Is the Patient Cleared?

Elizabeth Bamgbose PhD, CRNA, FAANA

1

Conflict of Interest & Disclosures

- I have no financial relationships with any commercial interest related to the content of this activity.
- I will **not** discuss off-label use during my presentation.
- The views presented are based on published standards of practice and personal experience, they are not to be used as a source of reference in the legal setting.

2

To-Do:

1. Keep the patient alive.
2. Keep the surgeon/center happy.
3. Avoid a lawsuit.

3

Outpatient Anesthesia in 2025

Cases are…

- ➔ENT
- ➔Plastics
- ➔Ortho
- ➔General surgery
- ➔GYN
- ➔Ophthalmology
- ➔Pain
- ➔GI
- ➔GU
- ➔*AND OCS*

Patients are…

BIG
small
Tall
Short
Wide
Narrow
Hungry!!
Full
Sick
Healthy

4

Who needs clearance?

Good question, it depends.

5

General or Specialized Medical Clearance?

- PS I and II: none or primary care clearance
- PS III + : primary care + "consider" specialized clearance (cardiac/pulmonology etc.)

- Other reasons to consider clearances – or canceling:
  - Recent hospitalization
  - Unstable disease
  - Poorly controlled conditions

6

Um.....

Lab Results

Component	Value	Date
NA	137	02/28/2025
K	4.4	02/28/2025
BUN	11	02/28/2025
CREA	0.59	02/28/2025
GFRNONAA	102	05/09/2022
GFRAA	118	05/09/2022

Follow up in 4 months. Patient will continue on her blood pressure medication, lisinopril even on the morning of surgery with a sip of water.

CLEARED

PMH:

1. Covid-19 11/18/2022
2. Squamous Cell Carcinoma Tonsil
3. Neutropenic Sepsis 5/2020
4. Septic Encephalopathy 5/2020
5. Aspiration Pneumonia 5/2020
6. Parkinson's Dx'd 2020
7. CAD Dx'd 2/2020
8. Hyperlipidemia
9. OSA
10. Right Achille Rupture 2010
11. Pneumonia 2010
12. Hemorrhoids s/p eval Dr Lake
13. Excess diet soda ~3/day

7

8

BMI

- By 2030, nearly 1 in 2 Americans will be considered obese and 1 in 4 will be projected to have severe obesity.
- BMI remains the **"gold standard"** in describing obesity/weight

"obesity paradox"

- **Overweight** (BMI 25–29.9 kg/m2) and **obese** (BMI 30–34.9 kg/m2) patients with *established cardiovascular disease* have a *better prognosis* when compared to lean patients with the identical cardiovascular disease burden
- Morbid obesity is defined as a BMI greater than 40 kg/m, a BMI of greater than 35 kg/m with at least one serious obesity related condition, or being more than 100 pounds over ideal body weight

9

Early Postoperative Outcomes of Super Morbid Obese Compared to Morbid Obese Patients After Ambulatory Surgery Under General Anesthesia: A Propensity-Matched Analysis of a National Database

Sherine Hajmohamed, MD,* Deeran Patel, MD,* Patricia Apruzzese, MS,† Mark C. Kendall, MD,* and Gildasio De Oliveira, MD, MSCI, MBA*

Selection of Obese Patients Undergoing Ambulatory Surgery: A Systematic Review of the Literature

Girish P. Joshi, MB BS, MD, FFARSCI,* Shireen Ahmad, MD,† Waleed Riad, MSc, AB, MD (PhD), SB, KSUF,† Stanley Eckert, MD,§ and Frances Chung, MBBS, FRCPC‖

10

Hajmohamed, et al. (2021)

- 7160 patients with a **BMI ≥50 kg/m2** were then propensity matched to 7160 patients with a **BMI ≥40 kg/m2.**
- 17 of 7160 ***(0.24%)*** of super morbid obese patients had ***3-day medical complications*** compared to 15 of 7160 ***(0.21%)*** of morbid obese patients.
- A total of 35 of 7160 ***(0.49%)*** super morbid obese patients ***were readmitted within 3 days*** compared to 33 of 7160 ***(0.46%)*** morbid obese patients.
- **Super morbid obesity** is **not associated** with statistically significant greater rates of early **postoperative complications** when compared to morbid obese patients in ambulatory surgery.

