COVID-19 : Critical Care and Acute Care Hospitalization Modelling

March 27, 2020

Technical briefing

BRITISH COLUMBIA

Focus of Presentation

- Starts with an assessment of growth of covid-19 cases in B.C. compared with growth rates in two other jurisdictions: Hubei and Northern Italy (cases and hospitalizations). What does this tell us?
- Applies these scenarios to the B.C. population and assesses critical and non-critical hospitalization requirements based on three scenarios against B.C.'s critical care and hospital capacity.
  - Hubei-type epidemic (based on daily newly reported cases).
  - Northern Italy-type epidemic – Case based (based on daily newly reported cases; updated to most readily available data).
  - Northern Italy-type epidemic – Hospital admission based (based on reported COVID-19 hospitalization data from Italy).
- Provides a range of modelling scenarios for the purpose of estimating and then planning for critical care needs and non-critical acute care needs for managing COVID-19 cases in B.C.

Who did this work?

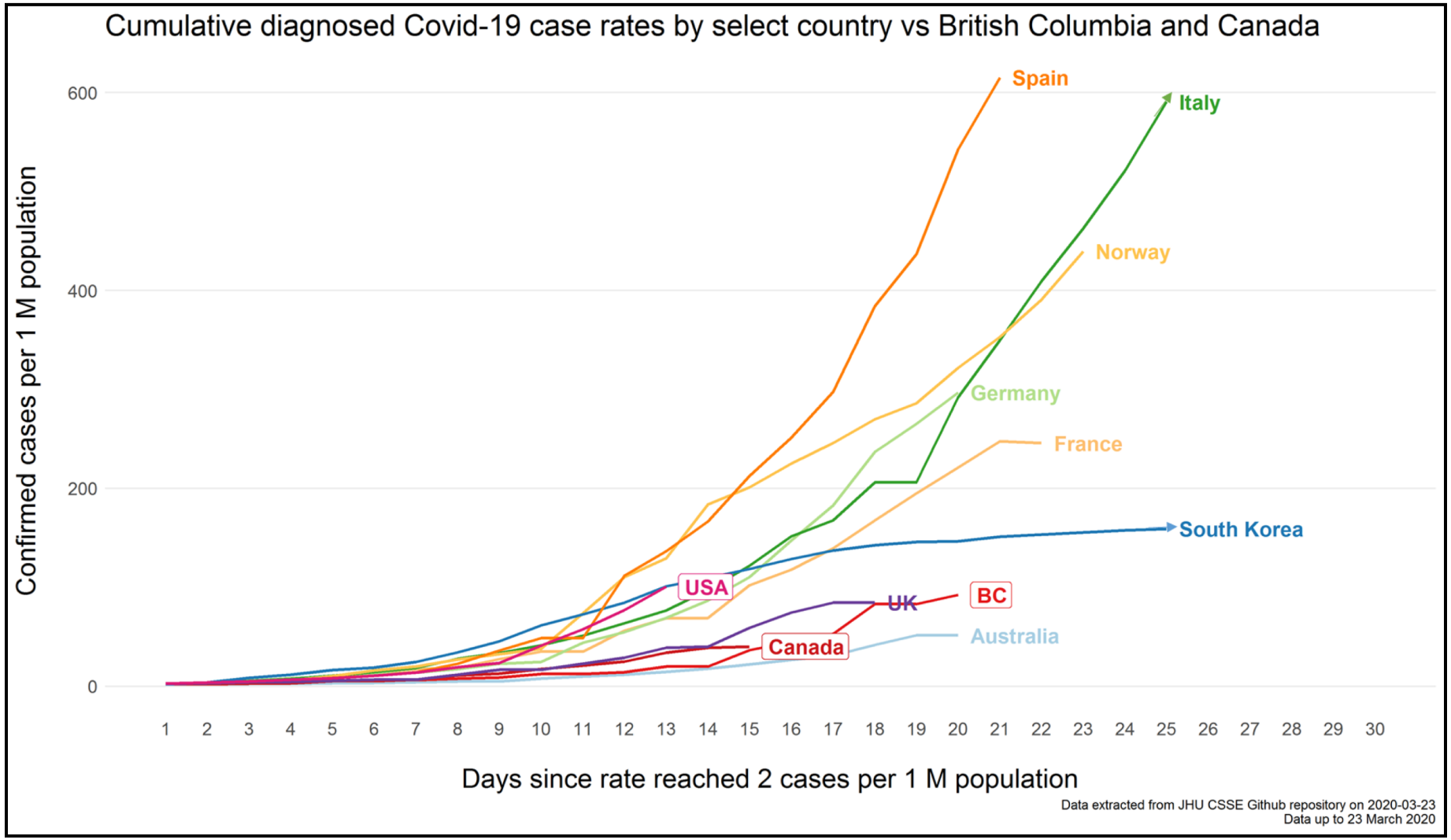
- A Provincial Critical Care Working Group - a provincewide group of over 20 medical directors, executive leads and clinical specialists responsible for ICUs and high acuity units.
- An Epidemic Modelling team from BCCDC.
- An Operational Capacity Modelling team from the PHSA.
- Additional clinical advice and oversight provided by the Provincial Clinical Policy leadership at the PHSA.

What do we know?

What we know about other populations around the globe? And how does this compare to what is happening in B.C.?

