



# CANADIAN BOARD FOR RESPIRATORY CARE INC.

CBRC  
7 WARDEN RD  
CAMBRIDGE-NARROWS NB E4C 4G5

*Candidate Information Manual  
CBRC National Respiratory Therapy Examination  
July 2020*

## **Board of Directors**

Julie Brown RRT (Chair)  
John Annear RRT (Director at Large)  
Danny Veniott RRT (Chair EDRC)  
Meena Kumar RRT (Director at Large)  
Duncan McRae (Public Member)  
Joanne Tignanelli RRT (Secretary/Treasurer)

## **Examination Development and Review Committee (EDRC)**

Danny Veniott RRT (Chair)  
Maryse Audet RRT  
Lori Gordon RRT  
Chris Grant RRT  
Ginette Greffe-Laliberté RRT  
Patricia McClurg RRT  
Benjamin Rauschning RRT  
Tammy Scott RRT  
Michele Mackenzie RRT

	<u>Page</u>
<b>Examination registration information</b>	4
<b>Eligibility to Sit the CBRC Examinations</b>	5
<b>Other information</b>	6
<b>General Information</b>	
Philosophy	7
Committee	7
Setting up the examination	7
Pilot Test Items	7
<b>Examination Information</b>	
Examination sites	8
Candidate preparation	8
Sitting the examination	8
Exam matrix	9
Style of Questions	10
Results	11
<b>Instructions and Regulations</b>	12 - 13
<b>CBRC Policies &amp; Procedures</b>	
Appeal	14
Accommodation of special needs Application for Special Accommodation	15 -16
<b>Nomenclature and Normal Values</b>	
Normal Values	17
Ventilator recommendations	19
Abbreviations and symbols	20

## *Examination Registration Information*

	July 6, 2020 Exam
Registration dates	April 3, 2020
Registration deadline	April 29, 2020
Registration fees includes 3.8% processing fee plus practice examination	\$899.00 Plus applicable Provincial Tax
Cancellation deadline	June 22, 2020

## *Eligibility to sit the CBRC Examinations*

---

a) **First time applicant:**

First time applicants who are or will be graduates of Accreditation Canada accredited training programs are automatically eligible to sit the CBRC examinations and can access the registration portal on the CBRC website at [www.cbrc.ca](http://www.cbrc.ca)

b) **Applicants unsuccessful on previous CBRC exam(s)**

Those who were unsuccessful on the CBRC examinations and are graduates of Accreditation Canada accredited training programs will have to have their eligibility approved by one of the regulating authorities or the CSRT (representing the non-regulated Provinces) in Canada.

Please select the appropriate candidate type when registering online through the registration portal on the CBRC website at [www.cbrc.ca](http://www.cbrc.ca)

c) **Foreign Trained Applicant**

Foreign trained applicants will have to have their eligibility approved by one of the regulating authorities or the CSRT (representing the non-regulated Provinces) in Canada.

Please select the appropriate candidate type when registering online through the registration portal on the CBRC website at [www.cbrc.ca](http://www.cbrc.ca)

(NOTE: Please contact the appropriate regulating authority to ensure that you meet all of the eligibility requirements of that organization.)

- CSRT Credentialing Examination / l'Examen de certification de la SCTR (representing the non-regulated provinces of British Columbia, Prince Edward Island, North West Territory, Nunavut, and the Yukon Territory) [www.csrt.com](http://www.csrt.com)
- CARTA Registration Examination\*(Alberta) [www.carta.ca](http://www.carta.ca)
- CRTO Registration Examination \*(Ontario) [www.crto.on.ca](http://www.crto.on.ca)
- MARRT Registration Examination\*(Manitoba) [www.marrt.org](http://www.marrt.org)
- NSCRT Registration Examination (Nova Scotia) [www.nscrt.com](http://www.nscrt.com)
- SCRT Registration Examination \*(Saskatchewan) [www.scrt.ca](http://www.scrt.ca)
- NBART Registration Examination (New Brunswick) [www.nbart.ca](http://www.nbart.ca)
- OPIQ (Quebec) [www.opiq.qc.ca](http://www.opiq.qc.ca)
- NLCRT (Newfoundland and Labrador) [www.nlcrt.ca](http://www.nlcrt.ca)

## **IMPORTANT REGISTRATION Information**

To register for an examination please go to the CBRC website during the registration period. There are two (2) components to the registration process:

1. Create a username and password on the CBRC Computer Based Examination Site

**NOTE:** Please record your username and password! You will need this information to log into the computer software on the day you write your exam.