Joshi, et al. (2012)

- **24 studies reviewed** (11 prospective cohorts and 9 retrospective chart reviews, 2 prospective cohorts, 1 retrospective study, and 1 systematic review assessing laparoscopic bariatric surgery).
- Overall, there were ***no differences in the rate of unanticipated admission between the obese and nonobese cohorts***.
- Super obesity (BMI >50 kg/m2) might influence out comes after ambulatory procedures, particularly those with coexisting medical conditions.

11

29-year-old patient presents for an elective breast reduction and tummy tuck.

Does this patient meet YOUR standards for an appropriate BMI in an outpatient setting?

12

GLP-1RAs

Comparison of societal guidance on perioperative management of glucagon-like peptide-1 receptor agonists: implications for clinical practice and future investigations

Marvin G. Chang, MD, PhD · Edward A. Bittner, MD, PhD

AANA American Association of Nurse Anesthesiology

Anesthesia Care of the Patient on a GLP-1 Receptor Agonist

13

GLP1-RAs

- Chang et al. (2024)
- Summarized **14 major societies** of anesthesiology, endocrinology, and gastroenterology addressing the management of GLP-1RAs in the perioperative period (inclusive of AANA)
- Consider **individual patient factors**:
  - Specific GLP-1 RA used
  - Dosing regimen (daily vs weekly)
  - Duration of GLP-1 RA use
  - Time that GLP-1 RAs have been withheld
  - Indication of use (diabetes mellitus vs weight loss)
  - Coexisting medical diseases (e.g., diabetes mellitus, pre existing aspiration risk)
  - Symptoms of delayed gastric emptying

14

Table 6 Major societies' recommendations on prolonged fasting times and clear fluid before the *nil per os* period

Society	Guidance available on prolonged fasting times and clear fluid for a period of time before the *nil per os* period
CAS[16]	Consider an extended *nil per os* period before surgery as a strategy to reduce the risk of aspiration on an individualized basis in patients who cannot withhold their GLP-1 RA for a prolonged period before surgery. Consider a clear fluid diet before the standard *nil per os* period as a strategy to reduce the risk of aspiration on an individualized basis in patients who cannot withhold their GLP-1 RA for a prolonged period before surgery. The specific duration of the clear fluid diet before the *nil per os* period is not explicitly defined but is suggested as part of the preoperative fasting strategy.
ASA[20]	Suggests adhering to the current ASA fasting guidelines, given the current lack of evidence for optimal fasting duration for patients with GLP-1 RAs.
AGA[19]	Does not provide guidance on prolonged fasting times. Does mention that placing patients on a liquid diet the day before sedated procedures when feasible is suggested as a better strategy compared with stopping GLP-1 RAs, as this would be consistent with current comprehensive preprocedural management strategies used when there is significant concern for delayed gastric emptying.
ISMP[26]	Does not recommend prolonging the fasting duration given the lack of safety evidence, but does mention that a clear fluid diet for some time before the *nil per os* time as an aspiration reduction strategy.
AANA[25]	No changes to fasting guidelines while, mentioning there have been reports of improved outcomes with prolonged fasting periods or clear liquid diets of 1–3 days before the procedure.
No guidance was provided on this topic by the AAGBI, ANZCA, AACE, ADA, CPOC, SPAQI, NHS, ADS–ANZCA, and SCARE	

AACE = American Association of Clinical Endocrinology; AAGBI = Association of Anesthetists of Great Britain and Ireland; AANA = American Association of Nurse Anesthesiology; ADA = American Diabetes Association; ADS–ANZCA = Australian Diabetes Society–Australian and New Zealand College of Anaesthetists; AGA = American Gastroenterological Association; ANZCA = Australian and New Zealand College of Anaesthetists; ASA = American Society of Anesthesiologists; CAS = Canadian Anesthesiologists' Society; CPOC = Centre for Perioperative Care; GLP-1 = glucagon-like peptide-1 receptor agonist; GLP-1 RA = glucagon-like peptide-1 receptor agonist; ISMP = Institute for Safe Medication Practices in Canada; NHS = National Health Service; SCARE = Colombian Society of Anesthesiology and Reanimation; SPAQI = Society for Perioperative Assessment and Quality Improvement

15

GLP1-RAs

- Limitations in existing knowledge on the topic
- Effective **duration of withholding** is still being determined, with societal guidance ranging from ***not holding at all*** to ***holding for up to three-half lives***
- Gastric ultrasound may help evaluate risk and guide individualized management
- ***Questions remain:***
  - Aspiration risk
  - Role of point-of-care ultrasound
  - Blood sugar control

