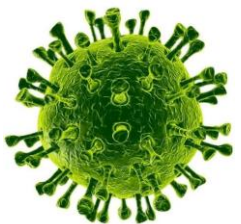


BC's—Approach to Surgical Procedures during COVID-19

Kelly Mayson
May 24th, 2020



COVID-19



Laboratory Confirmed Cases

 **2,507**

Currently Hospitalized

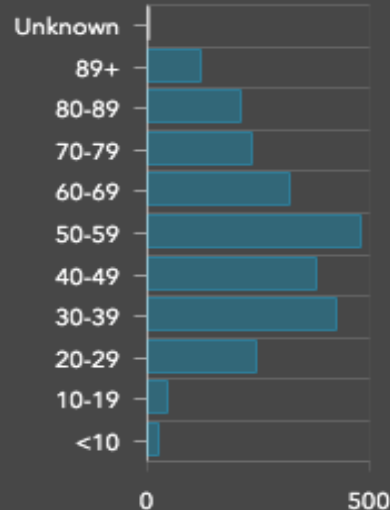
 **41**

Total to Date: 488

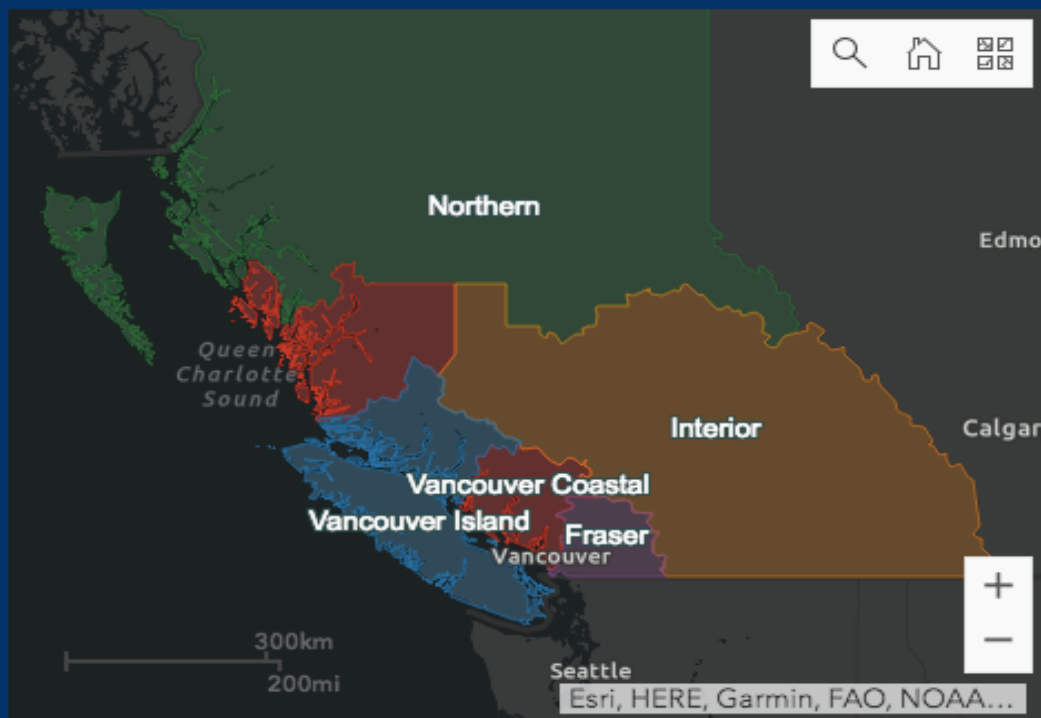
Currently Admitted to ICU

 **8**

Distribution by Age



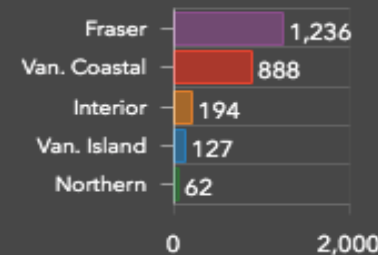
Age Sex



New Cases

 **18**

Total Cases Reported by Health Authority



Cases

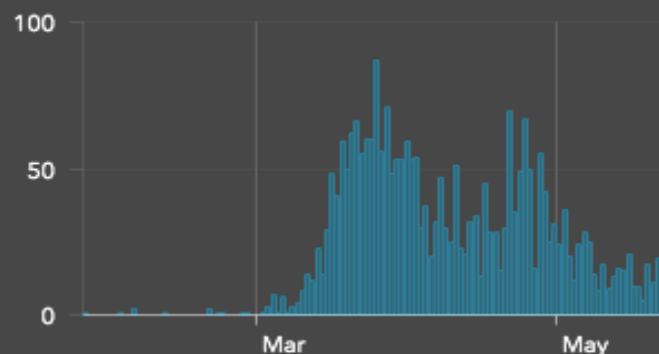
Confirmed Deaths

 **155**

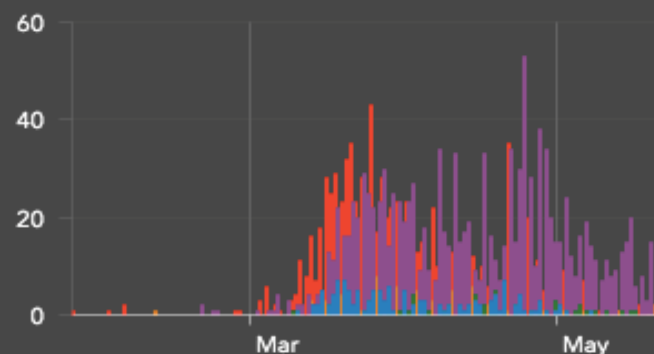
Recovered

 **2,042**

B.C. Cases Reported to Public Health by Day



Health Authority Cases Reported to Public Health by Day



Note: Y-axis varies between graphs.

Cases by Day

New Tests

Turn-Around

Positivity

Total Tests
129,942

B.C. Testing Rate
21,660
People per 1,000,000

New Tests
1,919

Canadian Testing Rate
37,288
People per 1,000,000

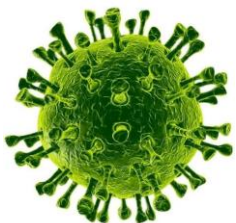
Terms of use, disclaimer and limitations of liability

Although every effort has been made to provide accurate information, the

Incident and prevalent cases of COVID-19 in hospital and critical care across VCH/PHC

Reporting from 3/12/2020 to midnight of 5/21/2020

	New Cases (Since Yesterday)	Today's Total Cases	Cumulative Cases
Hospitalized Patients	0 New hospitalized cases	17 Total hospitalized cases	158 Cumulative total hospitalized cases
Critical Care Patients	0 New critical care cases	4 Total critical care cases	71 Cumulative total critical care cases
Critical Care Patients on Ventilator	0 New ventilation cases	4 Total ventilation cases	43 Cumulative total ventilation cases
Discharge		2 Discharged case(s) from yesterday	114 Cumulative total discharged cases
Readmission		1 Current hospitalized readmitted cases	6 Cumulative readmitted cases
Death		1 Death(s) from yesterday	28 Cumulative total deaths



COVID-19



Testing in BC –March 13th to May 19th

- Retrospective review of surgical patients until the end of April –5% of surgical cases tested, all negative (cardiac, high risk surgical procedures)
- 10 positive “surgical & interventional radiology, endoscopy patients” (7 days prior to OR – 30 days post) 4 hospitals
- For one week period of time April 19-25th 4956 tests performed. 587 were done in patients presenting to ER
 - 10 positive tests—incidence 1.7%
 - 6 large tertiary hospital
 - 3 at one community hospital
 - 1 at another community hospital



