



VA: VGH / UBCH / GFS

VC: BP / Purdy / GPC

ORDERS

ADDRESSOGRAPH

COMPLETE OR REVIEW ALLERGY STATUS PRIOR TO WRITING ORDERS

PACU ORDERS: PATIENTS WITH DIAGNOSED OR SUSPECTED SLEEP APNEA

(items with check boxes must be selected to be ordered)

(Page 1 of 1)

Date: _____

Time: _____

Diagnosis & PAP therapy

Diagnosed sleep apnea

}	<input type="checkbox"/> severe	}	<input type="checkbox"/> on CPAP preoperatively	→ apply device in PACU if drowsy/sleeping
	<input type="checkbox"/> moderate		<input type="checkbox"/> on BiPAP preoperatively	
	<input type="checkbox"/> mild			
	<input type="checkbox"/> <i>unknown severity</i>			

or

 Suspected sleep apnea → **sleep apnea assessment required** →

}	<input type="checkbox"/> referred to regional Sleep Disorders Program , <u>or</u>
	<input type="checkbox"/> instructed to see GP for further arrangements

Respirology consult* for assessment and treatment if:

}	<input type="checkbox"/> PAP therapy newly required postoperatively , <u>or</u>
	<input type="checkbox"/> hypoxemic or hypercarbic respiratory failure

*as long as the patient remains in a monitored bed, the Respirology consult does not necessarily have to occur in the PACU

PACU sleep apnea protocol

- semi-upright or lateral **position**, PAP application if ordered & **monitor** for respiratory events
- **extended PACU stay:**
 - for at least **1 h after standard PACU discharge criteria met** (this requirement elapses after 3 hrs of post-extubated stay in the PACU)
 - 1 h extended stay **waived** (only if Baseline Risk not increased - see reverse side)
 - and**
 - for at least **1 h after last respiratory event** (unless transferred to a monitored bed),
 - and**
 - until **spinal anesthesia regressed below surgical incision** (order if pain management challenge expected)
- **prior to transfer from PACU:**
 - **notify Anesthesiologist of:**

}	respiratory events (apneas ≥ 10 s, RR < 8/min, desaturations to < 90%, or airway obstruction interventions)
	significant opioid requirement &/or sedation level
	unstimulated baseline room air SpO₂ < 90% &/or PaCO₂ > 50 mm Hg

 - ↳ O₂ supplementation may prolong apneas, exacerbate hypercapnea & hinder detection of respiratory deterioration by SpO₂
 - obtain **discharge clearance from Anesthesiologist** (not required if 1 h extended PACU stay waived by Anesthesiologist)
 - **inpatient: notify Respiratory Therapy if on PAP therapy** (for ward follow-up)

Safe transfer of care: Consider Baseline Risk and Postoperative Indicators (see reverse side)

- **Baseline Risk:**

}	<input type="checkbox"/> significantly ↑	→ monitored bed (regardless if Postoperative Indicators present or not)
	<input type="checkbox"/> not significantly ↑	→ monitored bed if Postoperative Indicators present (use clinical judgment)

Final decision regarding appropriate postoperative disposition made by Anesthesiologist, after getting report from PACU Nurse

Anesthesiologist Signature

Printed Name

College ID

STOP-Bang Questionnaire: Screening Tool for OSA

	Yes	No
S Do you snore loudly (loud enough to be heard through closed doors)?	<input type="checkbox"/>	<input type="checkbox"/>
T Do you often feel tired , fatigued, or sleepy during daytime?	<input type="checkbox"/>	<input type="checkbox"/>
O Has anyone observed you stop breathing during your sleep?	<input type="checkbox"/>	<input type="checkbox"/>
P Do you have or are you being treated for high blood pressure ?	<input type="checkbox"/>	<input type="checkbox"/>
B BMI > 35 kg/m ² ?	<input type="checkbox"/>	<input type="checkbox"/>
A Age > 50 years old?	<input type="checkbox"/>	<input type="checkbox"/>
N Neck circumference > 40 cm?	<input type="checkbox"/>	<input type="checkbox"/>
G Male gender ?	<input type="checkbox"/>	<input type="checkbox"/>