16

Cardiac Risk Assessment

----------RISK STRATIFICATION----------
I. Functional Capacity:
GREATER than 4 METS (Can perform light housework or climbing a hill or flight of stairs)
II. Clinical Predictors:
INTERMEDIATE: Diabetes Mellitus

III. Surgery Risk Stratification:
Ambulatory surgery, LOW RISK PROCEDURE

Revised Goldman Cardiac Risk Index:
NO PERTINENT CARDIAC RISK FACTORS.
No risk factors=0.4%

17

Cardiac Clearance

- Cardiac risk stratification by PCP/medical clearance – used to "predict" MACE (major adverse cardiac events)
- 2024 ACC/AHA guidelines state that using a validated risk prediction tool can be useful to estimate risk of perioperative MACE
- Critical to understand how the most commonly employed tools were developed (RCRI, MICA, ACS-SRC)

18

Revised Cardiac Risk Indicator (RCRI)

- Prospectively evaluated 4,315 patients aged 50 years and older undergoing elective noncardiac, non-neurologic surgery with an expected hospital stay of at least 2 days – 6 variables assessed for risk
- Population age >50
- Widely used calculator, due to simplicity
- "Do not use" the RCRI for ambulatory surgery and low risk procedures with stay < 2 days – will OVERESTIMATE risk

19

Myocardial Infarction of Cardiac Arrest (MICA)

- Used historical data from 211,410 patients in the NSQUIP database – and developed a calculator to predict risk of MI or cardiac arrest within 30 days of non-cardiac surgery(validated on an additional 7,365 patients) – 21 variables measured
- Population age >16
- Better predictability than the RCRI

20

American College of Surgeons Surgical Risk Calculator (ACS-SSR)

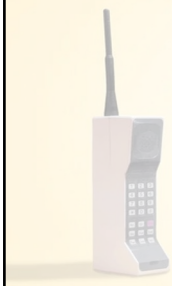
- Comprehensive risk calculator based on information from 1,414,006 patients in the NSQUIP database, CPT code for specific surgery, and 20 variables
- Population > 16 yo
- Predicts cardiac complications, death, and serious complications

21

Duke Activity Status Index (DASI)

- 1546 participants at an elevated cardiac risk who had inpatient non-cardiac surgery
- Measured 30-day death or myocardial injury + 30-day death or myocardial infarction
- Age > 40
- Easy to use – but should be employed with caution

22



Pick-up the Phone!

23

Amphetamines

- Prescription amphetamine drugs are used legitimately for several medical and psychological indications:
  - Attention deficit hyperactivity disorder
  - Narcolepsy
  - Exogenous obesity appetite suppression
  - Depression + Parkinson's disease (psychotherapeutic effects)
- **Chronic amphetamine exposure** and stimulation of the adrenergic and peripheral nerve terminals causes a **depletion of catecholamine activity**

24

Amphetamines

- Reduction in reserve catecholamines, especially norepinephrine contributes to a blunted physiologic and sympathetic response to hypotension
- Intraoperative, refractory hypotension or bradycardia in patients taking amphetamines should be treated with direct-acting vasopressors (i.e., phenylephrine)
- Mixed reviews regarding when to stop medications:
  - 7-14 days before and after surgery
  - Hold for 24 hours

25

Amphetamines and Acute Illicit Intoxication

General Anesthesia and Chronic Amphetamine Use: Should the Drug Be Stopped Preoperatively?

Stephen P. Fischer, MD
Clifford A. Schmiesing, MD
Cosmin G. Guta, MD
John G. Brock-Utne, MD, PhD

Prescription amphetamines are being used more often for several medical conditions. Anesthesia concerns focus on the cardiovascular stability of patients who may be catecholamine-depleted and thus have a blunted response to intraoperative hypotension. Previously we reported one case of a patient receiving chronic amphetamine therapy who had a stable intraoperative course. We now report eight additional patients taking chronic prescription amphetamines who underwent a safe general anesthesia and outcome. Predominately prescribed for narcolepsy and attention deficit hyperactivity disorder, amphetamine drugs had been given to these 8 patients for 2 to 10 yr. Ages ranged from 22 to 77 yr and genders were equally divided. All required general anesthesia for their surgical procedures and 6 of the 8 patients were tracheally intubated. Anesthesia operating room times ranged from 30 min to 4.25 h. The authors conclude that amphetamine use need not be stopped before surgery and anesthesia.

