# Adult Moderate Sedation Analgesia Policy Competency

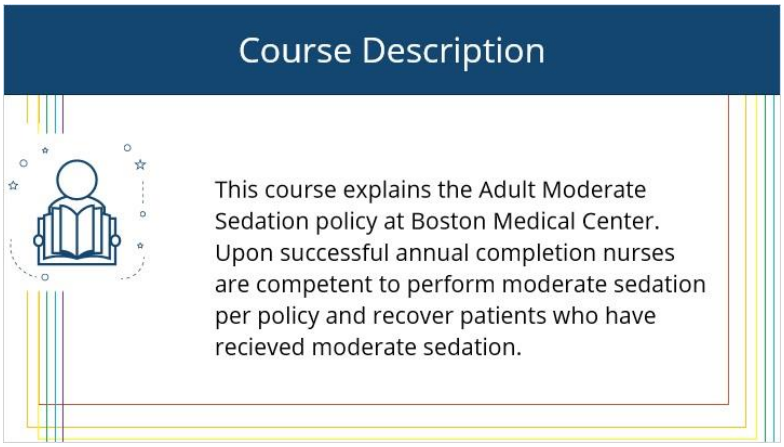
## 1. Home

### *1.1 Home*

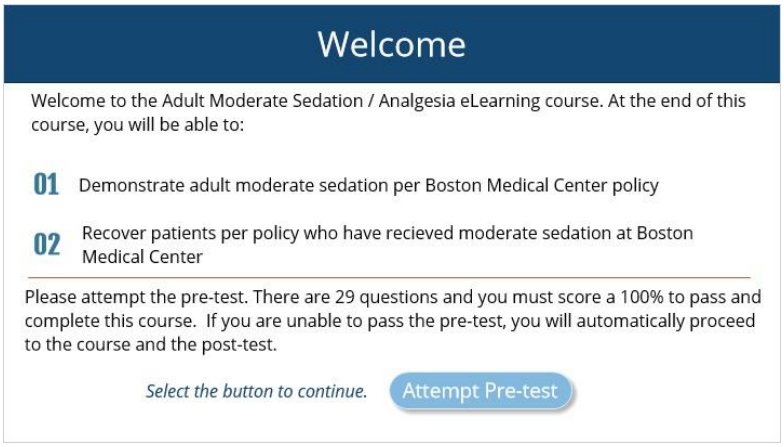



**Notes:**

### *1.2 Course Description*

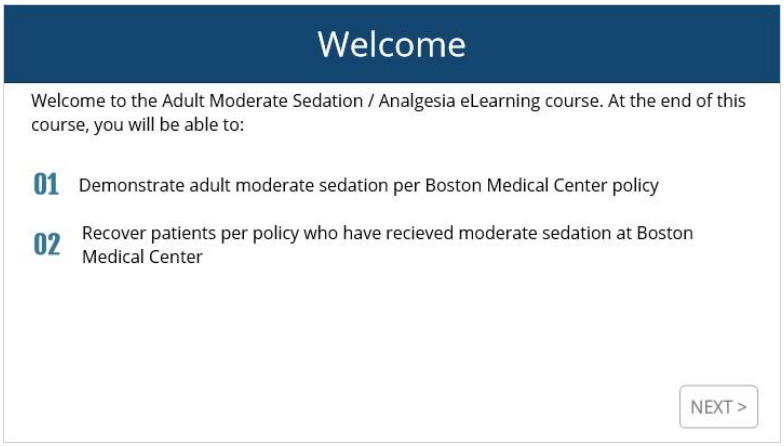


## *1.3 Learning Objectives*




**Notes:**

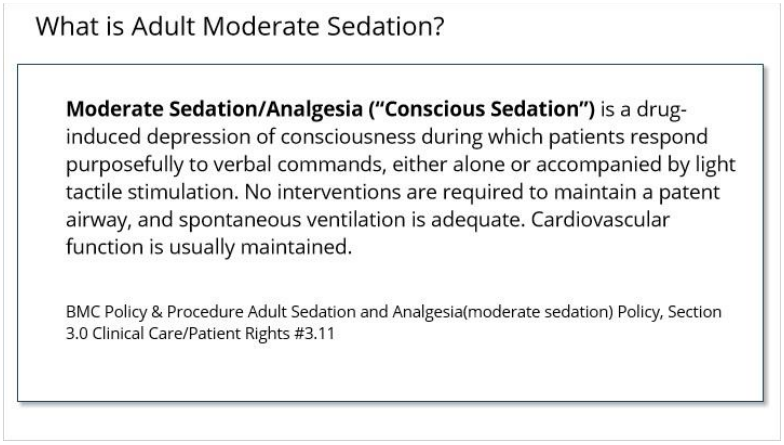
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## *1.4 Introduction*

