19 care
- Utilising non inpatient space within the hospital including the dining room for a nightingale ward
- Vacating between 48 and 96 Community Hospital beds through creation of additional care home capacity within Scottish Borders
- Field hospital in the grounds of the acute hospital
- Use of private hospitals
- Out of Borders capacity

These options have a range of significant risks and implementation issues. We will rapidly work through these options and plan on identifying the preferred options within 1-2 weeks.

ITU Demand

Both models are indicating an expected demand of around 20 ICU beds by mid-April. As highlighted earlier we have identified plans that would allow us to establish a maximum 20 ventilated ICU beds. Our current assessment is that we can safely staff up to the 20 beds. If actual numbers exceed this level, we would require alternative arrangements for additional patients, such as transfer to other facilities out with the Scottish Borders.

This will also need to be supported by Nationally agreed and implemented ITU triage tools that are currently under development.

Working With Partners To Reduce Delayed

The IJB with NHS Borders and Scottish Borders Council have been operating a number of programmes specifically designed to reduce patient delay, increase flow and reduce the number of occupied bed days due to delays.

These programmes have been established for varying lengths of time and in isolation have had varying degrees of success, but between them provide the framework for delivering a more robust and sustained reduction in delays.

The programmes in place or being established are:

Title	Description	Scale
a) Discharge hub	A multi-disciplinary team, coordinating complex patient discharge	
b) Trusted assessor	Ensuring assessments and allocation of residential and home care can be actioned by a range of professionals	Homecare, Residential, AHPs, Social Work able to provide assessments of patient needs
c) STRATA / Matching Unit	Digital electronic referral system and dedicated team for rapid matching of care provision with identified needs	Reducing the process time by 5/6 days
d) Home 1st	Nursing and Health Care Support workers providing immediate discharge with support and re-ablement	Up to 100 patients catered for at any one time
e) Step down	Intermediate care facilities to promote re-ablement and to allow for assessment etc to be undertaken outwith a hospital setting	39 beds available

Prior to the advent of COVID-19, actions to strengthen and expand the spread of these programmes was being developed. We are now planning a much more robust process for delivering a comprehensive discharge to assess programme, utilising the services and facilities we have established to enable these assessments to take place outside of hospital.

We are also driving forward our ability to share data and information between Health and Social Care and the amalgamation of some programmes. Modelling is currently underway to assess the need for an increase in care home and home care provision to support the response to COVID-19.

There are a number of immediate and potential actions that could be taken to increase care home places, which include:

- Redesignation of respite beds to permanent care
- Converting residential care to nursing home provision through change of staffing model

- Purchase of additional care home beds
- Recomissision of mothballed care home beds
- Commission beds out with Borders at a known facility

Together these options would bring a minimum of 47 beds. With each of these options there are issues associated with suitability, the identification of patients from the right location and ongoing additional financial commitments.

Overall these steps should provide enough capacity to clear all of the current Delayed Discharges currently waiting for care home beds (the majority of which are requiring nursing care) and create capacity for at least 20 more placements.

Further modelling is underway to identify the pressure on home care provision, for both growth in demand but also covering for the staff absences we anticipate as we move to the peak of the pandemic.

The following additional work is now being implemented to bolster the above and accelerate the ability to discharge patients:

Title	Description	Scale
Expansion of STRATA	Utilisation rolled out across all Care Homes	23 care homes are now providing their immediate capacity. Further work needed to identify respite places electronically, using daily e mails as a temporary fix
Two step moving on policy	Patients will now be moved to a respite care place, or another care home place to await their first choice becoming available. Revised moving on policy in place, but requires further staffing to implement the moves. Reallocating staff to this role.	14 of the 20 patients awaiting a residential place could be supported in this way
Home Care Scheduling	Merging Matching Unit with SBCares Scheduling team	More support required for SBCares homecare team, this merger will take place this week, to improve ability to mobilise home care runs.
Increased utilisation of digital and deployment of additional equipment	Reduction in the need for carers, increases the capacity elsewhere	More availability of packages of care.
AWI, PoA, 13Za Complex	Increase in Nursing Homes	Request to local Sheriff and

cases	has already released 14 beds, but need more freedoms on relaxing AWI constraints and the need for a Sheriff's order	through IJB national network, to allow for local decision making by the CSWO, for the duration of the Pandemic 6 out of 10 complex delays could be moved with this initiative.