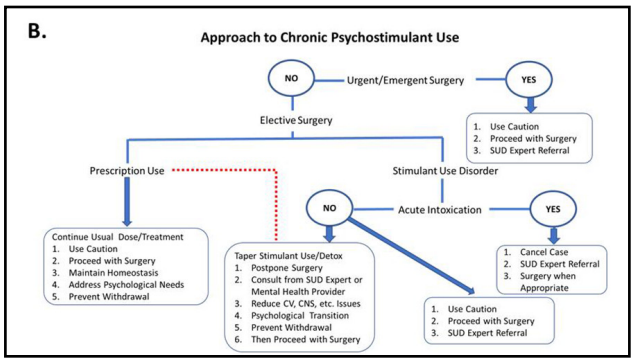
(Anesth Analg 2006;103:203–6)

Published in final edited form as: Anesth Analg. 2023 Aug 17;137(3):474–487. doi: 10.1213/ANE.0000000000006303

Perioperative Considerations for Patients Exposed to Psychostimulants

Trent D Emerick [a], Thomas J Martin [b], Douglas G Ririe [b]

26



27

Obstructive Sleep Apnea (OSA)

- Use STOP-BANG to assess
- Opioid sparing techniques
- Consider CPAP in PACU
- Check-in on post-surgery/recovery medications

Validation of the STOP-Bang questionnaire as a preoperative screening tool for obstructive sleep apnea: a systematic review and meta-analysis

Mark Hwang[1,2], Mahesh Nagappa[3], Nasimi Gulzadeh[2], Aparna Saripella[2], Marina Englesakis[4] and Frances Chung[1,2*]

28

SNORING – TIRED – OBSERVED – PRESSURE
BMI – AGE – NECK SIZE - GENDER

STOP		
Do you SNORE loudly (louder than talking or loud enough to be heard through closed doors)?	Yes	No
Do you often feel TIRED, fatigued, or sleepy during daytime?	Yes	No
Has anyone OBSERVED you stop breathing during your sleep?	Yes	No
Do you have or are you being treated for high blood PRESSURE?	Yes	No
BANG		
BMI more than 35kg/m2?	Yes	No
AGE over 50 years old?	Yes	No
NECK circumference > 16 inches (40cm)?	Yes	No
GENDER: Male?	Yes	No
TOTAL SCORE		

For general population
OSA - Low Risk : Yes to 0 - 2 questions
OSA - Intermediate Risk : Yes to 3 - 4 questions
OSA - High Risk : Yes to 5 - 8 questions
or Yes to 2 or more of 4 STOP questions + male gender
or Yes to 2 or more of 4 STOP questions + BMI > 35kg/m^2
or Yes to 2 or more of 4 STOP questions + neck circumference 16 inches / 40cm

http://www.stopbang.ca/osa/screening.php

29

34 year old patient presents for percutaneous lumbar discectomy.

Based on "first impressions", are you OK with putting this patient to sleep (in a 1 OR outpatient center where you are the solo-provider)?

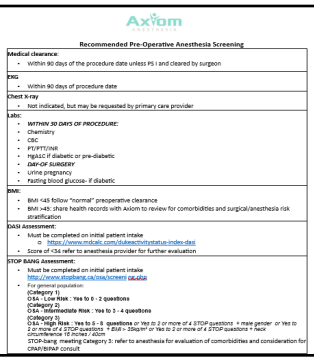
30

Think Outside the Box

- Modifications for safety (opioids)
- Create guidelines and policies – and stick to them
- Use your investigative skills
- Consider a point-person for pre-operative consultations
- YOU are the expert – don't rely on a clearance

31

Policies + Guidelines (center-specific)



Axiom

Recommended Pre-Operative Anesthesia Screening

Medical clearance:
- Within 90 days of the procedure date unless PS I and cleared by surgeon

EKG:
- Within 90 days of procedure date

Chest X-ray:
- Not indicated, but may be requested by primary care provider

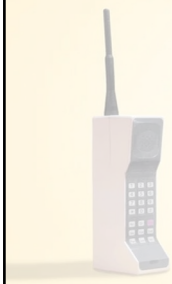
Labs:
- ***WITHIN 30 DAYS OF PROCEDURE:***
- Chemistry
- CBC
- PT/PTT/INR
- HgbA1C if diabetic or pre-diabetic
- ***DAY-OF SURGERY:***
- Urine pregnancy
- Fasting blood glucose- if diabetic

BMI:
- BMI <45 follow "normal" preoperative clearance
- BMI >45: share health records with Axiom to review for comorbidities and surgical/anesthesia risk stratification