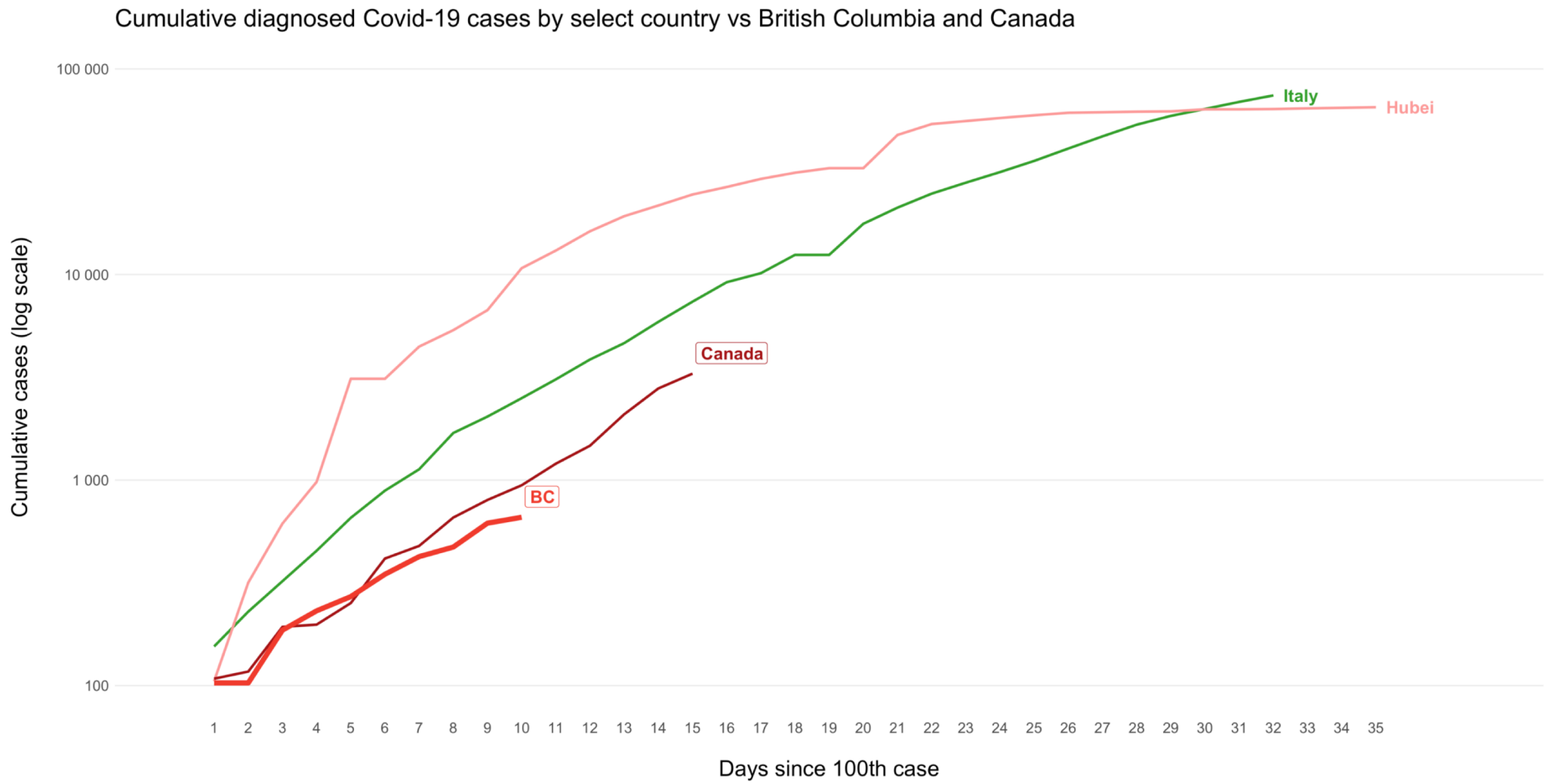
- The BCCDC continues to track and model the global, Canada and B.C. case rates on an ongoing basis.
- B.C.’s rate of growth is being positively impacted by the public health measures adopted over the past few weeks.

COVID-19 Case Rate Comparison

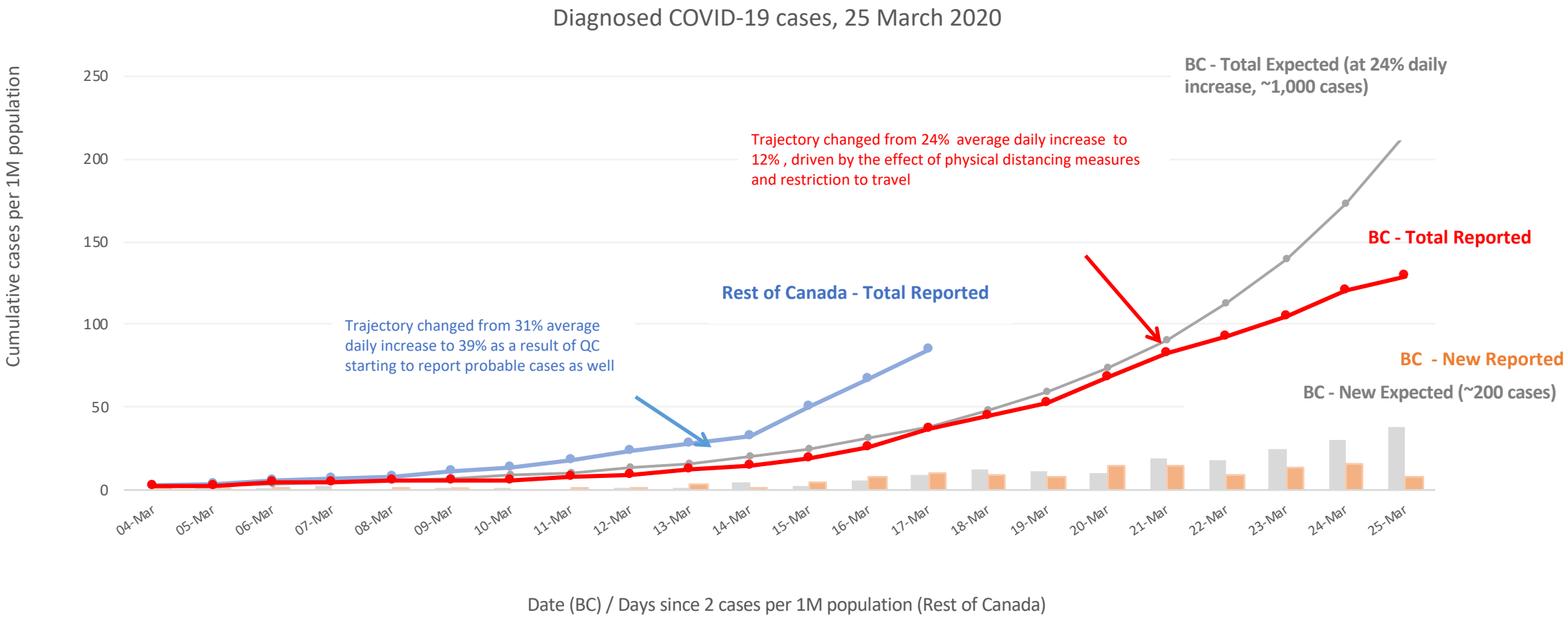


Note: As per March 23, 2020. This represents cumulative/total cases; not new/incident cases per day.