2. Sign in, select and purchase the current exam, and complete the registration process.

(NOTE: you are not considered registered until you complete both above steps!)

Please ensure at least one week prior to the examination that you have received a confirmation email containing the exam date, time, examination site location and required documentation.

If you have not received a confirmation email by this time please contact [testingsupport@getyardstick.com](mailto:testingsupport@getyardstick.com)

- The candidate is responsible for accurate completion of the appropriate CBRC Application Form and ongoing notification of address and telephone number changes through [testingsupport@getyardstick.com](mailto:testingsupport@getyardstick.com)
- Candidates with questions or concerns regarding the registration process can contact [testingsupport@getyardstick.com](mailto:testingsupport@getyardstick.com).
- Candidates cancelling prior to the cancellation deadline (see schedule) will be refunded their exam fee. ***After the cancellation deadline, the candidates will not be eligible for any reimbursement of paid fees.***

# **General Information**

## **Philosophy**

The goal of the CBRC is to provide a bilingual examination for credentialing of the highest educational caliber. The CBRC shall achieve and maintain a respiratory therapy entry to practice exam that is national in scope and accommodates provincial regulatory needs. The content of the examination will adhere to the current National Competency Profile and matrix as set out by the National Alliance of Respiratory Therapy Regulatory Bodies (NARTRB).

## **Committee**

The Examination Development and Review Committee (EDRC) is comprised of members from across Canada. The members are Registered Respiratory Therapists (RRT) in good standing with the CSRT and/or their regulatory body, who have been appointed by the CBRC. The Chair of the Committee is an RRT, appointed by the Board of Directors of the CBRC. Resources are consulted as required.

## **Creation of the examination**

All questions are based on the current [National Competency Framework](#) and generated by the EDRC. All questions must be unanimously accepted by the EDRC and reviewed in English and French prior to being approved for the question bank. Each year an examination is compiled from the question bank and is submitted to the EDRC for scrutiny. Included with this exam is the review of the pass mark based on the Cut Score Study and psychometric consultation.

## **Pilot test items**

In order to gather pertinent and relevant statistical information on new item bank questions, the CBRC may place a psychometrically approved number of pilot test items on each examination. These pilot questions are embedded within the exam. Pilot items will not affect the allotted exam time, do not contribute to the scoring process and are not part of the exam weighting matrix.

# *Examination Information*

## *Examination Sites*

---

### **July 6, 2020 Exam**

This exam will be offered at any of the Yardstick testing centers selected by the candidate at the time of registration.

## *Candidate Preparation*

---

Testing centers may vary from site to site and climate conditions cannot be guaranteed. Please dress accordingly; use layers so you can add or remove clothing as dictated by the room environment.

## *Writing the examination*

---

The CBRC National Respiratory Therapy Examination consists of approximately 200 questions.

Part One contains type A and case-based questions.

Part Two consists of case-based questions only.

If a technical issue occurs during the exam, the exam timer stops and resumes when the technical issue is resolved.

Spelling is either in the American or British form.

### **\*Suggested schedule**

0830 to 0900 hours – Check in and Instructions

0900 to 1130 hours – Part One

1130 to 1215 hours – Nutrition Break

1215 to 1445 hours – Part Two

\*Actual exam time may vary



## Exam matrix

### Final Examination Matrix – Distribution across Competency Areas

#### Final Examination Matrix by Question Type, Taxonomic Level, Age and Gender

	<b>Domain of competence</b>	<b>NARTRB Recommendation</b>	<b>Range</b>
1	Manage the airway, providing optimal ventilation (C4, C6)	20%	19% - 21%
2	Assess cardio respiratory status, incorporating cardio-pulmonary diagnostics, the use of invasive vascular procedures, and executing resuscitation. (C1, C7, C8, C10)	25.2%	24% - 26%
3	Administer medications and substances, assist with anesthesia, and perform adjunct therapies. (C3, C5, C9)	18%	17% - 19%
4	Provide evidence informed patient centered respiratory care, demonstrating critical thinking skills and communicating effectively. (B0, B2, B5)	23.8%	23% - 25%
5	Optimize patient safety, implementing preventative measures to ensure health and safety. (B7, C2)	13%	12% - 14%

