

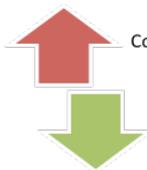
Tracheostomy Weaning Guidelines

PROGRESS

- Completes specified time
- Copes easily with current stage
- Continue to next stage
- Consider skipping a stage

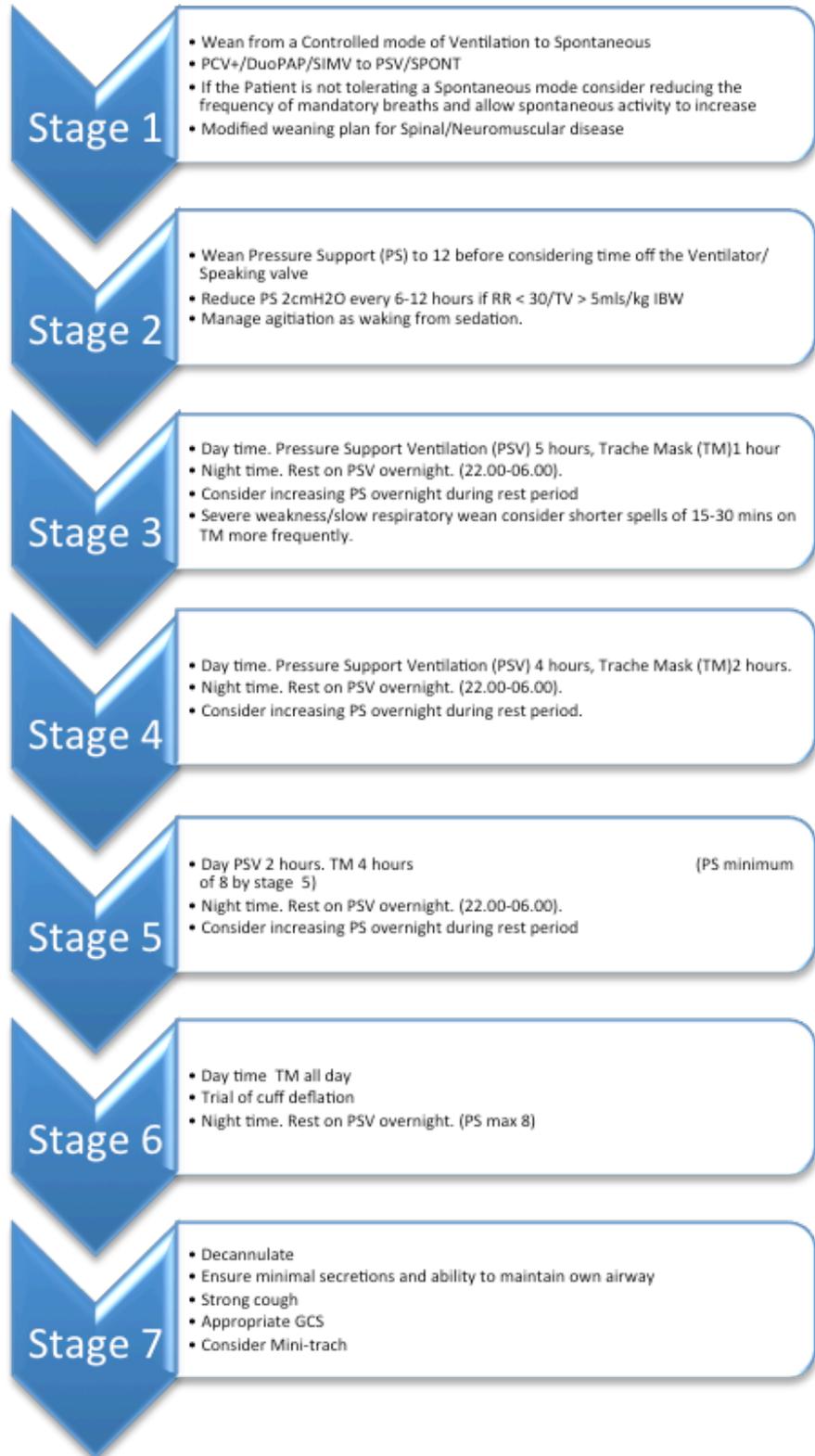
CAUTION

- Known respiratory or neurological compromise
- Triggering 2 or more of failing criteria (Appendix 1)
- Senior review (SpR, physio, NiC)
- Underlying reason for failure to wean (Figure 1)
- Document reason for failure to wean in variance box of weaning plan
- Reassess and consider going back to previous stage



Consider Weaning as stages not days.

The patient may spend a number of days on one stage before progressing or may skip stages if making rapid progress.



1. INTRODUCTION

Patients require tracheostomies for a number of reasons and weaning is potentially complex and requires a multi-disciplinary team (MDT) approach.

In order to commence weaning a number of criteria need to be fulfilled:

- The patient is able to maintain adequate gas exchange self-ventilating +/- supplemental oxygen. (Occasionally patients may require non invasive ventilation (NIV) post decannulation for the management of chronic conditions such as obstructive sleep apnoea (OSA) or chronic obstructive pulmonary disease (COPD))
- There are no signs of deteriorating bronchopulmonary infection or excessive pulmonary secretions
- The patient has a stable lung status with oxygen therapy less than 40%
- The initial reason for the insertion of the tracheostomy has been resolved and/or been considered (e.g. upper airway obstruction, cranial nerve palsy)
- The patient is cardiovascularly stable
- The patient has an adequate GCS and is able to maintain their own airway.

2. PROCESS

Recommendation (Action)	Justification (Rationale)
The guideline is intended for patients who have tracheostomies only	There is a separate SBT trial and extubation guide for patients with endotracheal tubes
The 'weaning plan' for the following day should be filled in on the evening ward round	This allows early initiation of the process. It includes the criteria which would be used to determine failure to complete a stage of weaning, and has space for documentation of variance.
The 'Stages of Weaning' do not equate to days of weaning.	It is likely that some patients will spend several days at (e.g) stage three before progressing whilst others will make sufficient progress to allow a stage or two to be skipped. (See Appendix 1)
If the patient fails to wean further assessment is required	There are many reasons a patient may fail to wean from the ventilator. (Table 1). A full assessment and attempts to optimise the patient are required in this scenario. (Figure 1)
Speaking valve/Cuff deflation	Allows patient to manage their own secretions and swallowing and vocalise. It may increase the work of breathing and patients should be monitored closely
Minitrach	This may facilitate aspiration of secretions in patients with a persistently weak cough