COVID-19 Case Rate Comparison

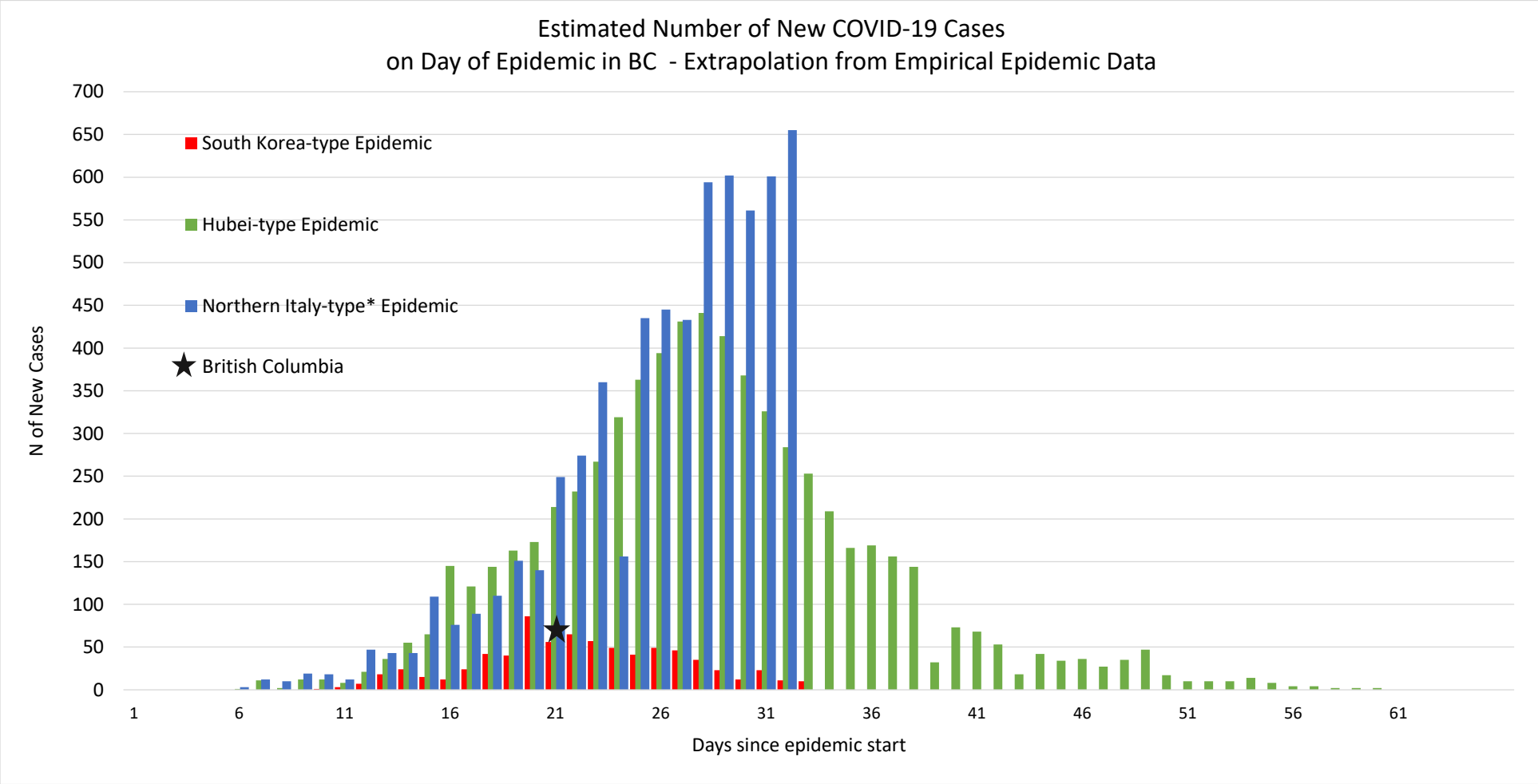


COVID-19 Cases in B.C.



Rates on 25 March: Total reported = 130 cases per 1M population; Expected = 215.

Reference Epidemic Scenarios and B.C.



Note: Based on March 22, 2020 data available. Italian epidemic in progress has not reached its peak.

B.C.’s Capacity to Meet Demand

First, focus on current capacity with respect to critical care spaces/capacity and current capacity with respect to ventilators for critically ill patients.

- Health authorities identified 17 “primary COVID” hospital care sites but also planning to use as needed “all hospital sites” to meet demand.
- Assuming that all children requiring ICU (expected to be a very low number) would be cared for at BC Children’s Hospital.
- Assumes that a phased approached would be used starting with using intensive care units and high acuity units then use auxiliary ventilator beds.

B.C.’s Capacity to Meet Demand

Second, focus on current hospital bed capacity for less acute patients requiring hospital care.

- Identify hospital bed capacity available to meet Covid-19 demand.
- Plan for ability to add more bed capacity off-site from hospitals for less acute medical and surgical inpatients to open up additional capacity for Covid-19 patients in hospitals with ready access to critical care.

B.C.'s Critical Care Capacity

Total Possible Critical Care Beds - Primary COVID Sites

HA	Vent Capable			Other Vent Capable		Total Vent Capable	Non-Vent Capable		
	ICU	HAU	Total	Phase 2[1]	Phase 3[2]		ICU	HAU	Total
IH	55	19	74	33	44	151			
FH	52	42	94	26	43	163			
VCH/PHC	63	26	89	75	26	190	6		6
VIHA	20	19	39	48	59	146			
NH	10	7	17	0	10	27			
PHSA[3]	28		28	0	0	28			
Total	**228**	**113**	**341**	**182**	**182**	**705**	**6**		**6**

Notes:

1. Other vent capable - Phase 2 represents capacity in CSICU, CCU and PARR.
2. Other vent capable - Phase 3 represents capacity in OR and other strategies (e.g., doubling up).
3. Assumes paediatric cases could be cohorted at BCCH.

