Prolonged-ventilation Weaning Centre (PWC) & Provincial Centre for Weaning Excellence
Phone: 416 469 6580 ext. 6841
Fax: 416 469 6670
Prolonged.Ventilation@tehn.ca
MGH facility number: 1302

*PWC REFERRAL REQUEST FORM

PATIENT INFORMATION									
Last name		Middle name		First name					
Date of birth	/ / (dd/mmm/yy)	Gender	☐F ☐M	**OHIP (+VC)**					
Address		Phone	( ) -						
Marital status	☐ Married	☐ Common law	☐ Divorced/separated	☐ Widowed	☐ Single				
Premorbid location	☐ Home	☐ Assisted-living	☐ Nursing home	☐ Rehabilitation	☐ Unknown				
Premorbid status	☐ Fully active	☐ Restricted in strenuous activity	☐ Ambulatory, capable of self-care but not work						
	☐ Bedridden 50% or more of the time, limited self-care								
	☐ Totally bedridden and disabled, no self-care								

REFERRING HOSPITAL CONTACT INFORMATION			
Hospital Name		Address	
Phone	( ) - Ext		
Fax (ICU)	( ) -	Hospital facility number	
Physician's Name		**Physician's OHIP billing number**	

APPLICATION CONTACT PERSON					
Last name		First name		Position	
Phone	( ) - Ext				
Email					

SUBSTITUTE DECISION MAKER (SDM) or Power of Attorney (POA)					
Last name		First name		Relationship	
SDM/POA agrees to be contacted by Michael Garron Hospital's clinical team		☐YES ☐No		Phone	( ) -

ADMISSION DETAILS	
Date of hospital admission	[/ /] (dd/mmm/yy)
Date of ICU admission	[/ /] (dd/mmm/yy)
Primary Diagnosis	

Secondary Diagnoses _____

CO-MORBIDITIES

☐	Right ventricular failure (cor pulmonale)	☐	Interstitial lung disease/pulmonary fibrosis
☐	Coronary artery disease	☐	Prior lung resection
☐	Congestive heart failure	☐	Pulmonary vascular disease
☐	Aortic stenosis	☐	Respiratory neoplasm
☐	Atrial arrhythmias	☐	Prior lung resection
☐	Peripheral vascular disease	☐	COPD
☐	Hypertension	☐	Dementia
☐	Kyphoscoliosis/chest wall restriction	☐	CVA: type _____
☐	Liver disease	☐	Moderate to severe renal disease

☐ Other (please describe)

REASONS FOR FAILURE TO WEAN/PROLONGED VENTILATOR DEPENDENCE

Did the patient experience surgery or surgical complications that resulted in PMV? ☐ Yes ☐ No

If yes, please describe: _____

Please indicate which of the following have contributed to PMV:

☐ CPR	☐ AMI/unstable angina	☐ CHF	☐ COPD exacerbation (no pneumonia)
☐ VAP	☐ Aspiration pneumonitis	☐ ARDS	☐ COPD exacerbation (with pneumonia)
☐ PE	☐ Status asthmaticus	☐ Pneumothorax	☐ Community acquired pneumonia (no COPD)
☐ CVA/ICH	☐ Mucus plug/atelectasis	☐ Kyphoscoliosis	☐ Obesity-hypoventilation syndrome
☐ NMD	☐ Neurologic infection	☐ Guillian Barre	☐ Sepsis
☐ DKA	☐ Head trauma	☐ Chest trauma	☐ Metabolic coma
☐ Malnutrition	☐ Acute renal failure	☐ Other	

Other reasons for Failure to Wean/Prolonged Ventilator Dependence _____

MECHANICAL VENTILATION and AIRWAY

Date of onset of mechanical ventilation: [/ /] (dd/mmm/yy)

Has the patient required mechanical ventilation prior to this admission? ☐ Yes ☐ No ☐ Unknown

Date of tracheostomy insertion: [/ /] (dd/mmm/yy)

Type of tracheostomy _____ Size [ ]

Any complications associated with the tracheostomy? _____

Has a swallowing study been done? ☐ Yes ☐ No Date most recent assessment: [/ /]