COVID-19





Coronavirus COVID-19

BC Centre for Disease Control | BC Ministry of Health



Infection Prevention and Control (IPC) Protocol for Surgical Procedures During COVID-19: Adult

May 21, 2020

Guiding Principles:

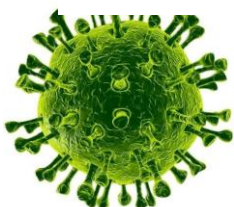
Provider Safety
Patient Safety
PPE Conservation

Approach to IPC Includes:

Patient COVID-19 Assessment
Surgical Risk Assessment
PPE Recommendation
PPE Allocation Framework¹

Background/Current Status

COVID-19



Pediatrics: bccdc.ca/Health-Professionals-Site/Documents/COVID19_IPCProtocolSurgicalProcedures/Pediatrics.pdf

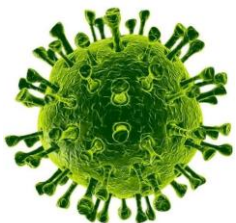
Obstetric: bccdc.ca/Health-Professionals-Site/Documents/COVID19_IPCProtocolSurgicalProcedures/Obstetric.pdf



Working Group

Appendix 2: Key Informants

Titus Wong, PICNet (Co-Lead)	Marthe Kenny Charles, VCH	Andrew Hurlburt, VCH
Michael Murray, BCSPC (Co-Lead)	David Schaeffer, VCH	Gary Redekop, VCH
Marcel Dvorak, VCH (Co-Lead)	David Evans, VCH	Kelly Mayson, VCH
Miles Hart, MoH	Jim Kim, PHC/RSEC	Linda Hoang, BCCDC
Brian Sagar, MoH	Darlene Emes, PHC	Pamela Kibsey, VIHA
Donald Griesdale, VCH	Victor Leung, PHC	Amanda Wilmer, IHA
Andrea Bisailon, VCH	Camille Ciarniello, PHC	Tara Donovan, PICNet
Patty Daly (MHO), VCH	Jock Reid, PHC	Dave Konkin, FHA
William Henderson, VCH	Jacqueline Trudeau, VCH	Elizabeth Brodtkin (MHO), FHA
Laura Sauve, PHSA (BCCW)	Jens Lohser, VCH	Trevor Corneil, PHO
Chelsea Elwood, PHSA (BCCW)	Roanne Preston, UBC	Ramesh Sahjpal, LGH/RSEC
Ellen Giesbrecht, PHSA (BCCW)	Cedric Ho, UBC	



COVID-19



Appendix 1: COVID-19 Surgical Patient Assessment Form

Health Authority LOGO

Patient Information

Name: _____

Date of Birth: _____

Language: _____

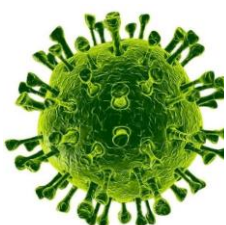
PHN: _____

NURSE OR MEDICAL OFFICE ASSISTANT SCREEN:

1. Able to obtain patient history? ☐ Yes ☐ No
If No, got to Physician Screen section below.
2. Does the patient have a risk factor for COVID-19 exposure? * In the last 14 days has the patient:
 - Returned from travel outside of Canada?
☐ Yes ☐ No When? Date: _____
 - Been in close contact with anyone diagnosed with lab confirmed COVID-19?
☐ Yes ☐ No When? Date: _____
 - Lived or worked in a setting that is part of a COVID-19 outbreak?
☐ Yes ☐ No When? Date: _____
 - Been advised to self-isolate or quarantine at home by public health?
☐ Yes ☐ No By who? Contact info: _____

