

Post Anaesthesia & Sedation Care

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Introduction



- Recovery from anesthesia and sedation can range from completely uncomplicated to life-threatening.
- Must be managed by skilled medical and nursing personnel



- All patients who have received general anesthesia, regional anesthesia, or monitored anesthesia care should receive postanesthesia management.
- The patient should be transported to the PACU by a member of the care team that is knowledgeable about the patient's condition.
- Upon arrival in the PACU, the patient should be re-evaluated and a verbal report should be provided to the nurse.
- The patient shall be evaluated continually in the PACU.
- A physician is responsible for discharge of the patient.

Transport from the O.R.



Do not transport until

- Patient has stable airway
- Ventilation is adequate
- Hemodynamics are stable

Patient Care in the PACU



- Coordinate prior to arrival
- Admission
 - Apply oxygen and monitor
 - Receive report
 - Baseline vital signs / temperature
- Monitor and observe
- Achieve cardiovascular stability
- Achieve respiratory stability
- Achieve pain control Discharge from PACU

Pulse Oximetry

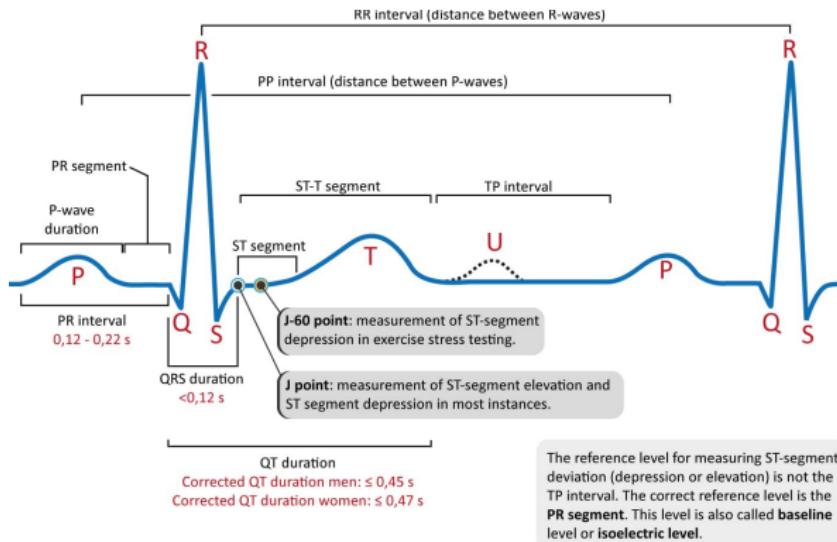
- Standard of care
- Should be first monitor applied
- Documents delivery of oxygenated blood to a peripheral site
- Documents presence of a pulse



Blood Pressure



- Obtain baseline readings
- Shivering may affect accuracy
- Adjust transducer to proper height



- Note the rate and rhythm
- Note ST segment compared to intraoperative tracing

Temperature

- Expect hypothermia
- Keep covered during transport and admission to the PACU
- Actively rewarm in cold



Initial Assessment



- Color
- Respiration
- Circulation
- Consciousness
- Activity

Aldrete's scoring System

Color



Pink	2 points
Pale / dusky	1 point
Cyanotic	0 points

Aldrete's Scoring System

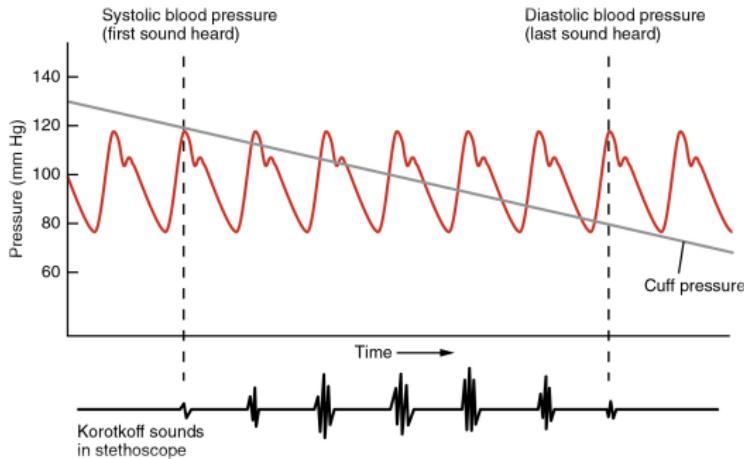
Respiration

95%

<i>Can take deep breathe and cough</i>	2 points
<i>Shallow but adequate breath</i>	1 point
<i>Apnea or obstruction</i>	0 points