* Last updated by Provincial Critical Care Working Group on March 23, 2020.

B.C.'s Critical Care Capacity

Total Possible Critical Care Beds - All Sites

HA	Vent Capable			Other Vent Capable		Total Vent Capable	Non-Vent Capable		
	ICU	HAU	Total	Phase 2[1]	Phase 3[2]		ICU	HAU	Total
IH	55	19	74	33	51	**158**		6	**6**
FH	89	42	131	26	43	**200**			
VCH/PHC	63	26	89	75	26	**190**	6		**6**
VIHA	54		54	111	116	**281**			
NH	19	13	32	0	25	**57**		3	**3**
PHSA[3]	28		28	0	0	**28**			
Total	**308**	**100**	**408**	**245**	**261**	**914**	**6**	**9**	**15**

Notes:

1. Other vent capable - Phase 2 represents capacity in CSICU, CCU and PARR.
2. Other vent capable - Phase 3 represents capacity in OR and other strategies (e.g., doubling up).
3. Assumes paediatric cases could be cohorted at BCCH.

* Last updated by Provincial Critical Care Working Group on March 23, 2020.

B.C.’s Ventilator Capacity

Inventory of Adult Mechanical Critical Care Ventilators by Health Authority

Data Source: HEMBC (March 5, 2020); Provincial Ventilator and ECMO Inventory For the COVID-19 Surge Capacity Working Group

	Current Inventory of Critical Care Vents		
HA	**Adult critical care vents**	**Less Small Hospital Vents (assume they stay in place for Non-COVID 19 use)**	**Remaining Vent Inventory at Large Hospitals**
IH	77	25	52
VIHA	84	27	57
NH	16	7	9
VCH/PHC	150	25	125
FH	130	25	105
Total for adults:	**457**	**109**	**348**

Important to note:

- This is using adult critical care ventilator units and not spaces capable of providing ventilator care and this does not include transport, neonatal or other non-critical care ventilators. When all available ventilators are included, B.C. has more than 1200.
- An additional 120 ventilators have been ordered since this inventory was completed on March 5, 2020. As of March 24, 15 additional adult critical vents have arrived, with an additional 29 expected early next week. Also, additional critical care ventilators have been identified for loan and for refurbishment – 38 are now ready to be deployed with 19 in progress as of March 26.
- Ventilators at BC Children’s include models that could be used for adults but for planning purposes are being held for children/youth.

B.C.’s Hospital Bed Capacity

In addition to critical care bed capacity, B.C. currently has acute **medical and surgical inpatient bed capacity of 5,610** (this excludes maternity, pediatrics, mental health, rehab and palliative care beds):

- Fraser Health – **1,447**
- Interior Health – **1,007**
- Island Health – **1,424**
- Northern Health – **412**
- VCH/PHC – **1,320**

What does this mean for critical care capacity?

We have used a number of “conservative” (on the high side) assumptions to model demand:

1. Provincial rate of hospitalization for COVID-19
   - 4.7% for critical care; as of March 19, 4.4% were in ICU.
   - 13.8% for hospitalization (non-critical care); as of March 19, 11% were ever hospitalized.
   - Interior Health and Island Health will have higher percentage of critical care stays due to higher percentage of elderly population.
2. Expected time from case identification to hospital arrival: 5 days (2- 7)

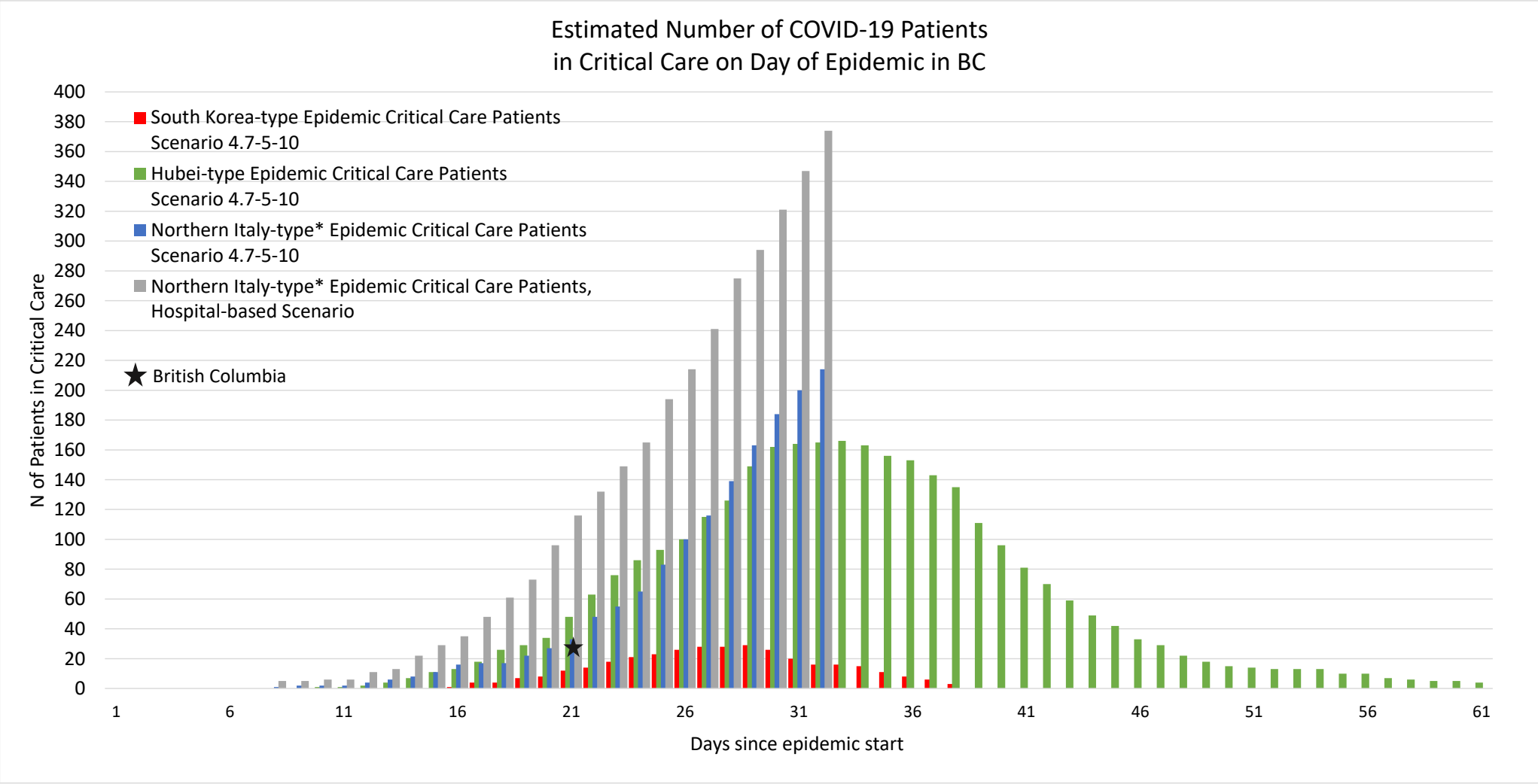
What does this mean for critical care capacity?