Total "yes" ≥ 5: high probability of OSA

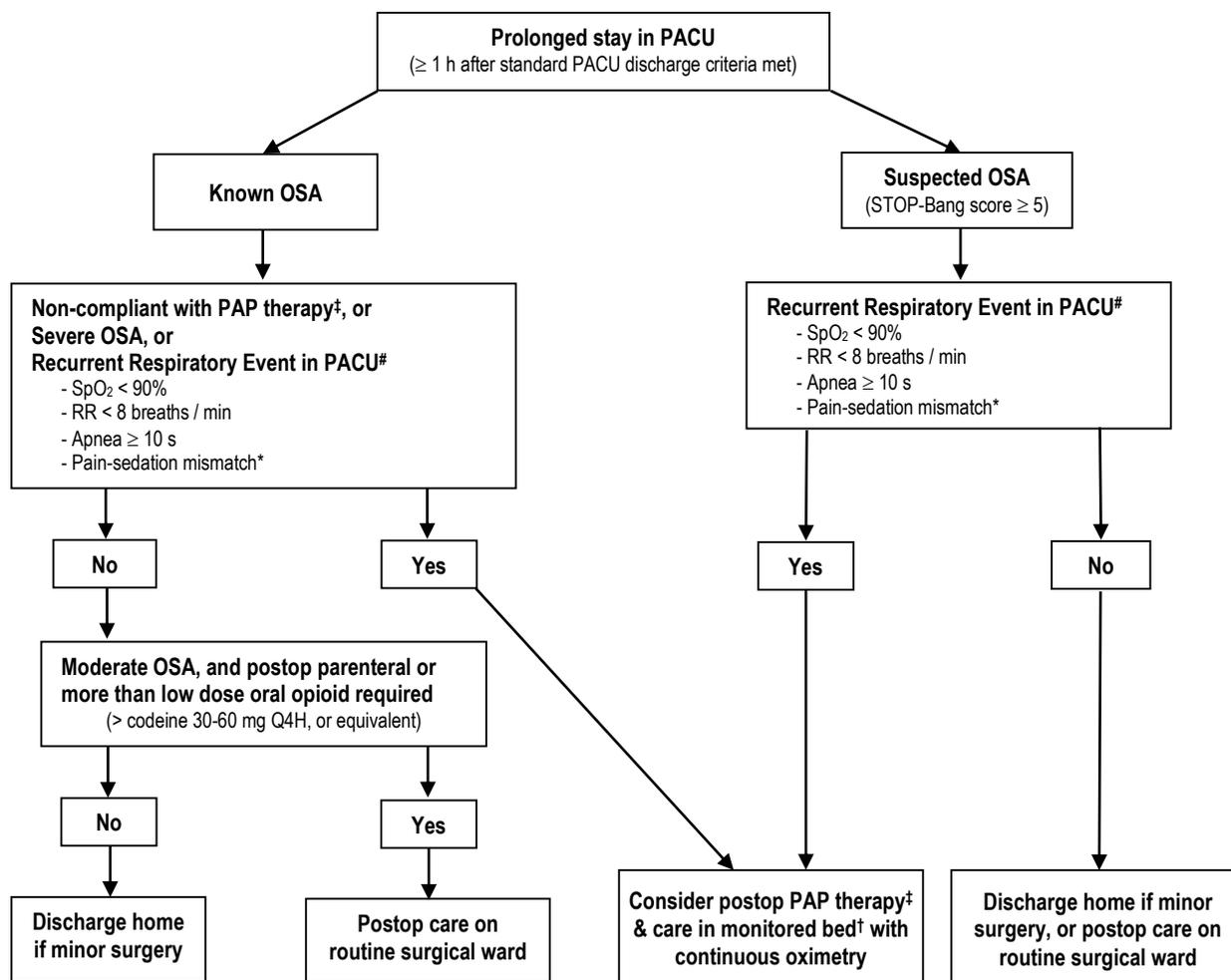
(Chung F, et al. STOP Questionnaire. A Tool to Screen Patients for OSA. *Anesthesiology* 2008; 108: 812–21)
 (Chung F, et al. High STOP-Bang score indicates a high probability of OSA. *Br J Anaesth.* 2012; 108: 768–75)

Postoperative Risk of Complications from Sleep Apnea

Baseline Risk	Postoperative Indicators	Indications for Monitored Bed
<ul style="list-style-type: none"> • severity OSA, <u>and</u> • severity comorbidities, <u>and</u> • impact surgery & anesthesia, <u>and</u> • postoperative opioid requirement 	<ul style="list-style-type: none"> • recurrent respiratory events, <u>or</u> • newly required PAP therapy, <u>or</u> • respiratory failure, <u>or</u> • significant risk of myocardial ischemia or dysrhythmia, <u>or</u> • opioid or sedative requirement not stabilized, <u>or</u> • pain-sedation mismatch 	<ul style="list-style-type: none"> • significantly ↑ baseline risk, <u>or</u> • any postoperative indicators of risk

Postoperative Management of the Known or Suspected OSA Patient after General Anesthesia

Adapted from: Seet E & Chung F. Management of sleep apnea in adults - functional algorithms for the perioperative period. *CJA.* 2010; 57: 849-65.



#Recurrent Respiratory Events - consider the number, frequency and severity of events, as well as the time interval between the first and last event

†Positive airway pressure (PAP) therapy - including CPAP, BiPAP, or autotitrating PAP (APAP)

*Pain-sedation mismatch - high pain & sedation scores concurrently

†Monitored bed = continuous pulse oximetry monitoring & possibility of early nursing intervention (e.g. PACU, SDU, other Critical Care Unit, or remote oximetry by telemetry on ward)