Aldrete's Scoring System

Circulation



- | | |
|------------------------------|----------|
| BP within 20% of baseline | 2 points |
| BP within 20-50% of baseline | 1 point |
| BP deviating more than 50% | 0 points |

Aldrete's Scoring System

Consciousness



Awake, alert, oriented	2 points
Arousalable, but readily sleeps	1 point
No response	0 points

Aldrete's Scoring System

Activity



Moves all extremities	2 points
Moves 2 extremities	1 point
No movement	0 points



- Patient's name and age
- The procedure
- Type of anesthesia or sedation
- Preoperative vital signs
- Coexisting disease



Drugs of interest:

- Narcotics / sedatives
- Relaxants / reversal
- Antibiotics (dose and time)
- Vasoactive drugs
- Steroids

Reporting

Cont.



- Preoperative medications
 - Routine
 - Sedatives administered by anesthetist
- Allergies
- Blood loss / urine output
- Fluid replacement

Reporting

Cont.



- Intraoperative lab results
 - *Trends*
 - *Most recent*
- Anesthetic / surgical complications
- Special treatments
- Special considerations

Problems

- Airway obstruction
- Arterial hypoxemia
- Hypoventilation
- Hypertension
- Cardiac dysrhythmias
- Oliguria
- Bleeding
- Hypothermia
- Agitation upon emergence
- Delayed emergence
- Nausea and vomiting
- Pain

Respiratory complications



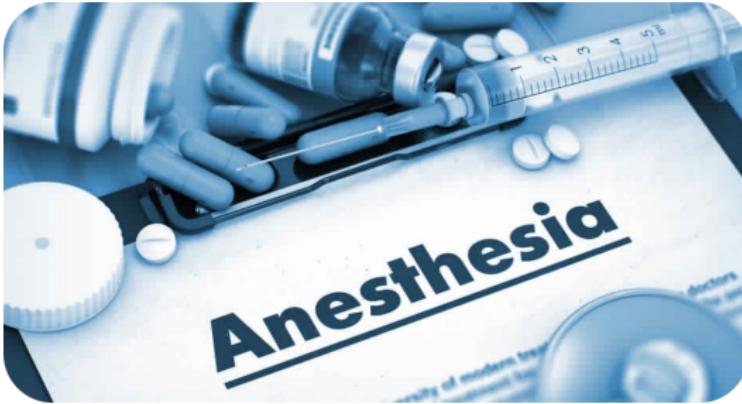
- Respiratory depression
- Airway Obstruction

Airway Obstruction Treatment



- Verbal/Physical stimulation
- Oral Airway
- Nasal Airway
- LMA
- Tracheal intubation
- Cricothyroidotomy
- Trachostomy

Hypoventilation



- Residual anesthesia
- Narcotics
- Inhalation agent
- Residual Relaxant
- Post op Analgesia

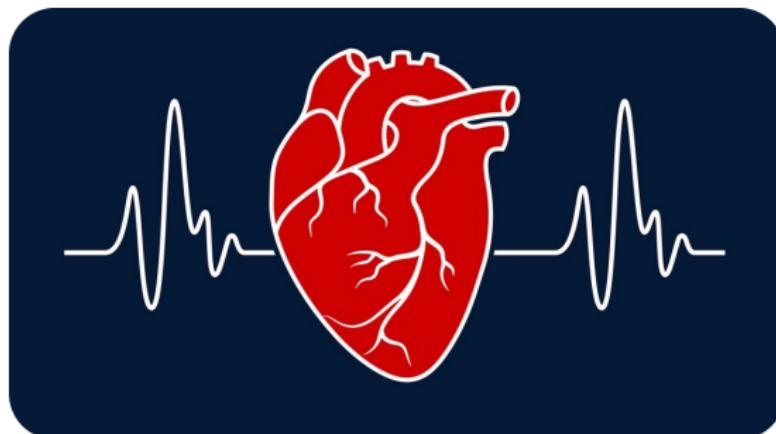
Hypoventilation

Treatment



- Stay with patient
- Assess the problem
- Reverse relaxant
- Reverse narcotic
- Reverse midazolam
- Bag-Mask Ventilation