<b>Additional Examination Specifications - 2020</b>	<b>Percentage of Examination</b>
Question Presentation	
Independent	25 - 40%
Case-based	60 - 75%
Taxonomy	
Comprehension	5 % max
Application	50 - 65%
Analysis & Synthesis (critical thinking)	Min. 35%
Age Group	
Neonates	10-20%
Pediatrics	10-20%
Adults	70-80%
Gender	
Male	45-55%
Female	45-55%

## *Style of Questions*

The examination is entirely comprised of type “A” multiple choice with up to four (4) possible choices.

Case Study questions: To help indicate the end of one case study and the beginning of a new case study, a horizontal line followed by the words NEW CASE will be used.

### *Examples of A-Type questions:*

Which of the following effects on the heart are seen during parasympathetic stimulation?

1. stroke volume decreases, cardiac output decreases
2. cardiac output decreases, coronary circulation increases
3. heart rate decreases, blood pressure increases
4. blood pressure decreases, stroke volume increases

The maximal quantity of gas which can be inspired from the expiratory resting position is termed:

1. inspiratory reserve volume
2. residual volume
3. inspiratory capacity

## **Results**

Candidates will receive their results within 90 days of the examination date. Candidates who provide an email address on their application form may receive an email message with their results sooner. Results will not be given by telephone. **Results will be reported to the candidates and the organization(s) indicated on their application form. It will be the responsibility of the candidate to contact their regulatory body to obtain their credential and/or license to practice.**

## *Cut Score Study*

---

Bookmark standard setting methods (Lewis, Mitzel, Green et al., 1999) were used to establish a cut level (i.e., pass mark) for the 2016 CBRC Respiratory Therapy Exam.

The Bookmark method provides a set of procedures designed to yield cut scores that are based on expert participants' review of individual test items (Cicek, 2007).

The procedures are designed to enable the expert review to be guided and informed by pre-determined criteria, for example by proficiency with specific skills or competencies such as those identified in the 2016 [National Competency Framework](#).

The Bookmark method was selected because of the method's ability to accommodate assessments based on mixed-format or multiple sessions, because the method permits participants to review stand-alone and case study based constructed responses items concurrently, and because the method is based upon and ideally suited for item response theory (IRT) based assessment approaches. The Bookmark method requires fewer, simpler decisions from participants than many other standard setting methods, and is simpler for those who sponsor the sessions (Mitzel, Lewis, Patz et al., 2001). The Bookmark method was considered an efficient, effective and appropriate approach for standard setting with the CBRC.

## **Instructions and Regulation**

1. The computer software provides access to an online calculator.

All other electronic devices (e.g. cell phone, mobile devices, calculators, etc) are not permitted. If these items are stored in the examination room, they **must be turned off**.

Permissible items shall include: disposable earplugs, and drinks in a clear spill proof container with no label. All items will be reviewed/approved by the test centre proctor. No food is permitted in the test centre.

On the day of the examination candidates must present two pieces of identification, one being a government issued photo ID (i.e. driver's license or passport) (Student and hospital identifications are NOT accepted). The proctor will check their names against the list of candidates for that specific testing centre.