DASI Assessment:
- Must be completed on initial patient intake
  - https://www.mdcalc.com/duke-activity-status-index-dasi
- Score of <34 refer to anesthesia provider for further evaluation

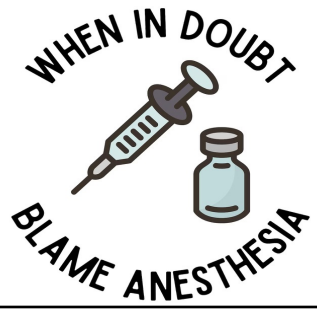
STOP BANG Assessment:
- Must be completed on initial patient intake
  http://www.stopbang.ca/osa/screening.php
- For general population:
  OSA - Low Risk : Yes to 0 - 2 questions
  (Category 1)
  OSA - Intermediate Risk : Yes to 3 - 4 questions
  (Category 2)
  OSA - High Risk : Yes to 5 - 8 questions or Yes to 2 or more of 4 STOP questions + male gender or Yes to 2 or more of 4 STOP questions + BMI > 35kg/m^2 or Yes to 2 or more of 4 STOP questions + neck circumference 16 inches / 40cm
  STOP-bang meeting Category 3: refer to anesthesia for evaluation of comorbidities and consideration for CPAP/BIPAP consult

32



Pick-up the Phone!

33



34

lizbamgbose@gmail.com

35

References

1. Chang MG, Bittner EA. Comparison of societal guidance on perioperative management of glucagon-like peptide-1 receptor agonists: implications for clinical practice and future investigations. *Canadian journal of anesthesia*. 2024;71(9):1302-1315. doi:10.1007/s12630-024-02810-5
2. Cohn SL, eds. *Decision Making in Perioperative Medicine: Clinical Pearls, 2nd Edition*. McGraw Hill; 2025. Accessed September 25, 2025. https://accessmedicine-mhmedical-com.libproxy1.usc.edu/content.aspx?bookid=3557&sectionid=293488571
3. Emerick TD, Martin TJ, Ririe DG. Perioperative Considerations for Patients Exposed to Psychostimulants. *Anesth Analg*. 2023;137(3):474-487. doi:10.1213/ANE.0000000000006303
4. Fischer SP, Schmiesing CA, Guta CG, Brock-Utne JG. General Anesthesia and Chronic Amphetamine Use: Should the Drug Be Stopped Preoperatively? *Anesthesia and analgesia*. 2006;103(1):203-206. doi:10.1213/01.ane.0000221451.24482.11
5. Hajmohamed S, Patel D, Apruzzese P, Kendall M, De Oliveira G. Early Postoperative Outcomes of Super Morbid Obese Compared to Morbid Obese Patients After Ambulatory Surgery Under General Anesthesia: A Propensity-Matched Analysis of a National Database. *Anesthesia & Analgesia*. 2021; 133 (6): 1366-1373. doi: 10.1213/ANE.0000000000005770.
6. Joshi GP, Ankichetty SP, Gan TJ, Chung F. Society for Ambulatory Anesthesia Consensus Statement on Preoperative Selection of Adult Patients with Obstructive Sleep Apnea Scheduled for Ambulatory Surgery. *Anesthesia and analgesia*. 2012;115(5):1060-1068. doi:10.1213/ANE.0b013e318269cfd7
7. Joshi GP, Ahmad S, Riad W, Eckert S, Chung F. Selection of Obese Patients Undergoing Ambulatory Surgery: A Systematic Review of the Literature. *Anesthesia and analgesia*. 2013;117(5):1082-1091. doi:10.1213/ANE.0b013e3182882bf4
8. Safdari KM, Converse C, Dong F, et al. Hemodynamic Effects of Methamphetamine and General Anesthesia. Pearl RG, ed. *Anesthesiology research and practice*. 2022;2022. doi:10.1155/2022/7542311
9. Tutor AW, Lavie CJ, Kachur S, Milani RV, Ventura HO. Updates on obesity and the obesity paradox in cardiovascular diseases. *Prog Cardiovasc Dis*. 2023;78:2-10. doi:10.1016/j.pcad.2022.11.013
10. Wijeysundera DN, Beattie WS, Hillis GS, et al. Integration of the Duke Activity Status Index into preoperative risk evaluation: a multicentre prospective cohort study. *Br J Anaesth*. 2020;124(3):261-270. doi:10.1016/j.bja.2019.11.025

36