3. GLOSSARY

SBT Spontaneous Breathing Trial

4. REFERENCES AND ONLINE RESOURCES

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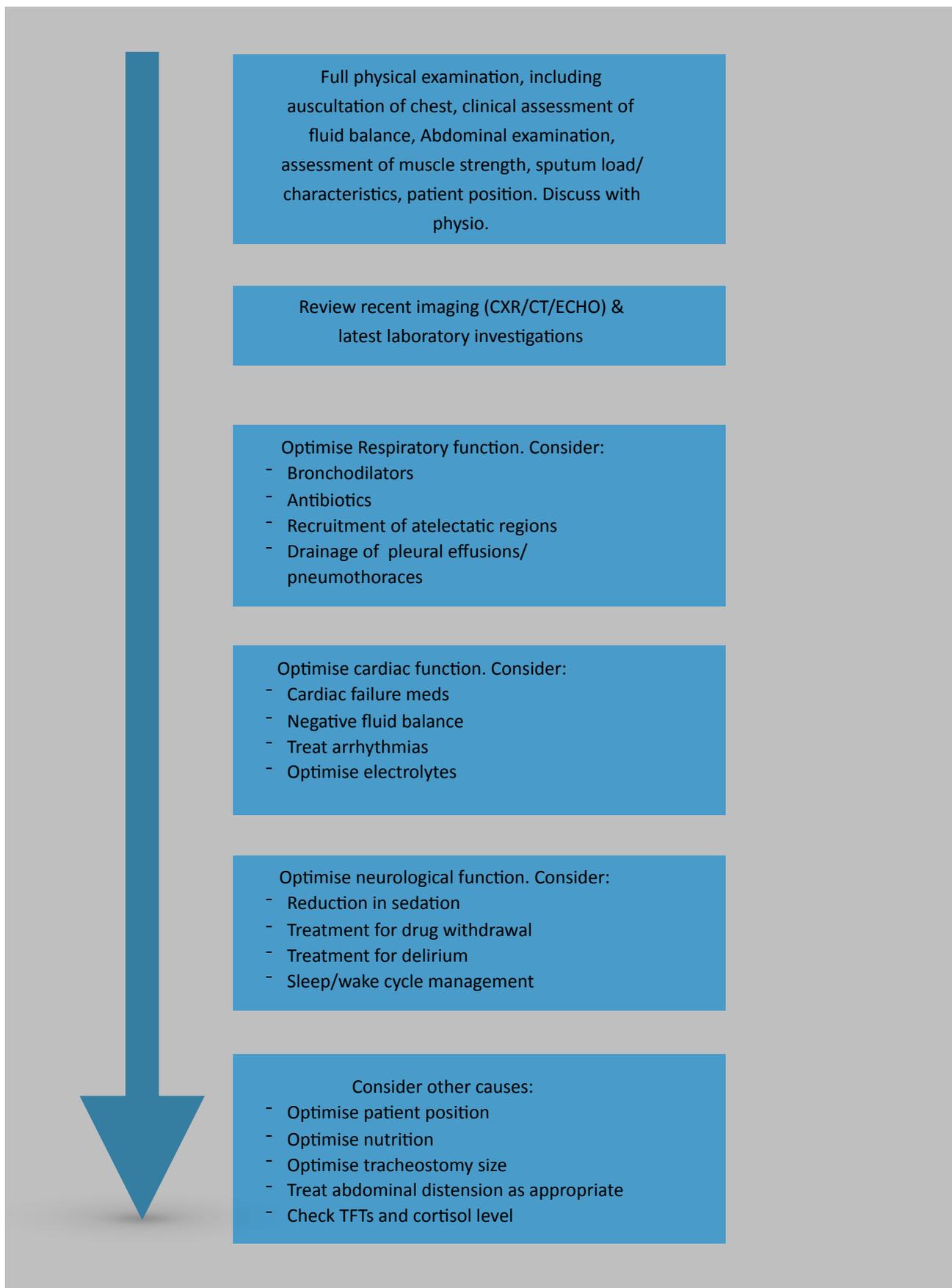
[ICU Extubation and SBT guidelines](#)

[Trust tracheostomy guidelines](#)

TABLE 1 Reversible causes for failure to wean from mechanical ventilation

Respiratory	Cardiac	Neurological	Other
Infection	Pulmonary oedema	Sedative drugs	Patient position
Pleural effusion	Left ventricular failure	Drug withdrawal	Inadequate nutrition
Bronchospasm	Uncontrolled atrial fibrillation	Sleep deprivation	Small tracheostomy
Pneumothorax		Delirium	Hypophosphataemia
Atelectasis			Abdominal distension
Sputum production/ plugging			Hypothyroidism