3. Does the patient have new onset COVID-19 like symptom:

Before surgery – Date/Time:		Day of surgery – Date/Time:	
Fever	<input type="checkbox"/> Yes <input type="checkbox"/> No	Fever	<input type="checkbox"/> Yes <input type="checkbox"/> No
Cough	<input type="checkbox"/> Yes <input type="checkbox"/> No	Cough	<input type="checkbox"/> Yes <input type="checkbox"/> No
Shortness of breath	<input type="checkbox"/> Yes <input type="checkbox"/> No	Shortness of breath	<input type="checkbox"/> Yes <input type="checkbox"/> No
Diarrhea	<input type="checkbox"/> Yes <input type="checkbox"/> No	Diarrhea	<input type="checkbox"/> Yes <input type="checkbox"/> No
Nausea and/or vomiting	<input type="checkbox"/> Yes <input type="checkbox"/> No	Nausea and/or vomiting	<input type="checkbox"/> Yes <input type="checkbox"/> No
Headache	<input type="checkbox"/> Yes <input type="checkbox"/> No	Headache	<input type="checkbox"/> Yes <input type="checkbox"/> No
Runny nose/nasal congestion	<input type="checkbox"/> Yes <input type="checkbox"/> No	Runny nose/nasal congestion	<input type="checkbox"/> Yes <input type="checkbox"/> No
Sore throat or painful swallowing	<input type="checkbox"/> Yes <input type="checkbox"/> No	Sore throat or painful swallowing	<input type="checkbox"/> Yes <input type="checkbox"/> No
Loss of sense of smell	<input type="checkbox"/> Yes <input type="checkbox"/> No	Loss of sense of smell	<input type="checkbox"/> Yes <input type="checkbox"/> No
Loss of appetite	<input type="checkbox"/> Yes <input type="checkbox"/> No	Loss of appetite	<input type="checkbox"/> Yes <input type="checkbox"/> No
Chills	<input type="checkbox"/> Yes <input type="checkbox"/> No	Chills	<input type="checkbox"/> Yes <input type="checkbox"/> No
Muscle aches	<input type="checkbox"/> Yes <input type="checkbox"/> No	Muscle aches	<input type="checkbox"/> Yes <input type="checkbox"/> No
Fatigue	<input type="checkbox"/> Yes <input type="checkbox"/> No	Fatigue	<input type="checkbox"/> Yes <input type="checkbox"/> No
Screened by: _____	Initial: _____	Screened by: _____	Initial: _____



Pre-Surgical Huddle

PHYSICIAN SCREEN:

COVID-19 NP test performed

☐ Yes ☐ No

Date: _____

If test has not been performed, do you recommend testing patient?

☐ Yes ☐ No

Result: ☐ Negative ☐ Positive

Reason: _____

Unable to perform swab?

☐ Yes ☐ No

Reason: _____

Type of anesthesia to be used

☐ General

☐ Local/Regional

Screened by:

Signature: _____

Date/Time: _____

FINAL SURGICAL TEAM ASSESSMENT:

COVID-19 risk factor (travel, contact, outbreak)?

☐ Yes ☐ No ☐ Unknown

COVID-19 like symptoms that cannot be explained by another medical or surgical diagnosis?

☐ Yes ☐ No ☐ Unknown

COVID-19 test result?

☐ Yes ☐ No ☐ Unknown ☐ N/A

PATIENT RISK CATEGORY TABLE:

COVID-19 Risk Factors	COVID-19 Symptoms	COVID -19 Test Results	COVID-19 Risk Category
NO	NO	NOT REQUIRED	GREEN
NO	NO	NEGATIVE	GREEN
YES	NO	NEGATIVE	GREEN
NO	UNKNOWN	NEGATIVE	GREEN
NO	YES	NEGATIVE	GREEN
YES	YES	NEGATIVE	GREEN
UNKNOWN	UNKNOWN	UNKNOWN/PENDING	YELLOW
YES	NO	UNKNOWN/PENDING	RED
NO	YES	UNKNOWN/PENDING	RED
YES	YES	UNKNOWN/PENDING	RED
-	-	POSITIVE	RED