The Chief Social Work & Public Protection Officer for Scottish Borders Council has written to the local Sheriff to raise the issue of AWi / Guardianship patients in hospital settings. It is hoped that given the changes to criminal and civil court scheduling over the coming period, we will be able to negotiate the acceleration of AWi / Guardianship cases to court to have people subject to legal measures placed in more appropriate provision to safeguard them as much as possible.
Taking the planned actions as outlined above into account we have developed a trajectory to reduce delays to 0 over a 3 week period. This is attached at Appendix 2

We are currently 24 above our trajectory for delays but it is anticipated that the actions outlined above including the creation of additional care home capacity will ensure the planned reduction .

Whole System Planning Across Acute/Primary/Social Care

NHS Borders along with colleagues in Scottish Borders Council are working actively to ensure a consistent and cohesive approach and activities across the Health and Social Care system. An SBC/NHS Joint Strategic Group has been established with members drawn from the Council Management Team and Board Executive Team which meets virtually three times per week.

The NHS Borders Strategic Planning group coordinated COVID-19 health planning across the clinical boards and corporate services. Regular sessions were held to update colleagues on acute/primary & community/mental health and LD/social work and corporate service plans and to identify any gaps or points for discussion and clarification.

The Strategic Planning group was stood down on 24 March 2020. The NHS Borders COVID-19 Pandemic Committee (Gold Command) went live on 25 March 2020. The purpose of the Committee is to operationally oversee and manage the response of NHS Borders to the COVID-19 Pandemic. The current Terms of Reference for the Committee are attached at Appendix 3

A meeting of the East Region Programme Board on 27 March 2020 agreed to refresh our commitment to Mutual Aid and to continue to work together across the East Region Boards to ensure consistency of approach to levels of care.

For further information details are outlined below of on-going work and mobilisation activities across Mental Health, Learning Disabilities, Primary & Community Services and NHS Borders Corporate Services.

PRIMARY AND COMMUNITY SERVICES

Our primary and community services are continuing to mobilise and respond to COVID-19. Below is a summary of the current position and the approach being taken:

Primary Care

- The COVID-19 Primary and Community Services co-ordinating group is meeting daily with a daily update circulated to Primary Care
- All Primary Care issues are directed to a Primary and Community Services Emergency Planning Mail Box which is manned during working hours
- A new separate management on call rota to provide seven day Primary Care management has been introduced
- Managing and streamlining outflow of information to Primary Care

Health and Social Care Partnership

- We are creating 5 multidisciplinary locality hubs – these will be supporting frail elderly, vulnerable and in due course patients who are at highest risk from COVID-19 and will require shielding.

General Practice

- The GP out of hours centre moved out of ED to free up capacity in ED – completed 19th March
- Daily contact by COVID-19 lead in Primary care and Chair of GP sub committee
- GP practices were moved to level 2 of Escalation Strategy at 6pm on 23rd March
- Negotiation with GPs to rationalise enhanced services as below

We have negotiated with GPs to rationalise enhanced services and the following services have been stood down:

LES	• Prescribing
DES	• Minor surgery • Extended hours • Palliative care

The following services will continue as below:

LES	• DMARD
DES	• Care home – prioritising anticipatory care planning • Community Care – again prioritising anticipatory care planning
NES	• Minor Injury - no longer accepting walk in and telephone triage first, prioritising clinical need to minimise footfall in the surgery • Anti coagulation • IUCD and long term contraception – can be referred to Sexual Health if

	necessary and prioritising clinical need to minimise footfall by clinical prioritisation • DMARD • Childhood vaccination • Influenza and pneumococcal vaccination

We are currently supporting two practices with significant staff shortages associated with COVID-19 positive staff members by co-ordinating additional admin and nursing and other support
GPs are offering to support the COVID-19 Hub and Assessment Centre. We have an HR process in place to support non NHS Borders employees and are planning to start this week to look at deployment of additional the additional resources.