FIGURE 1 Review of the patient who fails to wean from mechanical ventilation



APPENDIX 1 Weaning Chart

Intensive Care Unit				Weaning Plan			
Name		Mode of Ventilation		RR.		Failure Criteria	
DOB		FiO2		TV		FiO2 >	
Hospital No		PS		HR		RR >	
		PEEP		BP		TV <	
						Sap >	
						PaCO2 >	
						HR >	
				This weaning Plan is to be completed on the ward round in Joint discussion with the Consultant, Nurse and Physiotherapist.			
				Consultant: _____			
				Nurse: _____			
				Physio: _____			
Date		Date		Date		Date	
Respiratory Goals		Respiratory Goals		Respiratory Goals		Respiratory Goals	
Weaning stage		Weaning stage		Weaning stage		Weaning stage	
Pressure Support PEEP		Pressure Support PEEP		Pressure Support PEEP		Pressure Support PEEP	
Ventilator for hrs		Ventilator for hrs		Ventilator for hrs		Ventilator for hrs	
Trache Mask for hrs		Trache Mask for hrs		Trache Mask for hrs		Trache Mask for hrs	
Speaking valve for mins		Speaking valve for mins		Speaking valve for mins		Speaking valve for mins	
Mobilisation/Physiotherapy		Mobilisation/Physiotherapy		Mobilisation/Physiotherapy		Mobilisation/Physiotherapy	
Chair		Chair		Chair		Chair	
Sit on the edge of the bed		Sit on the edge of the bed		Sit on the edge of the bed		Sit on the edge of the bed	
Tilt table		Tilt table		Tilt table		Tilt table	
Hoist		Hoist		Hoist		Hoist	
Stand aid		Stand aid		Stand aid		Stand aid	
Zimmer Frame		Zimmer Frame		Zimmer Frame		Zimmer Frame	
Assistance of		Assistance of		Assistance of		Assistance of	
Nutrition/Hydration		Nutrition/Hydration		Nutrition/Hydration		Nutrition/Hydration	
Fluid Balance Target		Fluid Balance Target		Fluid Balance Target		Fluid Balance Target	
Nutritional meets being met		Nutritional meets being met		Nutritional meets being met		Nutritional meets being met	
If no consider dietician referral		If no consider dietician referral		If no consider dietician referral		If no consider dietician referral	
Phosphates & Electrolytes optimized		Phosphates & Electrolytes optimized		Phosphates & Electrolytes optimized		Phosphates & Electrolytes optimized	
Night/Sleep/Comfort		Night/Sleep/Comfort		Night/Sleep/Comfort		Night/Sleep/Comfort	
Rest on the ventilator overnight 21.00-06.00		Rest on the ventilator overnight 21.00-06.00		Rest on the ventilator overnight 21.00-06.00		Rest on the ventilator overnight 21.00-06.00	
PS PEEP		PS PEEP		PS PEEP		PS PEEP	
Night sedation Considered Y N		Night sedation Considered Y N		Night sedation Considered Y N		Night sedation Considered Y N	
Night sedation prescribed Y N		Night sedation prescribed Y N		Night sedation prescribed Y N		Night sedation prescribed Y N	
Observations Frequency overnight 2hrly 4hrly		Observations Frequency overnight 2hrly 4hrly		Observations Frequency overnight 2hrly 4hrly		Observations Frequency overnight 2hrly 4hrly	
Variance		Variance		Variance		Variance	
A brief description to explain why the goals have not been achieved or patient not progressed further (document in medical notes including evaluation on QIP)		A brief description to explain why the goals have not been achieved or patient not progressed further (document in medical notes including evaluation on QIP)		A brief description to explain why the goals have not been achieved or patient not progressed further (document in medical notes including evaluation on QIP)		A brief description to explain why the goals have not been achieved or patient not progressed further (document in medical notes including evaluation on QIP)	
PLAN FOR THE NEXT 24 HOURS		PLAN FOR THE NEXT 24 HOURS		PLAN FOR THE NEXT 24 HOURS		PLAN FOR THE NEXT 24 HOURS	

The use of this guideline is subject to professional judgement and accountability. This guideline has been prepared carefully and in good faith for use within the Department of Critical Care at Brighton and Sussex University Hospitals. The decision to implement this guideline is at the discretion of the on-call critical care consultant in conjunction with appropriate critical care medical/ nursing staff.