2. CBRC needs to have current contact details for all candidates in order to notify of results. If any contact details change after registration the candidates will have access to make changes to their profile at any time.
3. The exam sites are "scent free".
4. Candidates are encouraged to use the washroom prior to the exam but are allowed supervised bathroom breaks during the exam. The exam timer will continue to run during the absence.
5. Candidates are permitted to bookmark questions to revisit and are able to scroll back and forth throughout the exam
6. Feedback and comments on any questions should be noted on the clipboard icon. Candidates can enter feedback for each question. Proctors are not permitted to respond to questions regarding content of the exam. These comments will be reviewed by the EDRC prior to the final evaluation.
7. In the French version of the exam, rarely used terms or abbreviations are often accompanied in brackets by their better known English equivalents.
8. The doors of the examination room will be closed promptly at the hour set for the examination. Up to 60 minutes into the examination time, candidates who are late will be admitted to the exam room, but they will be restricted to sit the examination within the remaining time.

9. A candidate may not leave the room at any time except as permitted and accompanied by the proctor. If a candidate must leave the room to use the washroom, they may not take books, papers, etc., out of the testing center with them nor bring books, papers etc. back into the testing center.
10. If a candidate becomes ill when writing the examination, the candidate must advise the proctor.
11. Any candidate found cheating will be subject to disciplinary action, removal from the exam, and their results made null and void.
12. Following the examination, candidates will be asked to complete an optional, short feedback survey.

# *CBRC Policies and Procedures*

## *Appeal*

The CBRC recognizes the need for a process to allow candidates to appeal their final status on the CBRC National Respiratory Therapy Examination.

### **Procedure**

1. A “Letter of Appeal” must be sent to the Chair of the CBRC Board of Directors in care of the CBRC head office.
2. Appeals based on medical conditions must be filed within seven (7) days after the examination date. A valid medical certificate must accompany the appeal. The examination will not be scored after a medical appeal has been granted. No examination results will be provided to any candidate that has a successful medical appeal and their examination fees will be deferred to the next sitting of the examinations. There is no fee associated for medical appeals.
3. Appeals based on disqualification due to academic dishonesty must be filed within seven (7) days after receiving the CBRC Board’s decision on the infraction. Appeals based on disqualification due to academic dishonesty must be accompanied by a bank certified cheque or money order for \$400.00 (includes HST) fee.
4. All other appeals must be filed within seven (7) days from receipt of the results accompanied by a bank certified cheque or money order for \$400.00 (includes HST)
5. The appeal will be heard and a decision rendered by the CBRC Board of Directors within ninety (90) days of receipt of the “Letter of Appeal” from the candidate.
6. All fees are to be paid by a **bank certified cheque** or **money order** payable to CBRC/CCSR.

---

## *Accommodation of Special Needs*

---

Candidates with special needs may request special accommodations and arrangements to sit the examination on the scheduled exam date.

If the candidate requires accommodation for a special need, they must access and complete the special accommodation application form available on the registration website when applying for the exam. All requests for special accommodations must be supported with written verification of the nature and extent of the candidate's special needs from a licensed professional verifying the candidate's identified special needs as well as documentation from the educational institution where candidates received their education.

The CBRC exam is only provided in the English or French language. Requests for exam accommodation will not be granted to challenge the exam in any other language.

In order to have special accommodations arranged for the exam, candidates must:

- complete and submit a special accommodations application form
- include appropriate documentation supporting their request
- return the completed special accommodations application form with documentation to the CBRC Head Office
- submit all forms by the exam application deadline, except in unusual circumstances, such as a recent injury

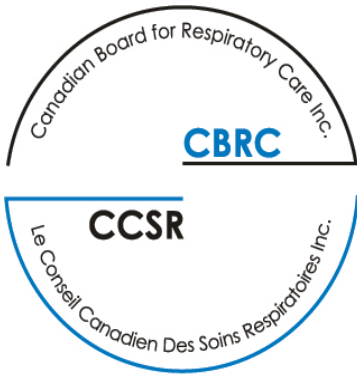
All special accommodation requests are subject to approval by the CBRC Board of Directors on a case by case basis. Candidates will be notified of the decision on their request by telephone or email.

Approved special accommodations will be arranged for the candidate at no extra charge.