Nursing

- We have identified vulnerable patients groups who will require additional support
- We have re-adjusted rotas to provide robust cover throughout the week and weekend
- We have closed Treatment Rooms with an alternative pathway in place to minimise footfall and clinical risk
- We have redeployed Dental staff and others to shore up stretched services across primary and community services
- We have established a Buddy System for Nurse Team Leads to support resilience
- We are participating in Locality Group Working to prevent admission and work together across the partnership

NHS BORDERS COVID-19 Hub and Assessment Centre

- NHS Borders COVID-19 Hub and Assessment centre was established by 8am Monday 23rd March – all calls passed from 111 dealt with appropriately
- COVID-19 Hub and Assessment centre and GP Out of Hours is currently co-located in the day hospital in acute hospital. A rapid action group has been convened to scope moving out of hospital and onto another location within the acute site within two weeks to release capacity on acute hospital.
- GP practise aligned to support housebound frail elderly patients referred down from the COVID-19 assessment centre

Community Hospitals

- All visiting has ceased
- Walk in minor injuries suspended with an alternative pathway in place
- We are moving to relaxation of geographical admission criteria to make best use of limited bed capacity
- Modelling length of stay, estimated length of stay, estimated dates of discharge and delayed discharges within Community Hospitals to ensure capacity and flow is maintained

MENTAL HEALTH & LEARNING DISABILITY SERVICES

In general all services have moved to a scaled down service, prioritising high risk patients/service users for telephone contact minimising face to face contact and maximising social distancing amongst staff and patients/service users.

Within the Mental Health Inpatient service we have temporarily relocated an older adult's mental health ward into our acute admissions ward to free up in patient capacity within Borders General Hospital. Delayed discharges are a priority focus to create capacity for any new admissions.

Work is underway to support General Practice in the form of a telephone helpline for Primary Care mental health referrals and to ensure that we coordinate the range of community mental health services available. Support is also being provided from within our psychology workforce to focus on supporting staff wellbeing across NHS Borders.

Additional nursing capacity is being made available to out of hour's services in anticipation of the redeployment of some medical staff into acute medicine.

Within Learning Disability services there is considerable support being provided to commissioned services to maximise the resilience of providers anticipating considerable staffing shortages over the coming 2 – 3 months.

CORPORATE SERVICES

Business Continuity plants for all support services are now in full operation with all non-essential business as usual stood down. All Corporate and support services have identified over 170 staff with varying and flexible skill sets to re-deploy to a number of activities.

A number of activities are currently underway in order to ensure that requests are responded to as efficiency as possible:

- The Turnaround PMO have now been set up as a central hub with all requests for additional staff being logged and actioned and allocated
- Call centres are being established for NHS Borders to deal with staff sickness absence, Occupational Health advice and support and any other general enquires
- Accelerated training sessions for staff to be equipped to undertake additional/alternative roles

A number of functions are also now being set up and resourced, these include:

- Staff deployment hubs
- Dedicated Absence line for all staff with appropriate signposting
- Staff accommodation hub
- Patient and family liaison service
- Staff well being
- Volunteers
- Transport hub

Staff Wellbeing

Staff Wellbeing is a priority within NHS Borders and we are in the process of setting up a psychological wellness hub within the Work and Wellbeing Department. This will be led by NHS Borders psychological services and overseen by the Head of Psychology.

Staff will be offered an initial triage appointment followed by a range of suitable options including web and telephone based. Provision is being made for bespoke staff interventions to those groups/areas who are at high risk of ongoing psychological difficulties. It is also vital that good evidence based information is being given and this service will filter the great amount of information being suggested for psychological wellbeing to ensure that this is focused, appropriate and useful.