3. Expected median length of stay of hospitalized COVID-19 patients:
   - Critical care: 10 days (7-10)
   - Hospitalized (non-critical care): 12 days (9-15)
4. Percentage of hospitalized critical care cases ventilated: 80%
   (increased from 67% based on input from provincial Critical Care Working Group – March 20, 2020)

Summary of Scenario Assumptions

Bed Type	Scenario	% COVID-19 cases requring hospitalization	Days from case confirmation to hospital entry	Duration of stay in days
Critical Care	4.7-5-10	4.7%	5 (4-7)	10 (7-14)
Hospitalization (non-Critical Care)	13.8-5-12	13.8%	5 (4-7)	12 (9-15)

Critical Care Estimates by Day of Epidemic + Underlying Epidemic Type



Scenario 4.7-5-10 assumes that 4.7% of all COVID-19 cases will be admitted to critical care.
Critical care admissions will commence 5 days (range 4-7 days) after symptom onset; ALOS in Critical Care will be 10 days (range 7-14 days).
Note: Italian epidemic in progress and did not reach the peak.

Estimates of ICU Capacity and Ventilator Demand vs. Current Capacity

Scenario One*:

Scenario 1. Utilizing ICU capacity from primary COVID sites only, South Korea-type Epidemic, Scenario 4.7-5-10

Health Authority	Non-COVID ICU Patients Current Average Daily Census[1]	Modelled COVID-19 Critical Care Patients at Peak[1]	Total ICU Patients at Peak	ICU Capacity[2]	Capacity vs. Demand Total ICU Patients	Total Vented Patients at Peak[3]	Adult Critical Care Vent Capacity[4]	Capacity vs. Demand Ventilators
IHA	39	5	44	55	11	35	52	17
FHA	46	11	57	52	-5	46	105	59
VCH/PHC	55	7	62	69	7	50	125	75
VIHA	24	5	29	20	-9	23	57	34
NHA	9	3	12	10	-2	10	9	-1
BC Total[5]	**173**	**29**	**202**	**206**	**4**	**162**	**348**	**186**

* Following the March 27, 2020 Technical Briefing and media event, slides 18 and 21 were updated to reflect a consistent approach of using only primary COVID-19 sites for the purposes of planning.

Estimates of ICU Capacity and Ventilator Demand vs. Current Capacity

Scenario Two:

Scenario 2. Utilizing ICU capacity from primary COVID sites only, Hubei-type Epidemic, Scenario 4.7-5-10

Health Authority	Non-COVID ICU Patients Current Average Daily Census[1]	Modelled COVID-19 Critical Care Patients at Peak[1]	Total ICU Patients at Peak	ICU Capacity[2]	Capacity vs. Demand Total ICU Patients	Total Vented Patients at Peak[3]	Adult Critical Care Vent Capacity[4]	Capacity vs. Demand Ventilators
IHA	39	28	67	55	-12	54	52	-2
FHA	46	61	107	52	-55	86	105	19
VCH/PHC	55	41	96	69	-27	77	125	48
VIHA	24	27	51	20	-31	41	57	16
NHA	9	17	26	10	-16	21	9	-12
BC Total[5]	**173**	**166**	**339**	**206**	**-133**	**271**	**348**	**77**

1. Data extracted: Feb 1st to Mar 10th, 2020 ICU data only, primary COVID sites.
2. New ICU capacity bed numbers provided by provincial Critical Care Working Group (March 23, 2020).
3. Assumes 80% patients are requiring ventilation.
4. HEMBC (March 5, 2020): Provincial Ventilator and ECMO Inventory. Represents existing ventilator capacity at Primary COVID sites only and does not include ventilators that could be moved from smaller sites or the addition of new purchased ventilators.
5. Paediatric cases will be modeled and presented separately.

Estimates of ICU Capacity and Ventilator Demand vs. Current Capacity

Scenario Three:

Scenario 3. Utilizing ICU capacity from primary COVID sites only, Northern Italy- type Epidemic (Case-based), Scenario 4.7-5-10 [6]

Health Authority	Non-COVID ICU Patients Current Average Daily Census[1]	Modelled COVID-19 Critical Care Patients at Day 29[1]	Total ICU Patients at Day 29	ICU Capacity[2]	Capacity vs. Demand Total ICU Patients	Total Vented Patients at Peak[3]	Adult Critical Care Vent Capacity[4]	Capacity vs. Demand Ventilators
IHA	39	38	77	55	-22	62	52	-10
FHA	46	82	128	52	-76	102	105	3
VCH/PHC	55	55	110	69	-41	88	125	37
VIHA	24	36	60	20	-40	48	57	9
NHA	9	23	32	10	-22	26	9	-17
BC Total[5]	**173**	**215**	**388**	**206**	**-182**	**310**	**348**	**38**

Estimates of ICU Capacity and Ventilator Demand vs. Current Capacity

* Following the March 27, 2020 Technical Briefing and media event, slides 18 and 21 were updated to reflect a consistent approach of using only primary COVID-19 sites for the purposes of planning.