Criteria that will be taken into account by the CBRC Board of Directors when requests for accommodation are considered include:

- the needs of the candidate
- preservation of the integrity of the examination
- the ability of CBRC to provide resources

***No accommodation request will be granted which jeopardizes the integrity or validity of the examination.***



**Canadian Board for Respiratory Care, Inc.  
Le Conseil Canadien Des Soins Respiratoires, Inc.**

CBRC  
7 WARDEN RD  
CAMBRIDGE-NARROWS NB E4C 4G5

---

**SPECIAL ACCOMMODATION APPLICATION FORM**

**PRINT OR TYPE ALL INFORMATION**

Name in Full: Mr. Ms. Miss. Mrs. **(circle)**

First Name \_\_\_\_\_

Middle Initial \_\_\_\_\_

Surname \_\_\_\_\_

Mailing Address:

Apt. # \_\_\_\_\_ Street \_\_\_\_\_

City \_\_\_\_\_ Province \_\_\_\_\_

Postal Code \_\_\_\_\_

Phone Number \_\_\_\_\_ Email address \_\_\_\_\_

Please indicate the school you have or expect to graduate from \_\_\_\_\_

Indicate at which testing centre you have selected \_\_\_\_\_

In order to request and have special accommodations arranged for the exam, candidates must:

- complete and submit a special accommodations application form
- include appropriate documentation supporting their request
- return the completed special accommodations application form with documentation to the CBRC Head Office.

All forms must be submitted by the exam application deadline, except in unusual circumstances, such as a recent injury.

All special accommodation requests are subject to approval by the CBRC Board of Directors on a case by case basis.



Candidates will be notified of the decision on their request by telephone or email.

Approved special accommodations will be arranged for the candidate at no extra charge.

Criteria that will be taken into account by the CBRC Board of Directors when requests for accommodation are considered include:

- the needs of the candidate
- preservation of the integrity of the examination
- the ability of CBRC to provide resources

***No accommodation request will be granted which jeopardizes the integrity or validity of the examination.***

Application Information:

Please state clearly what specific accommodations and/or arrangements you require.

---

---

---

---

---

---

---

**Before submitting, please ensure that the following are attached:**

- **relevant documentation from your licensed/registered professional**
- **recent letter from your educational institutions accommodation centre**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## *Nomenclature and Normal Values*

$$\begin{aligned} \frac{1}{V} \int z dV &= \frac{\pi r_1^2}{V H^2} \int_0^H z dz \\ &= \frac{\pi r_1^2}{V H^2} \int_0^H (z^3 - 2z^2 H + z H^2) dz \\ &= \frac{\pi r_1^2}{V H^2} \left[ \frac{z^4}{4} - \frac{2z^3 H}{3} + \frac{z^2 H^2}{2} \right]_0^H \\ &= \frac{\pi r_1^2 H^4}{V H^2} \left[ \frac{1}{4} - \frac{2H}{3h} + \frac{H^2}{2h^2} \right]. \end{aligned} \quad (9-1)$$

All test items have been referenced to the most recent editions of commonly used texts as identified by the accredited Respiratory Therapy programs across Canada.

Exam item content will always be consistent with best practice and not present ambiguity due to conflicting text references.

## *Normal Values*

The CBRC Exam Development and Review Committee has decided to remove all normal ranges and formulae in the candidate manual.

The committee rationale for this decision was based on the understanding normals differ slightly in a number of textbooks used across the country.

The committee will continue to develop item content which is always consistent with best practice and will not present ambiguity due to conflicting text references.

If you have any questions pertaining to this new practice please do not hesitate to contact the chair of the EDRC at the following e-mail address:

[cbrc@cbrc.ca](mailto:cbrc@cbrc.ca)

Danny Veniott  
Chair, CBRC Exam Development and Review Committee

## *Ventilator Recommendations*

- Regional use of makes and models of ventilators vary significantly. Therefore the emphasis of the exam items will be on the operating principles of ventilators classification.
- All modes, breath types and adjuncts currently available across all patient populations may be examined. They will be referred to in their generic terms on the exam.
- Unless a height is specified in a question, assume the patient weight that is provided is the ideal body weight (IBW).
- Unless specified, assume the patient is an adult.

## *Pharmacology*

---

In questions pertaining to pharmacology, **only** the generic drug name will be used.