In addition to this there are a number of practical supports being offered to staff, which include:

- Collecting goods from local supermarkets to create staff wellbeing packs which include toiletries and personal items of clothing
- The deployment of gifted items from local supermarkets which are being made available to staff
- Collating offers being made by local business for NHS and Social Care staff and making these available to the staff

Further supports will be added as they become available.

Early Financial Assessment

The Board has incurred significant costs over the last few weeks linked to COVID-19. The key areas of spend to date are – PPE equipment and supplies, medical equipment; building and maintenance work to facilitate the creation of increased capacity, stock for our additional capacity in our inpatients areas and additional staffing (including agency staff) to support increased activity.

In our first mobilisation plan we estimated that up to £3m of additional cost would be incurred over the next five months. This figure has been refined in light of further work and the modelled assumptions which underpin this plan. We have submitted our initial template as requested by Scottish Government with the total estimate of our assumed activities linked to COVID-19 being in the region of £20.5m, including £3.5m of anticipated social care costs.

This does not include reference to opportunity cost relating to a delay in our financial turnaround programme which we currently estimate would be in the region of £1m non-recurring in year on the basis of a 3 month delay. Depending on the length of the COVID-19 impact this will need to be further reviewed.

Work continues to develop, refine and remodel financial costs as the mobilisation plan evolves and it is anticipated that further submissions will be made as this develops.

Next Steps

This plan will be refined and updated as new information becomes available from the services on their responses to COVID-19, as we identify preferred options for increasing inpatient capacity and as information is received from Scottish Government.

27 March 2020

Appendix 1

SBAR: Covid demand modelling – NHS Borders

Situation

- A set of scenarios for potential demand for COVID in Scottish Borders has been developed based on Imperial College paper
- The model covers Hospital beds and ICU (Critical Care) beds

Background

- To date, planning has been based on worst case scenarios that are potentially unachievable.
- It is unclear when we will hit peak activity, which affects planning assumptions

Assessment

- We have created three scenarios for likely daily bed demand.
- These use the pandemic flu modelling but based over the expected time period (20 weeks) and impact assumptions within the Imperial College paper
- We have modelled 3 scenarios
    - Scenario 1: Do Nothing scenario. This assumes an 80% population infection rate over the 20-week period and no impact from mitigation or suppression measures
    - Scenario 2: Best-case scenario. This is extrapolated from an assumption that suppression measures will reduce infection rate to 15% of population during this period (this is a higher % population than Imperial have modelled)
    - Scenario 3: Mid-point scenario. This is simply the 20 week curve modelled for 50% population infection rate.

  Length of stay assumptions are based on the Imperial paper assumptions:

    - 8 days LoS for non-ICU patients
    - 6 days non-ICU and 10 days ICU LoS for ICU patients

  Split of beds is also based on Imperial assumptions:

    - 30% of admissions require ICU
    - 0.9% death rate for infected cases
    - We have not adjusted for age and gender

The doubling time for the Imperial paper is 5 days (equates to 1.15 daily rate) and this is therefore factored into the scenarios.

We have also reviewed the Lothian model with Colin Briggs, who has modelled for Borders current case numbers. The Lothian model only predicts to 13th April currently and the trajectory for Borders is based on

last 5 days actual positive patients, which equates to a 1.12 daily increase rate (very close to Imperial assumptions) ,

Our modelled requirements to 13th April based on Lothian model are therefore

	Worst case - 1.226 daily rate	Scotland rate – 1.14 daily rate	Lothian best rate – 1.108
Hospital Beds	169	27.8	12.9
ICU beds	77	19.4	10.7

The impact of the introduction of suppression measures on 23rd March are likely to impact 14 days later (i.e., 7th April). Imperial paper suggests 5 days from symptoms to hospitalisation, therefore we could expect to see a reduction in hospital admissions from 12th April. We will not be able to assess the impact of this for between 3 and 5 days (15th and 17th April). Impact on ITU would be felt on 19th April.

Internal hospital surge capacity is approximately 150 beds.