Scenario Four*:

Scenario 4. Utilizing ICU capacity from primary COVID sites only[1], Northern Italy-type Epidemic (Hospital-based)[7]

Health Authority	Non-COVID ICU Patients Current Average Daily Census[2]	Modelled COVID-19 Critical Care Patients at Day 29	Total ICU Patients at Day 29	ICU Capacity[3]	Capacity vs. Demand Total ICU Patients	Total Vented Patients at Peak[4]	Adult Critical Care Vent Capacity[5]	Capacity vs. Demand Ventilators
IHA	39	63	102	55	-47	82	52	-30
FHA	46	137	183	52	-131	146	105	-41
VCH/PHC	55	92	147	69	-78	118	125	7
VIHA	24	60	84	20	-64	67	57	-10
NHA	9	38	47	10	-37	38	9	-29
BC Total[6]	**173**	**374**	**547**	**206**	**-341**	**438**	**348**	**-90**

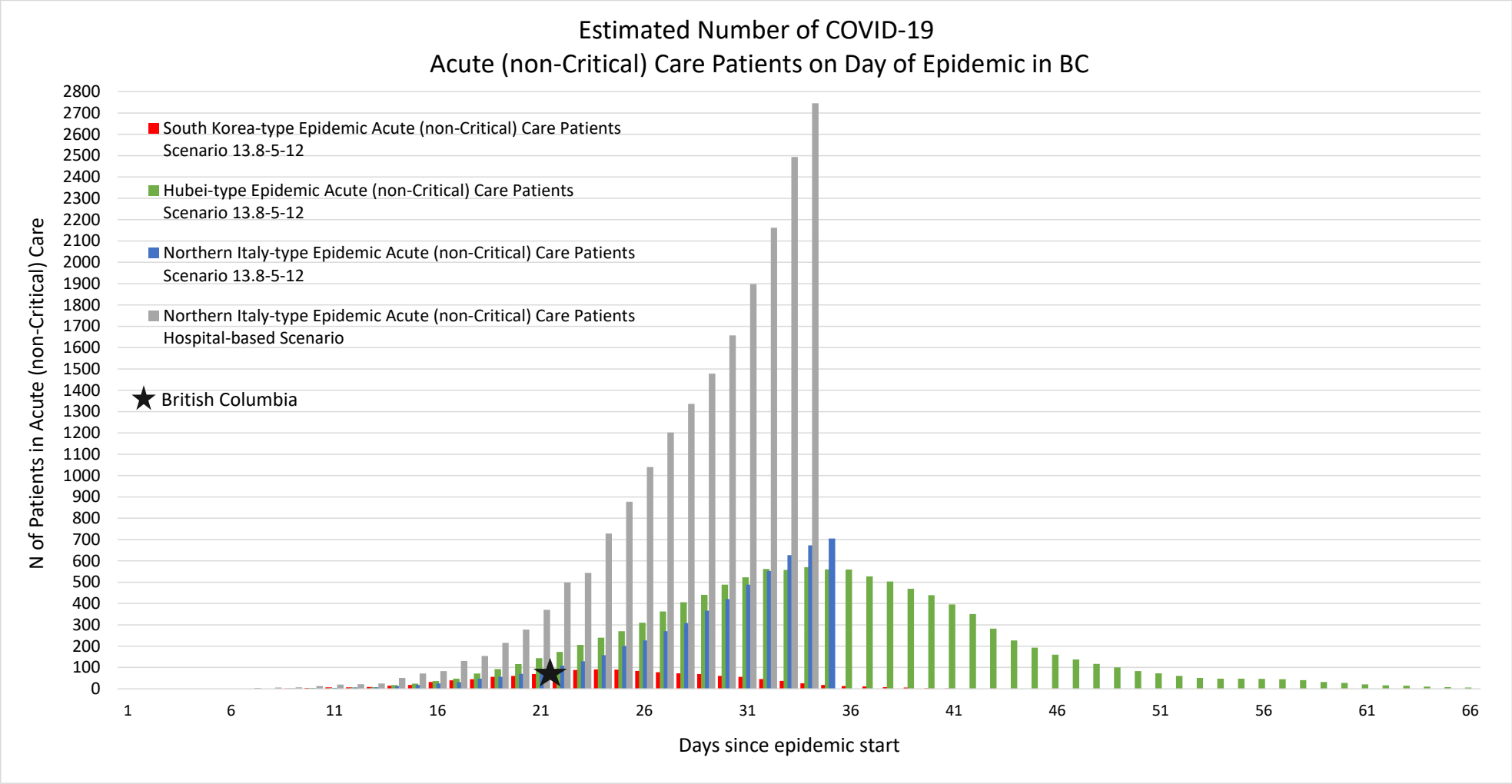
1. For the purposes of consistency with Scenarios 1-3, the critical care capacity presented in this table includes ICU capacity from primary COVID sites; however, in the event of Scenario 4, **all critical capacity (not only ICU's) and all sites, as well as all available ventilators, including those newly purchased and refurbished, would be deployed.**

2. Data extracted: Feb 1st to Mar 10th, 2020 ICU data only, primary COVID sites.
3. New ICU capacity bed numbers provided by provincial Critical Care Working Group (March 23, 2020).
4. Assumes 80% patients are requiring ventilation.
5. HEMBC (March 5, 2020): Provincial Ventilator and ECMO Inventory. Represents existing ventilator capacity at Primary COVID sites only and does not include ventilators that could be moved from smaller sites or the addition of new purchased ventilators.
6. Paediatric cases will be modeled and presented separately.
7. Northern Italian epidemic is in progress, peak unknown.