PATIENT RISK CATEGORY (CIRCLE ONE):

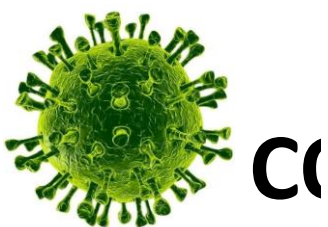
GREEN	YELLOW	RED
-------	--------	-----



E. Protocol for Management of Surgical Patients - Adult

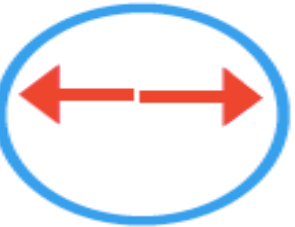
Infection Prevention & Control Risk Category			
	Green	Yellow	Red
Intubation Team Recommended PPE <i>Limit personnel in the OR to anesthesiologist, RN +/- AA</i>	All staff in OR suite don: <ul style="list-style-type: none"> Surgical mask Eye protection Gown/Gloves 	All staff in OR suite don: <ul style="list-style-type: none"> fit-tested N95 respirator Eye protection Gown/Gloves 	All staff in OR suite don: <ul style="list-style-type: none"> fit-tested N95 respirator Eye protection Gown/Gloves
Surgical Team	All staff in OR suite don: <ul style="list-style-type: none"> Surgical mask Eye protection Gown/Gloves 	All staff in OR suite don: <ul style="list-style-type: none"> fit-tested N95 respirator* Eye protection Gown/Gloves 	All staff in OR suite don: <ul style="list-style-type: none"> fit-tested N95 respirator Eye protection Gown/Gloves
Extubation Team <i>Limit personnel in the OR to anesthesiologist, RN +/- AA</i>	All staff in OR suite don: <ul style="list-style-type: none"> Surgical mask Eye protection Gown/Gloves 	All staff in OR suite don: <ul style="list-style-type: none"> fit-tested N95 respirator Eye protection Gown/Gloves 	All staff in OR suite don: <ul style="list-style-type: none"> fit-tested N95 respirator Eye protection Gown/Gloves
Phase 1 Recovery	<ul style="list-style-type: none"> In the post-anesthesia recovery (PAR) droplet/contact precautions No need to delay moving patient to PAR following extubation. 	<ul style="list-style-type: none"> In the post-anesthesia recovery (PAR) using droplet/contact precautions Patient may be moved to PAR after appropriate air exchanges. 	<ul style="list-style-type: none"> Recover in the OR suite until ready to move to appropriate isolation room. Patient may be moved to PAR after appropriate air exchanges.
Air Exchange	<ul style="list-style-type: none"> No need to wait to begin cleaning 	<ul style="list-style-type: none"> No need to wait to begin cleaning 	<ul style="list-style-type: none"> Begin cleaning and disinfection after period of appropriate air exchanges
Cleaning and Disinfection Staff	All cleaning staff in OR don: <ul style="list-style-type: none"> Surgical mask Eye protection Gown/Gloves 	All cleaning staff in OR don: <ul style="list-style-type: none"> Surgical mask Eye protection Gown/Gloves 	All cleaning staff in OR don: <ul style="list-style-type: none"> Surgical mask Eye protection Gown/Gloves
Disposition	Return patient to appropriate inpatient unit.	Return patient to appropriate inpatient unit based on further patient risk assessment.	Return patient to appropriate COVID-19 ward if confirmed positive or isolation room if unknown.

*At the discretion of the surgical team, surgical masks may be used in place of N95 respirators after appropriate air exchanges.



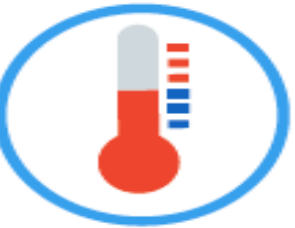
PRE-SURGERY and COVID-19

What to do once you have a surgery date



Practice COVID-19 risk prevention measures - avoid non-essential errands, practice physical distancing, and good hand hygiene.