Lothian model: (Average Daily rate of 1.15), the hospital demand at these points will be:

	Hospital beds	ICU beds
13th April	79	19.4
15th April	102	25.2
17th April	133	32.8
19th April		42.6

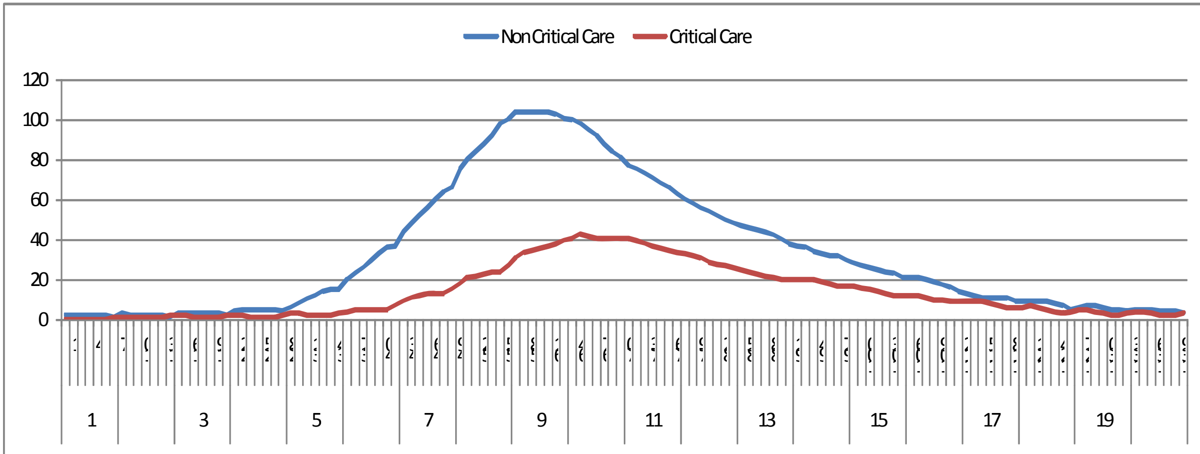
Borders model: Using Borders scenarios, the hospital demand at these points will be:

	Hospital beds			ICU beds		
	15%	50%	80%	15%	50%	80%
13th April	12	33	55	2	5	6
15th April	15	44	71	2	7	10
17th April	20	62	98	4	9	14
19th April				5	12	19

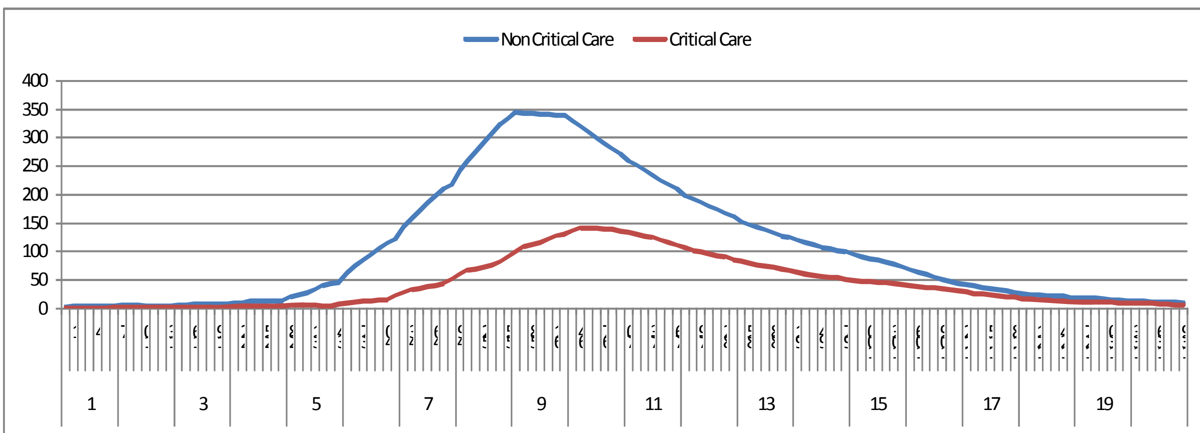
Beyond these points, we can expect to see impact of suppression measures. We currently do not have indications of the expected impact of these measures. Our current model therefore is based on variable % infection rates and indicates the following potential Borders demand;