Conclusions on ICU and Ventilator Capacity

- Using the likely scenario of below or at a Hubei epidemic level using ICU and high acuity unit bed capacity along with vent capacity, looks reasonable focused on using the 17 primary Covid-19 care sites.
- If B.C. was to move to a Northern Italy trajectory, B.C. would have to use all sites to meet bed demand and implement increased transportation of patients between sites.

Acute Care Estimates by Day of Epidemic + Underlying Epidemic Type



Scenario 13.8-5-12 assumes that 13.8% of all COVID-19 cases will be admitted to hospital (non-critical care); hospital admissions will commence 5 days (range 2-7 days) after case identification; ALOS in hospital (non-critical care) will be 12 days (range 9-15 days).
Note: Italian epidemic in progress and did not reach the peak.

Estimates of Acute Care (non-critical) Demand vs. Current Capacity

Scenario One:

Scenario 1. Utilizing Acute (non-critical) Care capacity from all sites, South Korea-type Epidemic, Scenario 13.8-5-12

Health Authority	Hospitalized (non-critical care) Current Average Daily Census[1]	Modelled COVID-19 Hospitalized (non-critical care) Patients at Peak	Total Hospitalized (non-critical care) Patients at Peak	Acute (non-critical) Care Capacity (funded)[2]	Capacity vs. Demand
IHA	897	17	914	1,007	93
FHA	1,206	34	1,240	1,447	207
VCH/PHC	962	22	984	1,320	336
VIHA	1,182	15	1,197	1,424	227
NHA	395	6	401	412	11
BC Total[3]	**4,642**	**90**	**4,732**	**5,610**	**878**

Estimates of Acute Care (non-critical) Demand vs. Current Capacity

Scenario Two:

Scenario 2. Utilizing Acute (non-critical) Care capacity from all sites, Hubei-type Epidemic, Scenario 13.8-5-12

Health Authority	Hospitalized (non-critical care) Current Average Daily Census[1]	Modelled COVID-19 Hospitalized (non-critical care) Patients at Peak	Total Hospitalized (non-critical care) Patients at Peak	Acute (non-critical) Care Capacity (funded)[2]	Capacity vs. Demand
IHA	897	105	1,002	1,007	5
FHA	1,206	221	1,427	1,447	20
VCH/PHC	962	128	1,090	1,320	230
VIHA	1,182	95	1,277	1,424	147
NHA	395	33	428	412	-16
BC Total[3]	**4,642**	**571**	**5,213**	**5,610**	**397**

1. Census data was extracted on or after midnight of March 22, 2020 and may reflect a small percentage of COVID patients occupying inpatient non-critical care beds. As well, noted that reductions in elective admissions already underway. Other med/surg (e.g., paediatrics, palliative, maternity), Critical care and Other beds (mental health, rehab) excluded from daily census calculation. Included in the daily census is med/surg beds only.

2. Inpatient (non-critical care) capacity includes funded and unfunded beds as reported by the health authorities on March 23, 2020. Unfunded beds represent an estimate of available beds as of March 23, 2020. The number of unfunded beds available may change over time and does not reflect staffing available to care for patients in these beds. Included in the capacity calculation is med/surg beds only.

3. Peadiatric cases will be modeled and presented separately.

Estimates of Acute Care (non-critical) Demand vs. Current Capacity

Scenario Three:

Scenario 3. Utilizing Acute (non-critical) Care capacity from all sites, Northern Italy-type Epidemic (Case-based)[4], Scenario 13.8-5-12

Health Authority	Hospitalized (non-critical care) Current Average Daily Census[1]	Modelled COVID-19 Hospitalized (non-critical care) Patients at Day 29	Total Hospitalized (non-critical care) Patients at Day 29	Acute (non-critical) Care Capacity (funded)[2]	Capacity vs. Demand
IHA	897	130	1,027	1,007	-20
FHA	1,206	273	1,479	1,447	-32
VCH/PHC	962	158	1,120	1,320	200
VIHA	1,182	117	1,299	1,424	125
NHA	395	41	436	412	-24
BC Total[3]	**4,642**	**704**	**5,346**	**5,610**	**264**

Estimates of Acute Care (non-critical) Demand vs. Current Capacity

Scenario Four:

Scenario 4. Utilizing Acute (non-critical) Care capacity from all sites, Northern Italy-type Epidemic (Hospital-based)[4]

Health Authority	Hospitalized (non-critical care) Current Average Daily Census[1]	Modelled COVID-19 Hospitalized (non-critical care) Patients at Day 29	Total Hospitalized (non-critical care) Patients at Day 29	Acute (non-critical) Care Capacity (funded)[2]	Capacity vs. Demand
IHA	897	507	1,404	1,007	-397
FHA	1,206	1,065	2,271	1,447	-824
VCH/PHC	962	616	1,578	1,320	-258
VIHA	1,182	456	1,638	1,424	-214
NHA	395	160	555	412	-143
BC Total[3]	**4,642**	**2,746**	**7,388**	**5,610**	**-1,778**

1. Census data was extracted on or after midnight of March 22, 2020 and may reflect a small percentage of COVID patients occupying inpatient non-critical care beds. As well, noted that reductions in elective admissions already underway. Other med/surg (e.g., paediatrics, palliative, maternity), Critical care and Other beds (mental health, rehab) excluded from daily census calculation. Included in the daily census is med/surg beds only.

2. Inpatient (non-critical care) capacity includes funded and unfunded beds as reported by the health authorities on March 23, 2020. Unfunded beds represent an estimate of available beds as of March 23, 2020. The number of unfunded beds available may change over time and does not reflect staffing available to care for patients in these beds. Included in the capacity calculation is med/surg beds only.

3. Peadiatric cases will be modeled and presented separately.

4. Northern Italian epidemic is in progress, peak unknown.

Conclusions on Inpatient Acute Care Capacity

- Using the likely scenario of below or at a Hubei epidemic level using inpatient medical and surgical beds, capacity looks good focused on using all sites.
  - This has been enabled in large part by the decision to defer scheduled surgeries, which opened up significant surge capacity across hospitals in B.C. over the past week.
- If B.C. was to move to an Northern Italy “hospitalized” trajectory, B.C. would use all sites and bed capacity off-site from hospitals for less acute medical and surgical inpatients to open up additional capacity for Covid-19 patients in hospitals with ready access to critical care.