<http://www.vch.ca/covid-19/about-covid-19/prevention>



Monitor for COVID-19 symptoms as this can increase your surgical risk - for a full list of symptoms check: <http://www.vch.ca/covid-19/about-covid-19/symptoms> or take the COVID-19 self assessment tool:


<https://bc.thrive.health/>




Report any COVID-19 symptoms to your surgeon - you may be asked to be COVID-19 tested. If you are experiencing any symptoms of COVID-19 or think you have it, find out what you should do at:

<http://www.vch.ca/covid-19/about-covid-19/if-you-are-sick>

BJS

Original article |  Free Access |

Elective surgery cancellations due to the COVID-19 pandemic: global predictive modelling to inform surgical recovery plans

CovidSurg Collaborative, Dmitri Nepogodiev, Aneel Bhangu 

First published: 12 May 2020 | <https://doi.org/10.1002/bjs.11746>

BC Government Wish list

- May 18th-June 15th, increasing capacity over 4 weeks to “near normal levels”
- Jun 28th—utilize private contracted facilities
- June 15-Oct 15th: incrementally bringing on additional capacity through:
 - Extended daily hours of operation
 - Adding elective slates to Saturday and Sunday
 - Full capacity over July & August
 - Opening “new operating rooms” where available



COVID-19



COVIDSurg

Methodology



- International multicenter cohort study.
- Inclusion criteria:
 - Perioperative SARS-CoV-2 infection (within 7 days before or 30 days after surgery).
 - Laboratory, radiological, or clinical diagnosis of SARS-CoV-2.
- Outcomes:
 - Primary: 30-day mortality.
 - Secondary: 30-day pulmonary complications (pneumonia, ARDS, unexpected postoperative ventilation).

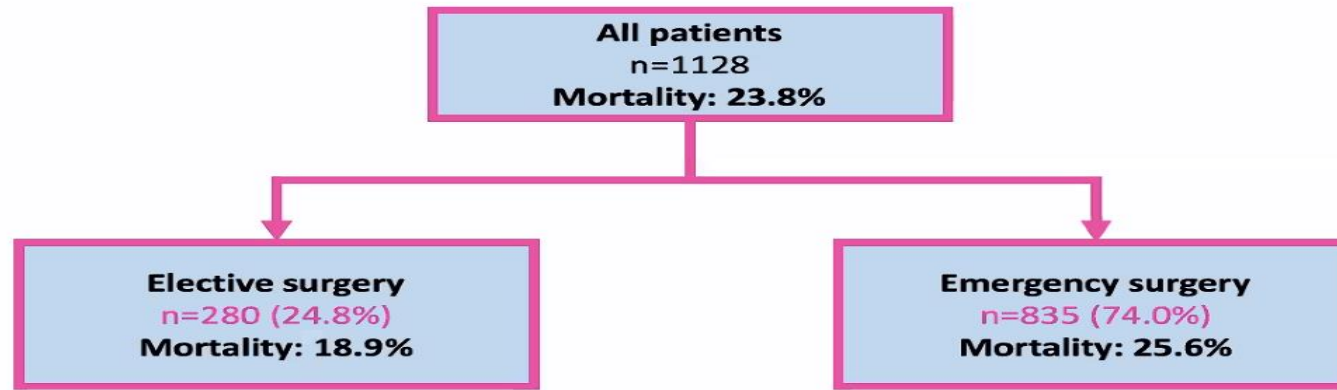
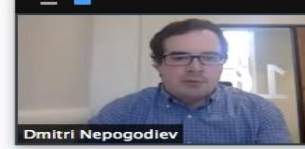