NB: Week 2 = w/c 20th March, week 9 = w/c 9th May

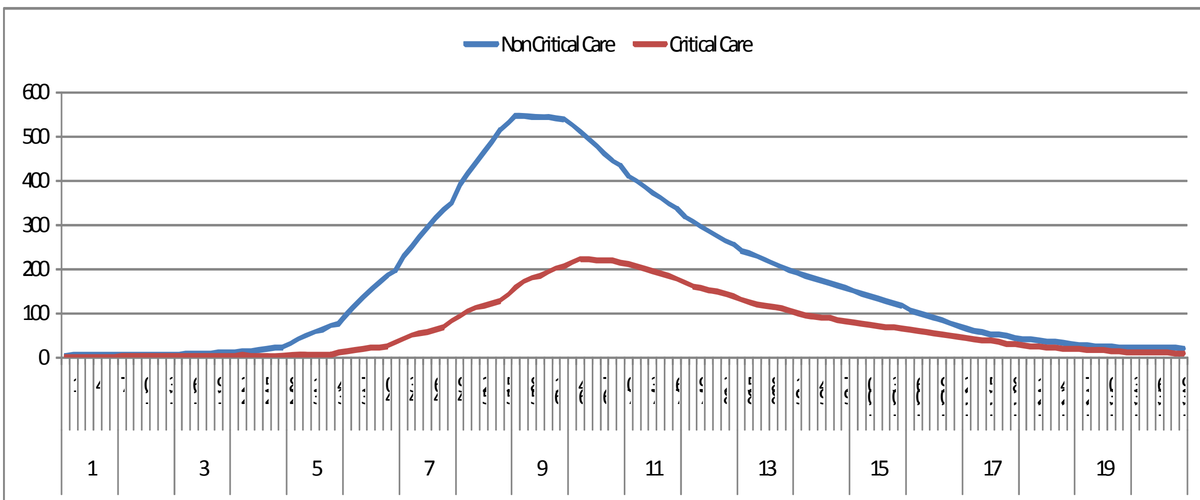
15% infection rate



50% infection rate



80% infection rate



Recommendation: We have been asked to submit our modelling methodology as above. Guidance is required as to whether we should continue to utilise this methodology in the planning of our services or whether we should be working to different assumptions.

Appendix 2

DD Trajectory 18th March to 7th April

29-Mar	30-Mar	31-Mar	01-Apr	02-Apr	03-Apr	04-Apr	05-Apr	06-Apr	07-Apr
4	4	3	3	2	2	1	1	1	0
10	9	8	7	6	5	4	3	2	0
5	4	4	3	3	2	2	1	1	0
19	**17**	**15**	**13**	**11**	**9**	**7**	**5**	**4**	**0**

Appendix 3

NHS BORDERS COVID 19 PANDEMIC COMMITTEE (NHSB C19 PC)

Membership

Chair: NHSB Chief Executive or Deputy (On Call Executive Director)

Members: Board Executive Team *
Clinical Board Representatives (1 x BGH, MH&LD and P&CS)
Corporate Services Representative
Social Work / SB Cares representative
Consultant Microbiologist
Infection Control Manager
Associate Director of Workforce **
Resilience Manager
Communications Manager

Scottish Ambulance Service - Area Service Manager Borders
Workforce huddle representative

* E&F issues to be covered by Director of Finance
* IM&T issues to be covered by Director of Strategic Change & Performance
* OHS issues to be covered by Director of Workforce
** Due to part time Director of Workforce an Associate Director will be required to attend to ensure continuity.

Purpose

The purpose of the NHSB C19 PC is to operationally oversee and manage the response of NHS Borders to the COVID 19 Pandemic.