Health Authority Response

- B.C. health authorities are using potential scenarios regarding demand/capacity to plan for a cascading response based on demand as it emerges over the coming four to six weeks.

1. Critical Care Demand Against Capacity

Summary of Additional Bed Capacity and Surplus/Deficit for Critical Care Patients, Four Scenarios

		Additional Bed Capacity Required for Modelled COVID-19 Critical Care Patients at Peak*			
		South Korea-type Epidemic, Scenario 13.8-5-12	Hubei-type Epidemic, Scenario 4.7-5-10	Northern Italy-type Epidemic (Case-based), Scenario 4.7-5-10	Northern Italy-type Epidemic (Hospital-based)
Modelled COVID-19 Critical Care Patients at Peak*		29	166	215	374
Non-COVID ICU Patients Current Average Daily Census of Primary COVID Sites[1]		173	173	173	173
Total ICU Patients at Peak*		202	339	388	547
Potential Capacity	Number of Beds	Demand vs. Potential Capacity			
ICU Primary COVID Sites[2]	206	4 ▲	-133 ♦	-182 ♦	-341 ♦
AND 50% HAU[2] Primary COVID Sites[3]	263	61 ●	-76 ♦	-125 ♦	-284 ♦
AND 85% CCU/CSICU/PARR Primary COVID Sites[3]	418	216 ●	79 ●	30 ▲	-129 ♦
AND 50% OR Primary COVID Sites AND 50% All Sites ICUs[3]	666	464 ●	327 ●	278 ●	119 ●

*Northern Italian epidemic is in progress, peak unknown.

1. Data extracted: Feb 1st to Mar 10th, 2020 ICU data only, primary COVID sites.
2. New Critical Care capacity bed numbers provided by provincial Critical Care Working Group (March 23, 2020).
3. For purposes of modelling available capacity has been estimated as 50% of HAU, 85% of CSICU, CCU, PARR (through cancellations of elective surgeries), and 50% of remaining capacity (ORs and ICU of non-Primary-COVID sites)

2. Acute Inpatient Care Demand Against Capacity

Summary of Additional Bed Capacity and Surplus/Deficit for Acute Care Patients, Four Scenarios

		Additional Bed Capacity Required for Modelled COVID-19 Acute (non-Critical) Care Patients at Peak*			
		South Korea-type Epidemic, Scenario 13.8-5-12	Hubei-type Epidemic, Scenario 13.8-5-12	Northern Italy-type Epidemic (Case-based), Scenario 13.8-5-12	Northern Italy-type Epidemic (Hospital-based)
Modelled COVID-19 Acute Care Patients at Peak*		90	571	704	2,746
Non-COVID Acute Care Patients Current Average Daily Census of Med/Surg, All Sites[1]		4,642	4,642	4,642	4,642
Total Acute Care Patients at Peak*		4,732	5,213	5,346	7,388
Potential Capacity (All Sites)	Number of Beds	Demand vs. Potential Capacity			
Med/Surg Funded[2]	5,610	878 ●	397 ▲	264 ▲	-1,778 ♦
AND 100% Unfunded Med/Surg AND 40% Funded Med/Surg Other[3]	6,944	2,212 ●	1,731 ●	1,598 ●	-444 ♦
AND Off Site/Community-based (Additional 500 Beds)	7,444	2,712 ●	2,231 ●	2,098 ●	56 ▲

*Northern Italian epidemic is in progress, peak unknown.

1. Census data was extracted on or after midnight of March 23, 2020 and may reflect a small percentage of COVID patients occupying inpatient non-critical care beds. As well, noted that reductions in elective admissions already underway. Other med/surg (e.g., paediatrics, palliative, maternity), Critical care and Other beds (mental health, rehab) excluded from daily census calculation. Included in the daily census is med/surg beds only.

2. Acute (non-critical care) capacity includes funded Med/Surg beds only as reported by the health authorities on March 23, 2020.

3. Acute (non-critical care) capacity includes funded and unfunded beds as reported by the health authorities on March 23, 2020. Unfunded beds represent an estimate of available beds as of March 23, 2020. The number of unfunded beds available may change over time and does not reflect staffing available to care for patients in these beds. Included in the capacity calculation is med/surg and other med/surg (e.g. pediatric, maternity, palliative) beds. Assumes some decanting from HAU to med/surg as well as non-covid management of paediatrics, maternity and palliative.

4. Additional capacity off-site or through community based services (estimated at 500 beds) will be required to provide sufficient capacity in case of a severe and rapid epidemic.

Considerations and Next Steps

- A range of scenarios are presented based on evidence from other jurisdictions and a set of grounded clinically oriented assumptions.
- As the days of the epidemic pass here in B.C., it will become more clear what curve will occur for our acute care and ICU needs. The impact of public health measures in B.C. and Canada should influence B.C. following a lower curve. Planning is going ahead based on a higher curve.
- These scenarios are being used by health authorities for planning a cascading response. It will require them and their clinical leadership to try to find a balance between meeting the needs of potential COVID-19 patients AND reducing the risk of unintended consequences on other non-Covid-19 patients needing access to acute and critical care.

- Health authorities now focused on putting in place, with their clinical and support staff, a four to six week staffing schedule based on their planning:
  - Redeployment and any required refresh training of key clinical staff to support critical care;
  - Redeployment of staff to support non-acute inpatient Covid-19 care;
  - Accessing additional staff to support both non-acute surgical and medical care (including re-registrants, trainee health-care professionals);
  - Enhancing primary and community care capacity to support and monitor Covid-19 patients in self-isolation;
  - Maintaining primary and community care to meet health needs of non-Covid-19 patients; and
  - Providing support to clinical care professionals throughout the surge.
- Health authorities are also focused on implementing measures to best use personal protective equipment based on existing at-hand and warehouse supplies.
- The province and federal government are also focused on securing additional needed PPE in the coming week and throughout the months of April and May.

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March 27, 2020

Technical briefing

BRITISH COLUMBIA