Type of assessment: _____

Results: _____

CURRENT VENTILATOR SETTINGS

Ventilator mode	[ ] ☐ Volume ☐ Pressure		
Mandatory respiratory rate	[ ]	Spontaneous respiratory rate	[ ]
Set tidal volume	[ ] mL	Spontaneous tidal volume	[ ] mL
Set inspiratory pressure	[ ] cm H_2O	Minute ventilation	[ ] L/min
Pressure support	[ ] cm H_2O	PEEP	[ ] cm H_2O
Peak inspiratory pressure	[ ] cm H_2O	Mean inspiratory pressure	[ ] cm H_2O
FiO_2	[ ]	PAV % (if applicable)	[ ] %

MOST RECENT BLOOD GAS

☐ ARTERIAL ☐ VENOUS

Date taken [/ /] FiO_2 [ ]

Recorded on: ☐ Trache mask ☐ CPAP/PSV ☐ AC/SIMV/PCV

pH [ ] $PaCO_2$ [ ] mmHg PaO_2 [ ]mmHg

WEANING HISTORY

Number of failed extubations [ ] Current weaning method:

Has the patient tolerated a spontaneous breathing trial? ☐ Yes ☐ No

If yes, what was used? (tick all that apply Trach mask ☐ PAV+ ☐ PSV ☐ CPAP ☐

How long was the longest TM/PAV trial? [ ] Date of longest trial [/ /]

Factors identified as contributing to weaning failure

- ☐ Anxiety ☐ Nutritional status ☐ Muscle weakness/paralysis
- ☐ Advancing respiratory disease
- ☐ Other _____

Smoking history	☐ Never smoked	☐ smoker	☐ active	☐ former	☐ unknown

AIRWAY STATUS

Cuff deflation: ☐ No testing ☐ Does not tolerate ☐ Tolerates > 1 hr ☐ Speaking valve > 1 hr

MOST RECENT CLINICAL LABORATORY TEST VALUES

WBC (x10^9/L)	[ ] x10^9/L	Platelets (x10^9/L)	[ ] x10^9/L
Hemoglobin (g/L)	[ ] g/L	Hematocrit (%)	[ ] %
Sodium (mmol/L)	[ ] mmol/L	Potassium (mmol/L)	[ ] mmol/L
Glucose (mmol/L)	[ ] mmol/L	Albumin (g/L)	[ ] g/L
Serum creatinine (umol/L)	[ ] umol/L	Urea (mmol/L)	[ ] mmol/L
Total bilirubin (umol/L)	[ ] umol/L	INR	[ ]

NOTE if other measurement units are used in your institution please identify above.

Cultures (Attach reports)

☐Sputum	☐Urine	☐Stool	☐Blood	☐Other(Specify)

ANTIBIOTIC RESISTANT ORGANISMS				
☐ MRSA	☐ C diff	☐ VRE	☐ ESBL	☐ Other (describe)

PLEASE ATTACH RELEVANT LAB RESULTS INCLUDING MICROBIOLOGY REPORTS and MOST RECENT CHEST X-RAY/ECHOCARDIOGRAM REPORTS

COMMUNICATION

Is the patient able to communicate?	☐ Yes	☐ No
Is the patient able to follow commands/direct care	☐ Yes	☐ No

Communication Method

☐ Verbal (tolerates cuff deflation)	☐ Mouths words	☐ Writes	☐ Speaking Valve
☐ Communication board	☐ Other(Specify)		

Cough Augmentation

☐ Cough Assist	☐ Chest PT	☐ Manually assisted cough and lung volume recruitment using manual resuscitation bag

Frequency of suction in ICU:

Other interventions

LINES/TUBES and DATE OF INSERTION

☐ PICC ☐ Foley

NUTRITION

Present weight	[ ] kg	Ideal weight	[ ] kg

☐ PEG ☐ NG ☐ ORAL ☐ TPN

Please describe feeding regime: _____

Does the patient have decubitus ulcers?	☐ Yes	Location	Stage	☐ No

MUSCULOSKELETAL/ACTIVITY LEVEL

Does the patient require special equipment for transfer?	☐ Yes (describe)	☐ No
Does the patient require special equipment for sitting?	☐ Yes (describe)	☐ No

Has the patient achieved any of the following?