Cardiovascular Complications



- Hypotension/ Hypertension
- Bradycardia
- Dysrhythmia
- Fainting

Cardiovascular Complications

Hypertension



- Common response to SNS stimulation
- Pain
- Full Bladder
- Common in hypertensive patients
- Fluid overload

Hypotension

Causes & Management

- Decreased venous return
 - Hypovolemia
 - Sympathectomy
 - 3rd space loss
- Left ventricular dysfunction

Common scenario:

- Arrives hypothermic, vasoconstricted, and normotensive.
- As patient rewarms, he/she vasodilates and becomes hypovolemic.
- Initially treat with fluid bolus

Secondary to

- Hypoxia
- Hypercarbia
- Acidosis
- Catecholamines
- Electrolyte abnormalities
- Hypothermia

Treatment

- Identify and treat the problem
- Assure oxygenation
- Pharmacology as needed

Urine Output

- Oliguria
- Hypovolemia
- Surgical trauma to ureters
- Impaired renal function
- Mechanical blocking of catheter

Management

- Assess catheter patency
- Fluid bolus
- Diuretics if appropriate

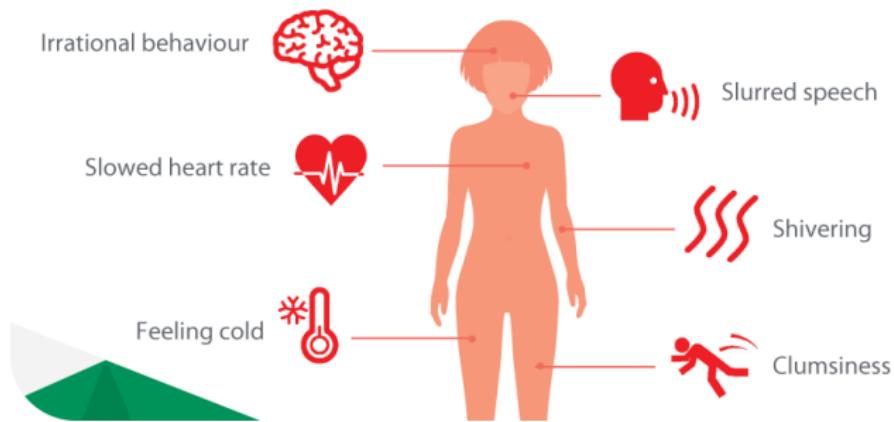
Post op Bleeding

- May be internal or external
- Usually surgical problem
- Consider coagulopathy

Management

- Open fluids/start lines
- Notify surgeon
- Order blood
- Prepare to return to OR

HYPOTHERMIA WARNING SIGNS



- Assume that all patients will arrive cold
- Get baseline temperature
- Actively rewarm
- Administer oxygen if shivering

Altered Mental Status

- Protect the patient
- Reaction to drugs?
- Sedatives
- Anticholinergies
- Consider baseline mental status
- Intoxication/Drug use

Consider

- Pain
- Distended bladder
- Hypoventilation
- Low cardiac output
- CVA

Postoperative Nausea & Vomiting

- Leading cause of unexpected admission
- Risk factors
 - Type of anesthesia
 - Type of surgery
 - Autonomic involvement

Prevention & Management

- NPO status
- Droperidol
- Metoclopramide
- Histamine blockers
- Ondansetron
- Propofol

PACU Discharge Criteria



- Aldrete's scoring more than 9
- Awake with muscle strength
- Patent airway / good respiratory function
- Stable vital signs
- Patency of tubes, catheters, IV's
- Condition of surgical site
- Comfort / anxiety



