UCH WEANING FROM MECHANICAL VENTILATION PATHWAY

WAKE WARM AND WEAN.

POST OPERATIVE PATIENTS WHO HAVE BEEN VENTILATED < 24 HOURS

DAILY EXTUBATION SCREEN

A DAILY SCREEN TO BE CARRIED OUT ON ALL PATIENTS VENTILATED VIA AN ETT >24 HOURS WHO ARE NOT ON THE INTERMEDIATE OR FAILURE TO WEAN PATHWAYS. THE RESULTS OF THE WEANING SCREEN SHOULD BE RECORDED ON THE WEANING SCREEN PAGE OF CIMS

INTERMEDIATE PATHWAY

PATIENTS WHO HAVE FAILED FIVE SPONTANEOUS BREATHING TRIALS

FAILURE TO WEAN PATHWAY

PATIENTS WHO HAVE FAILED TWO ATTEMPTS ON THE INTERMEDIATE PATHWAY.

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WAKE WARM AND WEAN

DOES PATIENT MEET INCLUSION CRITERIA?

1. Post Operative **AND**
2. Ventilated less than 24 hours

Patient Exclusion Criteria

The following groups of patients are not suitable for nurse led extubation

- Grade 3/4 intubations or difficult intubations
- Patients with significant lung disease
- Patients who have failed one or more previous extubation's
- Patients the medical staff have advised not to extubate
- Max Fax, ENT Head and Neck Surgery patients.

} The extubation for these patients must be doctor led

Warm

- Aim axilla temp >36C
- Ensure patient peripherally warm and well perfused – capillary refill < 3secs
- Use active external re-warming (bair hugger blanket if temp <35C)

Wake

Reduce sedation until patient is responsive and obeying commands, i.e. sedation score 0 or +1, ensure PATIENT AND STAFF SAFETY and adequate pain control

Wean

Change patient to pressure support ventilation ASAP and wean down pressure support ensuring targets are maintained (TV>5ml/Kg, RR <30/min, pH7.35-7.45, PC02<5.5)

If all of above achieved

Extubation Screen

1. P:F>26.6
2. PEEP≤5
3. GCS >12
4. Able to cough and initiate a breath
5. Haemodynamically stable off inotropes/pressors
6. No continuous sedation

If screened out on 5 and/or 6 discuss with medical team

Spontaneous Breathing Trial

(30min: PS 0, PEEP 5)

Monitor and stop SBT if :

a. RR>30 for >5mins
b. HR change >20%
c. SBP <80>200mm Hg
d. Sa02 drop of 3% > 30secs

RSBI≤95

Measure RSBI (PS 0, PEEP 5)