Unassisted dangling	☐ Yes	☐ No
Assisted weight bearing	☐ Yes	☐ No
Unassisted weight bearing	☐ Yes	☐ No
Mobilization to chair with maximal (≥ 2 person) assistance	☐ Yes	☐ No
Mobilization to chair with minimal (1 person) assistance	☐ Yes	☐ No
Walking with assistance	☐ Yes	☐ No

Mobility Scale at Time of Application – Highest Mobility To Date

☐ Nothing (lying in bed) Passive roll	☐ Sitting, exercises in bed

☐ Passively moves to chair, no standing	☐ Sitting over edge of bed
☐Standing, with or without assist	☐ Transferring to chair
☐ Marching on spot	☐ Walking with assistance – 5 metres min. 2 persons assist
☐ Walking 1 person assist	
☐Walking independently with gait aid	☐Walking 5 metres with no aid

BEHAVIOURAL/COGNITIVE ISSUES

Can the patient operate a call bell appropriately and reliably? ☐ Yes ☐ No

Has the patient required restraints in the past 7 days) ☐ Yes ☐ No

If yes, describe why _____

Has the patient been seen by psychiatry during the current ICU admission? ☐ Yes ☐ No

Is the patient currently receiving treatment for any of the following?

Depression ☐ Yes ☐ No Anxiety ☐ Yes ☐ No Other ☐ Yes ☐ No

If yes, please describe: _____

Cognitive function ☐ Normal ☐ Mildly impaired ☐ Moderately impaired ☐ Profoundly impaired

PLEASE ATTACH RELEVENT REPORTS FROM PSYCHIATRY

SOCIAL SITUATION

Please describe the patient's social situation and involvement of family members and significant others

_____

Please attach documented goals of care conversations

Please indicate if an application has been submitted to a Long Term Ventilation Program ☐ Yes ☐ No

Has patient/family information about the PWC been provided (if applicable)? ☐ Yes ☐ No

OTHER PERTINENT INFORMATION

Please provide any other information you believe pertinent to this referral for consultation

_____

Thank you. We will contact you within 2 working days

Prolonged/Long-Term Mechanical Ventilation ICU Checklist – 2013 Patient _____

Day 1 Ventilation (yy/mm/dd) (/ /) week ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10 ☐10+ Inter-professional ICU team to complete

1. Confirm Prolonged Mechanical Ventilation (PMV)

	Yes	No
Is the patient medically stable apart from ventilator support? *(If No, Stop here)*	☐	☐
Reversible factors identified by team? (see next page)	☐	☐
Risk of PMV confirmed? *(If No, Stop here)*	☐	☐
Prognosis and treatment options have been shared with patient/family?	☐	☐
If prognosis and goals are unclear, Palliative Care has been consulted for assistance (if available)	☐	☐

2. Optimize Successful Weaning

	Yes	No
Transfer of care to specialized inter-professional centre/unit/team? *(if feasible)*	☐	☐
Intact bulbar function confirmed in neuromuscular disease patients?	☐	☐
If YES to above, has extubation to continuous non-invasive ventilation been considered?	☐	☐

	Yes	No
Individualized Care Plan charted for?		
Weaning	☐	☐
Communication with patient	☐	☐
Mobilization	☐	☐
Nutrition	☐	☐
Minimal Sedation	☐	☐
Psychological state (Anxiety, Delirium, Depression, Sleep)	☐	☐
Continuity of weaning plan ensured from		
Day to day	☐	☐
Weekday to weekend	☐	☐
Week to week	☐	☐
Over the last week, on daily basis		
Progress documented in weaning chart accessible to entire team?	☐	☐
Weaning progress towards previous day's weaning targets been reviewed every morning?	☐	☐
Patient progressively mobilized from passive to active movement including daily ambulation?	☐	☐
Reason for each failed weaning trial been documented?	☐	☐
Expert advice obtained from Prolonged-ventilation Weaning Centre?	☐	☐

3. Confirm Need for Long-term Mechanical Ventilation (LTMV)

	Yes	No
Multiple failed weaning trials with optimized care & expert advice obtained? (*If No, Go to previous section)*	☐	☐
Prognosis and treatment options have been shared with patient/family?	☐	☐
If prognosis and goals are unclear, Palliative Care has been consulted for assistance (if available)	☐	☐
If appropriate, transitioned to palliative care?	☐	☐
Need for LTMV outside ICU confirmed? (see definition on next page) (*If No, Stop here)*	☐	☐
Transition protocols to LTMV care been implemented for?		
Non-invasive Ventilation	☐	☐
Invasive LTMV in community	☐	☐
Institutional Invasive LTMV	☐	☐
Transfer of care to a LTMV specialized centre/unit/team?	☐	☐
Has Expert advice for LTMV been obtained?	☐	☐