Aims

In managing the response the main aims that will underpin the work of the Team are:

1. Reduce overall morbidity and mortality from Covid 19.
2. Minimise transmission by optimising infection control and other public health measures across services
3. Maximise service capacity across Health & Care services to respond to the treatment needs of the population
4. Maintain other essential (non-COVID 19) Health & Care services for patients and clients
5. Minimise the impact on Health & Care staff and ensure, whenever possible that the risk to staff is minimised
6. Provide accurate, consistent, timely, authorative and up to date information to professionals, the public and the media.
7. Minimise the overall impact on daily life in the Borders and the consequent economic loss.
8. Ensure a debrief and lessons learnt process is carried out at the appropriate time

Please see Appendix 1 for the Roles and Responsibilities of the NHSB C19 PC

LOGISTICS

- The NHSB C19 PC will normally meet in the Incident Room (Lecture Theatre), Education Centre, BGH (or virtually using digital / telephone as available)
- Administrative support, minute taking will be provided by corporate services
- The NHSB C19 PC will normally meet on a daily basis at 11am Mon to Sun
- Substructure of the NHSB C19 PC is provided at appendix 2
- Standing agenda of the NHSB C19 PC is provided at appendix 3

Appendix 1

NHSB C19 PC ROLES AND RESPONSIBILITIES

All members of NHSB C19 PC are expected to:

- Liaise closely with their own staff, department and area to ensure a cascade of

information flows from and to NHSB C19 PC
- Report on the staffing situation within their own area and how their service is coping with demand
- Implement NHSB C19 PC decisions
- Ensuring appropriate deputising arrangements are in place for attendance / input at the NHSB C19 PC

CE or On Call Executive
- Establish and Chair meetings
- Direct and co-ordinate the Health & Care response
- Ensure that each member of the NHSB C19 PC understands his/her role and responsibilities
- Ensure that the Borders Health & Care response is compatible and integrated with that of Scottish Borders Council, local community planning partners and with SG and HPS national policies

Director of Public Health
- Collate information on the epidemiology and the spread of the pandemic and its local impact
- Communicate with SG and HPS
- Produce a report of the outbreak in consultation with EoSRRP and the NHSB C19 PC

Microbiologist
- Advise on the specimens that should be taken and the laboratory tests required for investigation of Covid-19 and its infective complications
- Advise on the collection and transportation of specimens
- Advise on the management and treatment of patients in conjunction with the Infectious Diseases Physicians / Senior Clinicians
- Liaise with specialist agencies such as HPS and Reference Laboratories as required
- ECOS system (HPS/NSS database across Scotland)

Infection Control Manager
- Ensure advice is available to the NHSB C19 PC on procedures to limit the spread of infection
- Ensure advice is available to the NHSB C19 PC on infection control in Acute Care and Primary Care settings
- Report to the NHSB C19 PC on the effective implementation of the infection control measures
- Monitor the effectiveness of infection control procedures and identify potential hazardous practices
- Ensure advice on the need for protective clothing and/or disposable equipment
- Ensure advice on the need for Personal Protective Equipment (PPE)
- Ensure appropriate training is in place for key staff

Clinical Board & Corporate Services Representatives

- Ensure that the decisions agreed by the NHSB C19 PC are implemented including the redeployment of staff and resources as necessary
- Report on availability of beds, staffing equipment and drugs
- Develop and implement agreed plans within their Clinical Board
- Ensure adequate communications onsite

Chief Officer / Social Work and/or SB Cares Representative

- Coordinate the primary care and community response
- Liaison with SBCares; private care homes
- Consider alternative models of delivery as required
- Ensure effective liaison with NHS 24 and out of hours arrangements
- Report on the availability of beds, equipment and drugs in rural general and community
- Make arrangements for coping with the increased demand for Social Care in the Community
- Make arrangements to cope with increased absenteeism in Social Care Staff in Residential Care Homes, Day Centres, Meals-on-Wheels Services, Home Help Services or other as appropriate
- hospitals

NHS Resilience Officer

- Manage the control room within NHS Borders on behalf of NHSB C19 PC
- Ensure adequate mortuary provision for those dying in hospital
- Arrange the provision of any helplines required
- Assist the Chair of the NHSB C19 PC to ensure all aspects of the contingency plan are followed
- Liaise with EPOs of other Category 1 Responders and SG Resilience Team