COVID-19

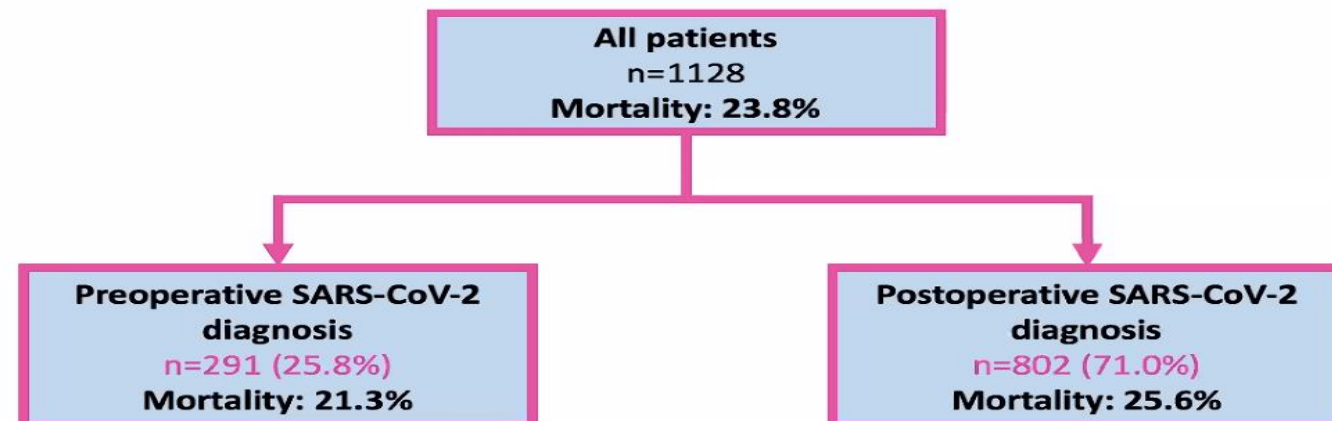
[Youtube.com/watch?v=wjcyQTyE9T4](https://www.youtube.com/watch?v=wjcyQTyE9T4)



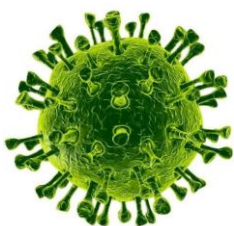
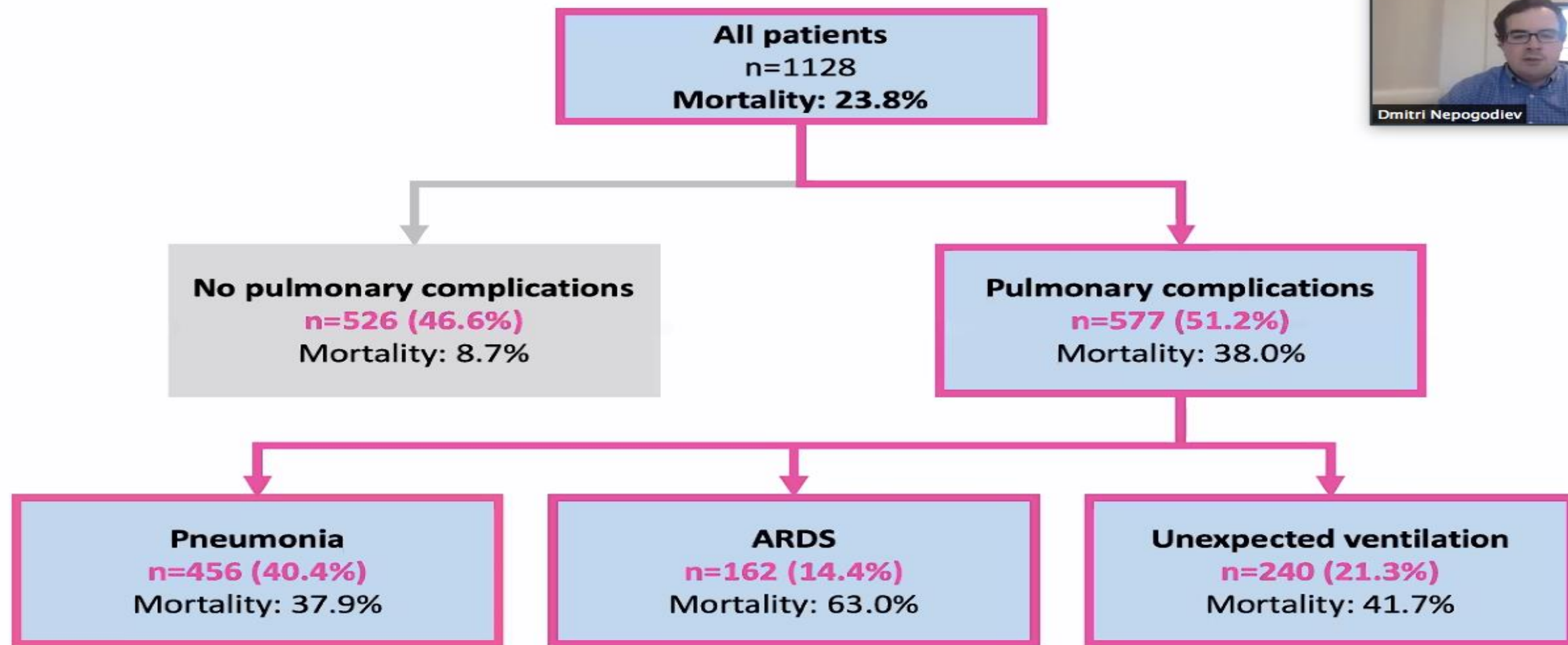
30-day mortality rates