Example: Ventolin<sup>®</sup>, Airomir<sup>™</sup>, and Apo<sup>®</sup>-Salvent **will** appear as salbutamol

## Abbreviations and Symbols

---

"A"	a	arterial	
	A	alveolar	
	ABG	arterial blood gas	
	AC	assist-control ventilation	
	ACLS	advanced cardiac life support	
	ADH	antidiuretic hormone	
	A/E	air entry with auscultation	
	AFB	acid-fast bacilli	
	AG	anion gap	
	AIDS	acquired immunodeficiency syndrome	
	ALS	amyotrophic lateral sclerosis	
	AP	anterior posterior	
	APGAR	Appearance, Pulse, Grimace, Activity, Respiration	
	APRV	airway pressure release ventilation	
	ARDS	adult respiratory distress syndrome	
	ASA	American Society of Anesthesiologists	
	ASD	atrial septal defect	
	ATP	adenosine triphosphate	
	ATPD	ambient temperature and pressure dry	
	ATPS	ambient temperature and pressure saturated	
	AV	atrioventricular	
	"B"	BCLS	basic cardiac life support
		BE	base excess
		BMI	body mass index
		BMR	basal metabolic rate
		BP	blood pressure
		BSA	body surface area
BPD		bronchopulmonary dysplasia	
BTPS		body temperature and pressure saturated	
BUN	blood urea nitrogen		
"C"	c	capillary	
	C	compliance	
	Ca <sup>++</sup>	calcium	
	CABG	coronary arterial bypass graft	
	CaO <sub>2</sub>	oxygen content of arterial blood	
	C(a- $\bar{v}$ )O <sub>2</sub>	arterial to venous oxygen content difference	
	C(a- $\bar{v}$ )O <sub>2i</sub>	arterial to venous oxygen content difference indexed	
	to BSA CcO <sub>2</sub>	oxygen content of capillary blood	
	CBC	complete blood count	
	C <sub>dyn</sub>	dynamic compliance	
	CF	cystic fibrosis	
	CHF	congestive heart failure	
	CI	cardiac index	

	Cl <sup>-</sup>	chloride
	cm H <sub>2</sub> O	centimetres of water pressure
	CNS	central nervous system
	CO	carbon monoxide (in context)
	CO	cardiac output
	CO <sub>2</sub>	carbon dioxide
	COHb	carboxyhemoglobin
	COPD	chronic obstructive pulmonary disease
	CPAP	continuous positive airway pressure
	CPP	cerebral perfusion pressure
	CPR	cardiopulmonary resuscitation
	C & S	culture and sensitivity
	CSA	Canadian Standards Association
	CSF	cerebrospinal fluid
	C <sub>stat</sub>	static compliance
	CT	computerized tomography
	CVA	cerebrovascular accident
	C $\bar{v}$ O <sub>2</sub>	oxygen content of mixed venous blood
	CVP	central venous pressure
	CXR	chest x-ray
"D"	DL	diffusing capacity
	DL <sub>CO</sub>	diffusing capacity of carbon monoxide
	DO <sub>2</sub>	oxygen delivery
"E"	ECG	electrocardiogram
	ECMO	extra corporeal membrane oxygenation
	EEG	electroencephalogram
	EF	ejection fraction
	ELBW	extremely low birth weight infant
	EOG	electrooculogram
	EMG	electromyogram
	EMT	emergency medical technician
	ER	emergency room/department
	ERV	expiratory reserve volume
	ETCO <sub>2</sub>	end-tidal carbon dioxide
	ETT	endotracheal tube
"F"	f	frequency
	FEF <sub>25-75</sub>	forced expiratory flow between 25% and 75% of vital capacity (MEFR)
	FEV <sub>1</sub>	forced expiratory volume at one second
	FEV <sub>1</sub> /FVC	ratio of exhaled volume at one second to forced vital capacity
	F <sub>I</sub> O <sub>2</sub>	fraction of inspired oxygen
	FR	French (sizes)
	FRC	functional residual capacity
	FVC	forced vital capacity