Prolonged/Long-Term Mechanical Ventilation ICU Checklist – 2013 Patient _____

Day 1 Ventilation (yy/mm/dd) (/ /) week ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 ☐9 ☐10 ☐10+ Inter-professional ICU team to complete

Acute to Prolonged Ventilation

Key Criteria*

(1) Physiologically stable patient
(2) Repeatedly unsuccessful weaning attempts
(3) Consideration of the patient's wishes

Other Considerations*

- Patient characteristics (underlying disease, presence of comorbidity and cognitive status)
- Diagnosis & prognosis
- Anticipated quality of life
- Consideration of patient & family motivation
- Establishment of a ventilator weaning plan

Prolonged to Long-term Ventilation

Key Criteria*

(1) Physiologically stable patient
(2) Establishment of a transition plan
(3) Option of withdrawal of care is discussed
(4) Acceptance and motivation of the patient based on informed choice

Other Considerations*

- Recognition that the need for mechanical ventilation (either invasive or non-invasive) is indefinite
- Redefinition of the goals of care
- Ability of the team to provide care including adequate resources and a transition placement
- Patient prognosis, diagnosis and quality of life
- Patient care needs that could be managed in the community or a long-term care facility
- Family motivation

** derived from Canadian delphi consensus 2013*

Factors Associated with Ventilator Dependence (Identify reversible factors guided by list below)

Systemic factors

- Chronic comorbid conditions (*e.g.* hypothyroidism, malignancy, COPD, immunosuppression)
- Overall severity of illness
- Non-pulmonary organ failure
- Poor nutritional status

Mechanical factors

- Increased work of breathing
- Reduced respiratory muscle capacity
  - Critical illness polyneuropathy
  - Steroid myopathy
  - Disuse myopathy
  - Isolated phrenic nerve or diaphragmatic injury (*e.g.,* after surgery)
- Imbalance between increased work of breathing & respiratory muscle capacity
- Upper airway obstruction (*e.g.,* tracheal stenosis) preventing decannulation

Iatrogenic factors

- Failure to recognize withdrawal potential
- Inappropriate ventilator settings leading to excessive loads/discomfort
- Imposed work of breathing from tracheotomy tubes
- Medical errors

Complications of long-term hospital care

- Recurrent aspiration
- Infection (*e.g.,* pneumonia, sepsis)
- Stress ulcers
- Deep venous thrombosis
- Other medical problems developing in the PMV care venue

Psychological factors

- Sedation
- Delirium
- Depression
- Anxiety
- Sleep Deprivation

Process of care factors

- Absence of weaning & sedation protocols
- Inadequate nursing staffing
- Insufficient physician experience

Reference: MacIntyre NR, Epstein SK, Carson S, et al. Management of patients requiring prolonged mechanical ventilation: report of a NAMDRC consensus conference, Chest. 2005;128:3937-3954.

Extubation to Continuous Non-invasive Ventilation

Bach JR, Goncalves MR, Hamdani I MD, Joao Carlos Winck JC Extubation of patients with neuromuscular weakness: a new management paradigm, Chest 2010; 137(5):1033-9.

Expert Advice

Michael Garron Hospital – Prolonged-ventilation Weaning Centre of Excellence **416-469-6580 x6841. pwc@tehn.ca, website https://www.tehn.ca/programs-services/medicine/provincial-prolonged-ventilation-weaning-centre-excellence-and-long-term**

West Park Healthcare Centre – Long-Term Ventilation Centre of Excellence **416-243-3600 x2063. donna.renzetti@westpark.org, website www.westpark.org**

CANVent Respiratory Rehabilitation Services 613-737-8899 x75318 dmckim@ottawahospital.on.ca website www.ottawahospital.on.ca/wps/portal/Base/TheHospital/ClinicalServices/DeptPgrmCS

London Health Science Centre (EICU) 519-685-8500 #35799, cathy.mawdsley@lhsc.on.ca website http://www.lhsc.on.ca/Patients_Families_Visitors/ICU/Bay_6.htm