30-day mortality rates



COVID-19

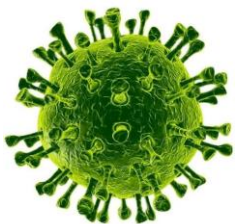


COVID-19



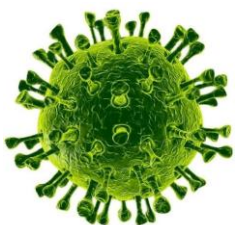
Take home points re Surgical Risk during COVID-19

- In patients with perioperative SARS CoV-2 infections
 - High mortality (24%) and pulmonary complications (51%).
 - Most deaths (83%) follow pulmonary complications
 - Elective surgery associated with substantial risk 19% mortality
 - Men age over 70 years undergoing emergency or elective major surgery are at particular risk.
 - Adjusted Odds Ratio 2.3 (1.65-3.22)



COVID-19





COVID-19

Submit your questions in the chat box





May 21, 2020

Prevalence and Clinical Presentation of Health Care Workers With Symptoms of Coronavirus Disease 2019 in 2 Dutch Hospitals During an Early Phase of the Pandemic

Marjolein F. Q. Kluytmans-van den Bergh, PhD^{1,2,3}; Anton G. M. Buiting, PhD^{4,5}; Suzan D. Pas, PhD⁶; [et al](#)

[» Author Affiliations](#) | [Article Information](#)

JAMA Netw Open. 2020;3(5):e209673. doi:10.1001/jamanetworkopen.2020.9673

86 cases, most mild disease, 93% had fever +/-coughing +/-SOB, extending to severe myalgia, +/- general malaise. Tested 1353 HCW – 6% incidence

May 21, 2020

Coronavirus Disease 2019 (COVID-2019) Infection Among Health Care Workers and Implications for Prevention Measures in a Tertiary Hospital in Wuhan, China

Xiaoquan Lai, MD¹; Minghuan Wang, MD, PhD²; Chuan Qin, MD, PhD²; [et al](#)

[» Author Affiliations](#) | [Article Information](#)

JAMA Netw Open. 2020;3(5):e209666. doi:10.1001/jamanetworkopen.2020.9666



110 cases, 84.5% had non-severe disease.

COVID-19

Asymptomatic carrier incidence 3/335 0.9%