	$F_{ET}CO_2$	fractional exhaled end tidal $CO_2$
	$F_ECO_2$	fractional mixed exhaled $CO_2$
	FVL	flow volume loop
	$f/V_T$	rapid shallow breathing index
"G"	g	gram
	GCS	Glasgow coma scale
	GERD	gastroesophageal reflux disease
	GI	gastrointestinal
	$G_xP_xA_x$	gravida, partum, abortion : gynecological terms used to represent number of pregnancies (G), number of live births (P) and number of abortion (A); x = number of
"H"	Hb	hemoglobin
	HbCO	carboxyhemoglobin
	HbF	fetal hemoglobin
	Hbmet	methemoglobin
	HBO	hyperbaric oxygen
	$HbO_2/O_2Hb$	oxyhemoglobin
	$HCO_3^-$	bicarbonate
	Hct	hematocrit
	HFJV	high frequency jet ventilation
	HFO	high frequency oscillation
	HIV	Human Immunodeficiency Virus
	HMD	hyaline membrane disease
	HME	heat and moisture exchanger
"I"	IBW	ideal body weight
	IC	inspiratory capacity
	ICP	intracranial pressure
	ICU	intensive care unit
	I:E	inspiratory to expiratory time ratio
	INR	international normalized ratio of prothrombin time
	IPPA	inspection, palpation, percussion, auscultation
	IRV	inspiratory reserve volume
"K"	kg	kilogram
	$K^+$	Potassium
"L"	L	litre
	LAP	left atrial pressure
	LLL	left lower lobe
	L:S (ratio)	lecithin : sphingomyelin
	LUL	left upper lobe
	LVEDP	left ventricular end-diastolic pressure
	LVH	left ventricular hypertrophy
	LVSV	left ventricular stroke volume
	LVSW	left ventricular stroke work

"M"	m	meter
	MAC	minimum alveolar concentration
	MAP	mean arterial pressure
	MAS	meconium aspiration syndrome
	MDI	metered dose inhaler
	MEP	maximum expiratory pressure
	Mg <sup>++</sup>	magnesium
	MI	myocardial infraction
	MIP	maximum inspiratory pressure
	mm Hg	millimetres of mercury pressure (torr)
	MOV	minimal occluding volume
	MRSA	methicillin resistant staphylococcus aureus
	MVA	motor vehicle accident
	MVV	maximum voluntary ventilation
	MMV	mandatory minute ventilation
	mmol	millimole
	mL	milliliter
	mg	milligram
"N"	Na <sup>+</sup>	sodium
	NIBP	noninvasive blood pressure
	NIPPV	noninvasive positive pressure ventilation
	NO	nitric oxide
	NO <sub>2</sub>	nitrogen dioxide
	N <sub>2</sub> O	nitrous oxide
	NPPV	noninvasive positive pressure ventilation
	NPV	negative pressure ventilation
	NREM	non-rem sleep
	NTT	nasotracheal tube
	NPO	nothing by mouth
"O"	O/A	on auscultation
	O/E	on examination
	O <sub>2</sub>	oxygen
	O <sub>2</sub> ER	oxygen extraction
	OI	oxygen index
	OR	operating room
"P"	P	pressure
	P <sub>50</sub>	partial pressure of oxygen at 50% HbO <sub>2</sub>
	PA	pulmonary artery
	P <sub>A</sub>	alveolar pressure
	P <sub>plateau</sub>	plateau pressure
	P(A-a)O <sub>2</sub>	alveolar to arterial oxygen gradient
	PAC	premature atrial pressure
	PAP	pulmonary artery pressure
	PAP	mean pulmonary artery pressure