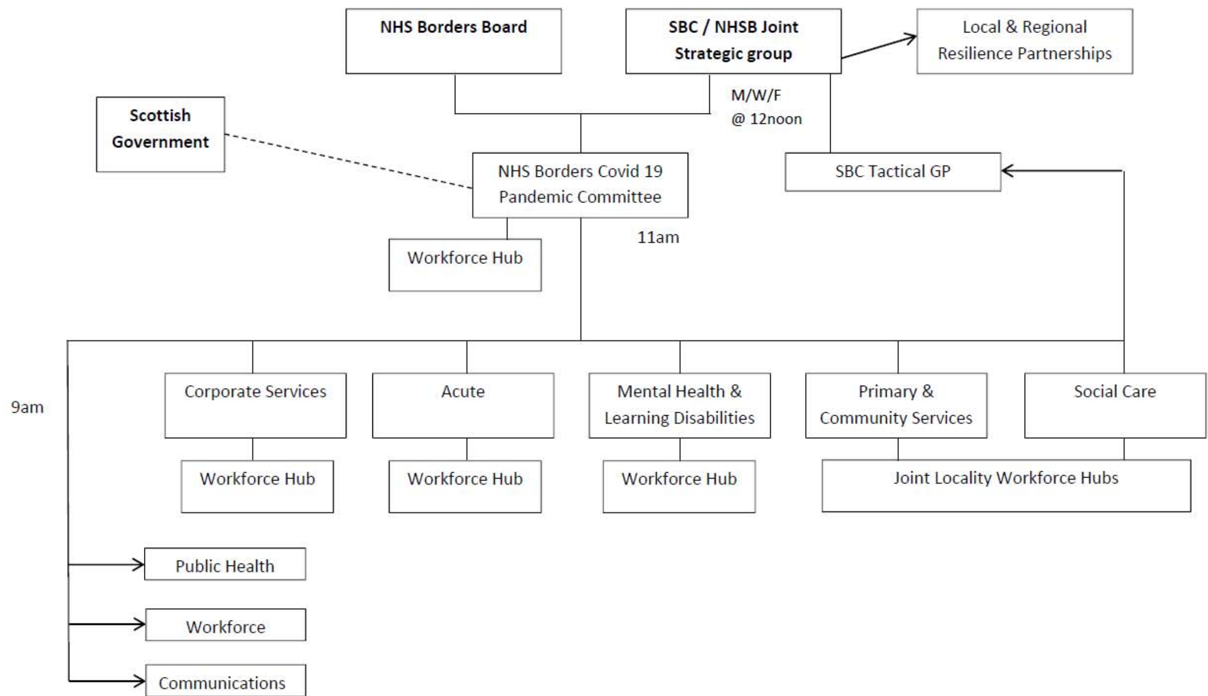
Communications Manager

- Be responsible for all formal communications with the general public, press and staff
- Acts as key link to SBC Communications team to ensure joint and consistent messaging where applicable

Scottish Ambulance Service – Area Service Manager

- Liaise with SAS and ensure patient transport services and emergency response services are maintained
- Update NHSB C19 PC on current position and expedite issues for decision to the committee

Appendix 2



Appendix 3

NHS BORDERS COVID 19 PANDEMIC COMMITTEE (NHSB C19 PC)

Date:

Time: 11.00am

Venue: Lecture Theatre, Education Centre

(Dial in arrangements Tel: 08444 737373 PIN 851857#)

AGENDA

Item	Title	Lead
1	Daily summary/ any significant shift in national position	
2	Primary & Community Services - Primary care - Community hospitals - Workforce -	
3	Social Care / SBC cares - Care homes - Community - Workforce	
4	Acute - inpatient - ITU - Workforce	
5	Mental Health & LD Services	

	- Community - Inpatients	
6	Corporate Services - Workforce -	
7	Communication	
8	Issues from other agencies/LRP Liaison: • SAS • Other	
9	National position – issues to note	
10	Date and time of next meeting	

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