RSBI>95

Return to previous level of Pressure Support, maintaining targets

Take ABG at 20-30mins and report findings NIC

If agreed by ALL extubate following extubation guidelines

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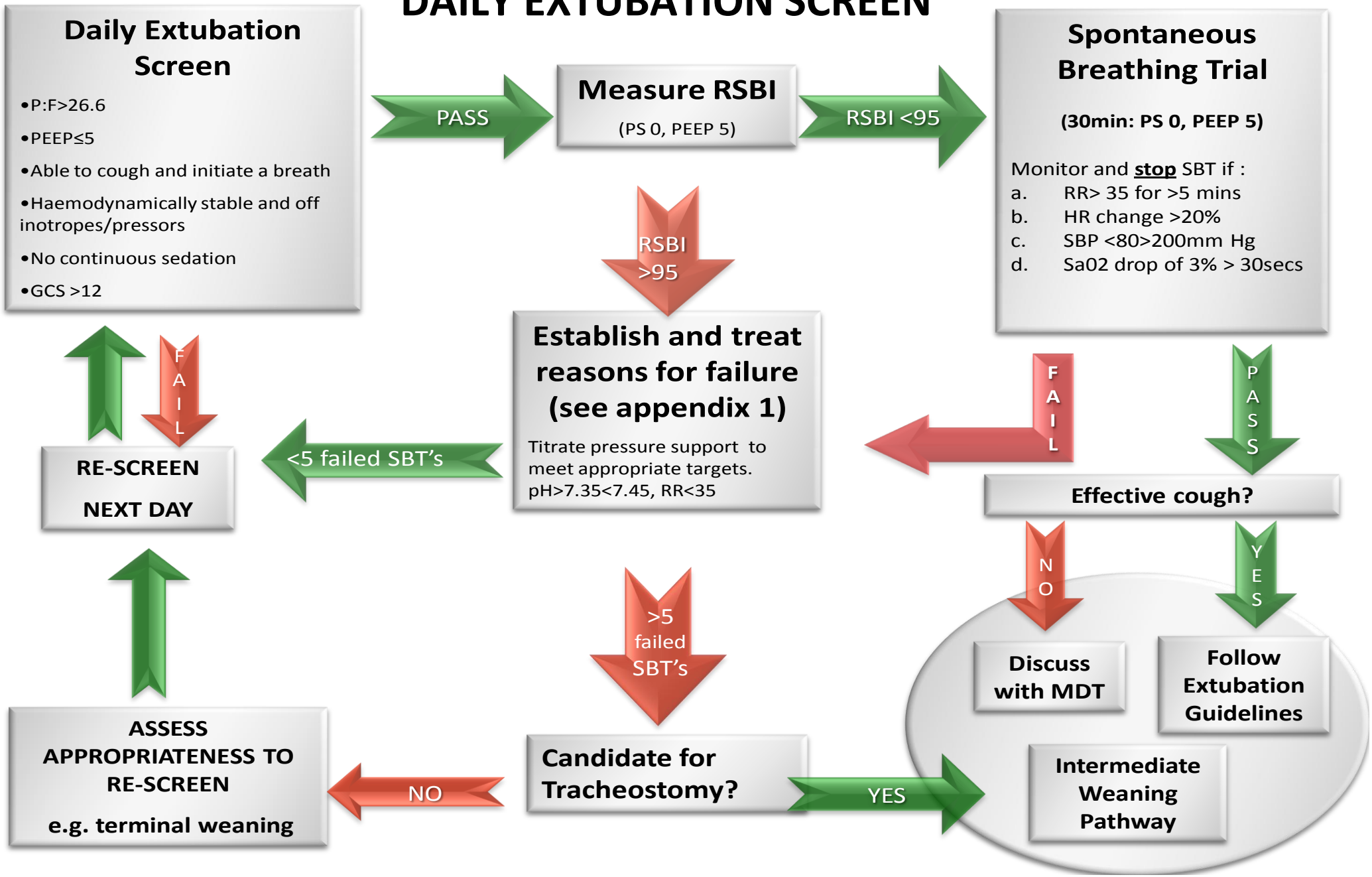
DAILY EXTUBATION SCREEN



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INTERMEDIATE WEANING PATHWAY

STEP 1

WEAN PRESSURE SUPPORT TO LEVEL **ABOVE** PREVIOUS FAILURE POINT

CONSIDER USING THIS PRESSURE SUPPORT TO REST THE PATIENT OVERNIGHT AIMING Vt> 5mls/Kg, f/Vt<90, RR<24

STEP 2

REDUCE DAYTIME PS BY 1-4 EVERY 24 HOURS UNTIL PS 5

MAINTAINING TARGETS pH7.35-7.45, RR <35

STEP 3

MAINTAIN ADEQUATE NIGHT TIME VENTILATION SETTINGS

NIGHT TIME VENTILATION: AIMING Vt> 5MLS/Kg, f/Vt<90, RR<24 TO MAINTAIN pH7.35-7.45, RR <35

TRACHE MASK TRIAL; PREFERABLY WITH CUFF DEFLATED & SPEAKING VALVE

USE AGREED PARAMETERS TO STOP TRIAL RR< 35, OR ≤RR+25%, HR +25% pH7.35-7.45 AND PATIENT COMFORT

STEP 4

USE DURATION OF TRACHE MASK TRIAL AS STARTING POINT ON WEANING TIME TEMPLATE (APPENDIX 2), TO CREATE WEANING PLAN

E.G. 1 HOUR START AT POINT 1, 3 HOURS START AT POINT 3.

CLINICIAN DISCRETION TO EXCLUDE STEPS

IF FAILS 2 ATTEMPTS ON THIS PATHWAY GO TO FAILURE TO WEAN PATHWAY

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FAILURE TO WEAN PATHWAY

STEP 1

WEAN PRESSURE SUPPORT TO LEVEL **ABOVE** PREVIOUS FAILURE POINT

USE THIS PRESSURE SUPPORT TO REST THE PATIENT OVERNIGHT AIMING Vt> 5mls/Kg, F/Vt<90, RR<24

STEP 2

REDUCE DAYTIME PS BY 1 EVERY 24 HOURS UNTIL PS 8-10

ONLY REDUCE PS IF PATIENT HAS MANAGED 12 HOURS AT THE PREVIOUS LEVEL, PH7.35-7.45, RR<24

STEP 3

REDUCE NIGHT TIME VENTILATION STILL MAINTAINING ADEQUATE REST BUT NOT BELOW PS 8

NIGHT TIME VENTILATION: AIMING Vt> 5MLS/KG, F/Vt<90, RR<24 TO MAINTAIN pH7.35-7.45.