	PAT	paroxysmal atrial tachycardia
	PAV	proportional assist ventilation
	Paw	airway pressure (proximal)
	$P_{AW}$ or $P_{AW}$	mean airway pressure
	PCWP(PAOP)	pulmonary capillary wedge pressure / pulmonary artery occlusion pressure
	$P_B$	barometric pressure
	PCV	pressure control ventilation
	PDA	patent ductus arteriosus
	$P_{E}CO_2$	pressure of mixed exhaled carbon dioxide
	PEEP	positive end-expiratory pressure
	PEFR	peak expiratory flowrate
	PEP	peak expiratory pressure
	$P_{ET}CO_2$	pressure of end-tidal carbon dioxide
	PFT	pulmonary function testing
	pH	standardized hydrogen ion activity
	$P_{high}$	pressure high
	PIF	peak inspiratory flow
	PIP	peak inspiratory pressure
	$P_{low}$	pressure low
	PNIP	peak negative inspiratory pressure
	PPHN	persistent pulmonary hypertension of the newborn
	ppm	parts per million
	PPV	positive pressure ventilation
	PRVC	pressure regulated volume control
	PS	pressure support
	PSV	pressure support ventilation
	PT	prothrombin time
	PTT	partial thromboplastin time
	PVC	premature ventricular contraction
	$P\bar{V}CO_2$	pressure of carbon dioxide in mixed venous blood
	$P\bar{V}O_2$	pressure of oxygen in mixed venous blood
	PVR	pulmonary vascular resistance
	PVRI	pulmonary vascular resistance index
"Q"	$Q_s / Q_t$	shunted cardiac output ratio
	$Q_t$	cardiac output
"R"	$R_{AW}$	airway resistance
	RBC	red blood cell
	RDS	respiratory distress syndrome
	REM	rapid eye movement
	RLL	right lower lobe
	RML	right middle lobe
	ROP	retinopathy of prematurity
	RQ	respiratory quotient
	RR	respiratory rate
	RSBI	rapid shallow breathing index

RSV

Respiratory Syncytial Virus

	RUL	right upper lobe
	RV	residual volume
	RVH	right ventricular hypertrophy
"S"	SaO <sub>2</sub>	arterial oxygen saturation
	SBT	spontaneous breathing trial
	SIDS	sudden infant death syndrome
	SIMV	synchronized intermittent mandatory ventilation
	SLE	systemic lupus erythematosus
	SOAP	subjective, objective, assessment, plan
	SOB	shortness of breath
	SOBOE	shortness of breath on exertion
	S <sub>p</sub> O <sub>2</sub>	oxygen saturation by pulse oximetry
	STPD	temperature 0°C, pressure 760 mm Hg and dry
	S $\bar{v}$ O <sub>2</sub>	mixed venous oxygen saturation
	SVC	slow vital capacity
	SVR	systemic vascular resistance
	SVRI	systemic vascular resistance index
"T"	T	temperature
	TB	tuberculosis
	TC	time constant
	TCO <sub>2</sub>	total CO <sub>2</sub>
	T <sub>c</sub> PO <sub>2</sub>	transcutaneous pressure of oxygen
	T <sub>E</sub>	expiratory time
	T <sub>high</sub>	time high
	T <sub>I</sub>	inspiratory time
	T <sub>ID</sub>	dynamic inspiratory time
	T <sub>IS</sub>	static inspiratory time
	TLC	total lung capacity
	T <sub>low</sub>	time low
	TTN	transient tachypnea of the newborn
"U"	URTI	upper respiratory tract infection
	UAC	umbilical artery catheter
	UVC	umbilical venous catheter
"V"	V <sub>E</sub>	minute volume of expired volume per minute (BTPS)
	V <sub>A</sub>	minute alveolar ventilation
	VC	vital capacity
	VCO <sub>2</sub>	carbon dioxide production (STPD) per minute
	V <sub>D</sub>	deadspace
	V <sub>D</sub> /V <sub>T</sub>	deadspace to tidal volume ratio
	VLBW	very low birth weight infant
	V <sub>max(x)</sub>	maximum flow where (x) = % of volume
	VO <sub>2</sub>	oxygen consumption per minute
	vol%	concentration (percent per volume)

	V/Q	ventilation/perfusion ratio
	VS	volume support
	VSD	ventricular septal defect
	V <sub>T</sub>	tidal volume
	V <sub>T(del)</sub>	delivered tidal volume
	V <sub>TG</sub>	thoracic gas volume
"W"	WBC	white blood cell
	WHMIS	Workplace Hazardous Materials Information System

*Revised: January 2020*