- All bariatric surgery patients are seen by PARC for complete pre-operative history/physical, indicated laboratory tests and other studies
- Anesthesia History & Physical should be focused on identification of obesity related issues
  - -Airway (including past anesthesia records to identify potential difficult airway)
  - -presence/severity of OSA
  - -cardiopulmonary system
  - -presence /severity of GERD
  - -presence/severity of kidney/hepatic disease
  - -presence/severity of endocrine disease
- Total body weight (TBW) and lean body weight (LBW) should be calculated for drug dosing
  - -use Callaghan nomogram for LBW calculation or Alternative formula: LBW = IBW + 0.3(TBW-IBW)
- If patient uses CPAP or BiPAP, request pt to bring machine and mask on the day of surgery

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- Anesthesiologist reviews PARC preop, indicated labs and all other studies
- Anesthesiologist completes history and physical with emphasis on any changes from prior visit
- Anesthesiologist explains entire anesthetic process including insertion of intravenous access, positioning, application of monitors, preoxygenation, intubation, maintenance of anesthesia, extubation, pain and PONV control, and post-operative course and obtains informed consent
- Anesthesiologist should ensure that DVT prophylaxis is initiated (sub-cutaneous heparin per surgeons order in preop, SCD's)
- Intravenous access should be obtained in preop
  - -Ultrasound available
  - -an 18G or 20G IV line should be placed
  - -if the patient has poor intravenous access and an 18 or 20G IV is not possible, a smaller IV can be placed
  - -if a smaller IV is placed, an 18 or 20G IV should be placed in the operating room after induction
- Intravenous anxiolytics (i.e. midazolam) should be avoided or minimized
- Preoperative gabapentin/pregabalin is to the discretion of the anesthesiologist. [1]

- Patient should participate in positioning to ensure comfort and in Head Elevated Laryngoscopy Position (HELP position)
- All pressure points should be padded and arms should be fully supported on arm boards and less than 90 degrees
- Place standard monitors in accordance to ASA guidelines (including EKG, non-invasive blood pressure cuff, pulse oximeter, capnography)
- Pre-oxygenation (3 minutes on 100% FiO2; goal to achieve end-expired oxygen of >90%). Obesity in adolescence is an independent risk factor for difficult mask ventilation
- Administer fentanyl 1-3 mcg per kg LBW
- Induce general anesthesia
  - -Propofol 2 mg per kg LBW
  - -Etomidate 0.2 mg per kg LBW or Ketamine 0.125-0.25 mg per kg LBW can be considered as induction alternatives
  - -Succinylcholine 1 mg per kg TBW
- Intubate patient (rapid sequence with cricoid pressure)
  - -Direct laryngoscopy with MAC or Miller blade
  - -7.0 or 8.0 ETT
  - -Bougie, LMA, video laryngoscopes on standby in case of necessary and should be considered only in extreme cases
- Monitor proper placement of endotracheal tube by auscultation and capnography
- Intravenous antibiotics should be given prior to surgical incision
- Intravenous decadron should be given to reduce the risk of PONV
- An orogastric tube should be placed to decompress the stomach then removed

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- Balanced General Anesthesia
- Maintenance of Hypnosis
  - -Inhaled agent is most common (Isoflurane or Sevoflurane)
  - -Propofol and/or dexmedetomidine can be used in addition to inhalational agents or alone as part of a total intravenous anesthetic
- Maintenance of Analgesia
  - -opioid of choice is fentanyl, avoid long acting narcotics. Long acting narcotics are to the discretion of the anesthesiologist.
  - -remifentanil may be used
  - -if remifentanil is used adjunct analgesia is necessary for post-operative analgesia
- Muscle relaxant (rocuronium, cisatracurium)

- Regional Anesthesia- TAP blocks as necessary
- ASA Standard Monitors
  - -EKG
  - -pulse oximetry
  - -noninvasive blood pressure
  - -capnography
  - -peripheral nerve stimulator
  - -temperature (oropharyngeal or nasopharyngeal temperature probes should NEVER be used due to the risk of being stapled during the surgical procedure
- Attention should be paid to patient positioning, including extra operating room table padding and protection for pressure areas
- Reduce tidal volumes to avoid excessive diaphragmatic excursion to optimize surgical field
- Liberal administration of intravenous fluids to maintain urine output, avoid PONV, and rhabdomyolysis

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- Prior to Emergence
  - -suction the oropharynx
  - -administer ondansetron 4 mg IV
  - -upon return of twitches, neostigmine (5 mg (IV) and glycopyrrolate (0.8 to 1 mg IV) should be given
  - -full pharmacologic reversal of neuromuscular block necessary to avoid postoperative residual neuromuscular block in these at risk patients
- Return to spontaneous ventilation on 100% FiO2
- Place patient in reverse trendelenburg position to optimize ventilation
- Assess readiness for extubation
  - -patient awake
  - -adequate tidal volumes
  - -adequate oxygen saturation
  - -adequate minute ventilation/end-tidal CO2
  - -acceptable hemodynamics
- Extubate patient on operating table
  - -NEVER move patient to gurney prior to extubation in case of the need to re-intubate
- Immediately after extubation place face-mask on patient
  - -assess adequacy of ventilation
  - -ensure patient is able to maintain oxygen saturation
- Transition to non-rebreather face mask on 8-10 liters of oxygen per minute
- Assess patient and vital signs prior to transfer to gurney
- Transfer patient to gurney
- Assess vital signs
- Transfer patient to PACU with supplemental oxygen, pulse oximetry monitoring, and in head-elevated position

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- Apply monitors to patient
- Re-assess hemodynamics, oxygenation and ventilation, and temperature
- Handoff to PACU RN using PACU handoff tool
- Post-operative orders to include
  - -Analgesia (Fentanyl opioid of choice, avoid long acting narcotics)
  - -PONV prophylaxis (ondansetron, Phenergan)
  - -IV fluids
  - -supplemental oxygen
- Patients who use Continuous Positive Airway Pressure (CPAP) or Bi-level Positive Airway Pressure (BiPAP) at home should have it available to them in the Post Anesthesia Care Unit (PACU) for use as needed, if ordered by the surgeon
- Patient should be reassessed by anesthesiologist before leaving PACU discharge note completed by anesthesiologist

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[1] Rebecca Claure, Genevieve D'souza and Jen Wagner. 4/9/2018