TRACHE MASK TRIAL; PREFERABLY WITH CUFF DEFLATED & SPEAKING VALVE

USE AGREED PARAMETERS TO STOP TRIAL RR< 35, OR ≤RR+25%, HR +25% pH7.35-7.45 AND PATIENT COMFORT

STEP 4

USE DURATION OF TRACHE MASK TRIAL AS STARTING POINT ON WEANING TIME TEMPLATE (APPENDIX 2) TO CREATE WEANING

PLAN INCLUDE REST DAYS ON THURSDAY AND SUNDAY

E.G. 1 HOUR START AT POINT 1, 3 HOURS START AT POINT 3. CLINICIAN DISCRETION TO EXCLUDE STEPS

CONTINUE UNTIL MANAGING 12 HOURS ON TRACHE MASK CONTINUOUSLY

STEP 5

ASSESS SUITABILITY FOR WEANING VIA NIV IF NOT CONTINUE USING TEMPLATE UNTIL ON 24 HOURS CONTINOUSLY; CLINICIAN DISCRETION TO EXCLUDE STEPS

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APPENDIX 1

FAILURE TO WEAN CHECKLIST

LOAD

Bronchospasm
Left ventricular failure
Sepsis
Fever
Seizures
Other causes of increased basal metabolic rate
Excessive secretions
Hyperinflation Pleural effusion/pneumothorax
Abdominal distension with upward displacement of the diaphragm

CAPACITY OF RESPIRATORY PUMP

Treat pain and discomfort
Treat abdominal discomfort
Optimise positioning
Look for diaphragmatic paralysis
Have muscle relaxants worn off?
Muscle weakness

DRIVE

Sedation
CNS disease
Hypercapnia

CONSIDER

Hb
Anxiety
Sensory overload/deprivation
Communication
Depression
Motivation: Is the patient motivated to wean?
Are there any signs of depression that could be treated?
Has a normal sleep wake cycle been established
Malnourished or metabolically disturbance

OPTIMISE STRENGTH

Neuropathy
Disuse atrophy
Nutrition
Rest/sleep
Electrolytes

DURATIONS & TIMING FOR WEANING VIA TRACHE MASK FOR PATIENTS WITHOUT AN ARTERIAL LINE

1. THE PATIENT SHOULD BE ADEQUATELY RESTED IN BETWEEN THE TRACHE MASK TRIALS (TM) AND OVERNIGHT. I.E. NORMAL PH & RR<24.
2. TM TRIAL SHOULD BE DONE CUFF DOWN WITH A SPEAKING VALVE IF TOLERATED
3. FOR THE INITIAL TM TRIAL, PARAMETERS TO STOP THE TRIAL MUST BE SET e.g. RR, ETC02, PATIENT COMFORT.
4. USE THIS INITIAL DURATION AS THE START POINT FOR THE TM TRIALS I.E. 3 HOURS START AT POINT 3
5. REST DAYS (THURSDAY & SUNDAY) MAYBE INCLUDED FOR THOSE ON THE FAILURE TO WEAN PATHWAY
6. ONCE POINT 6 IS REACHED IPPB VIA THE SERVO I SHOULD BE INSTIGATED 2-4 HOURLY

Point	AM Trache Mask Trial	PM Trache Mask Trial
1.	1 hour	1hour
2.	2 hours	2 hours
3.	09.00-12.00 (3hours)	18.00-21.00 (3 hours)
4.	09.00-13.00 (4 hours)	17.00-21.00 (4 hours)
5.	09.00-14.00 (5 hours)	17.00-21.00 (4 hours)
6.	09.00-15.00 (6 hours)	
7.	09.00-16.00 (7 hours)	
8.	09.00-17.00 (8 Hours)	
9.	09.00-19.00 (10 hours)	
10.	09.00-21.00 (12 hours)	
11.	06.00-00.00 (18 hours)	
12.	All day all night	

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APPENDIX 3

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