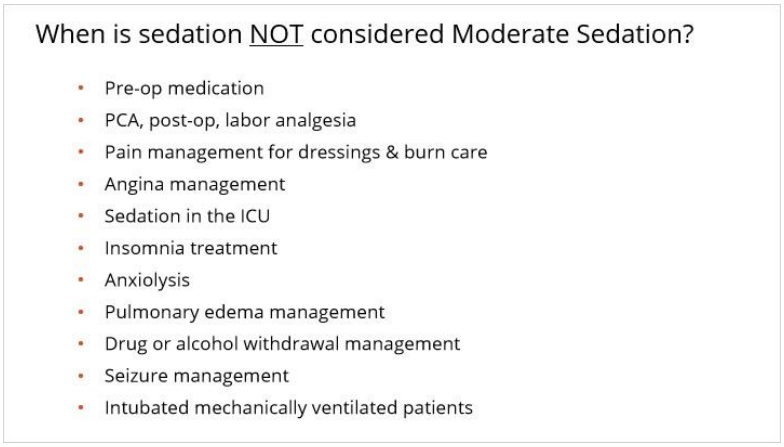



## *1.5 What is Adult Moderate Sedation?*

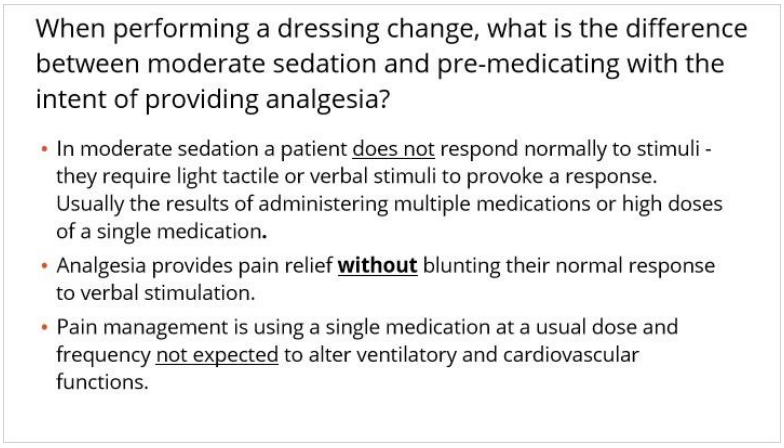



**Notes:**

## *1.6 When is sedation NOT considered Moderate Sedation?*

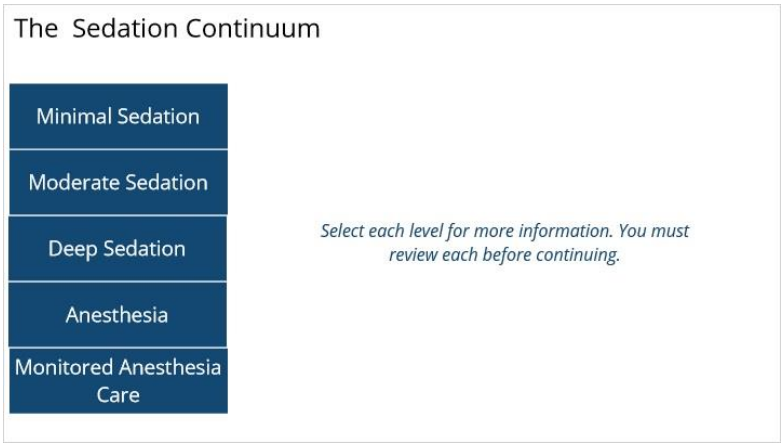



## *1.7 When performing a dressing change - What is the difference between moderate sedation and pre-medicating with the intent of providing analgesia?*

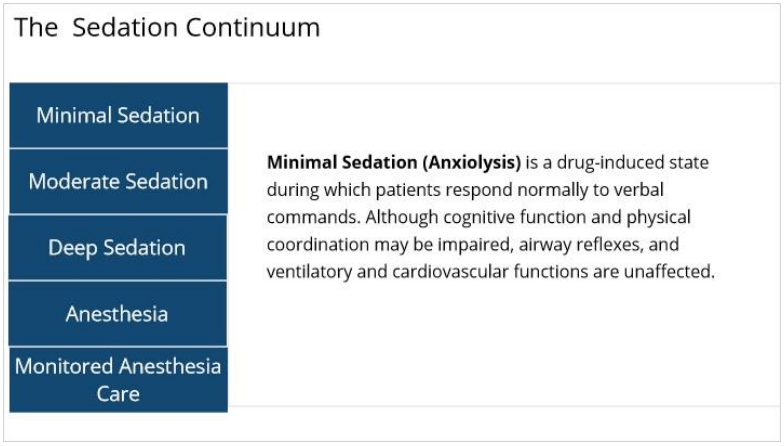



**Notes:**

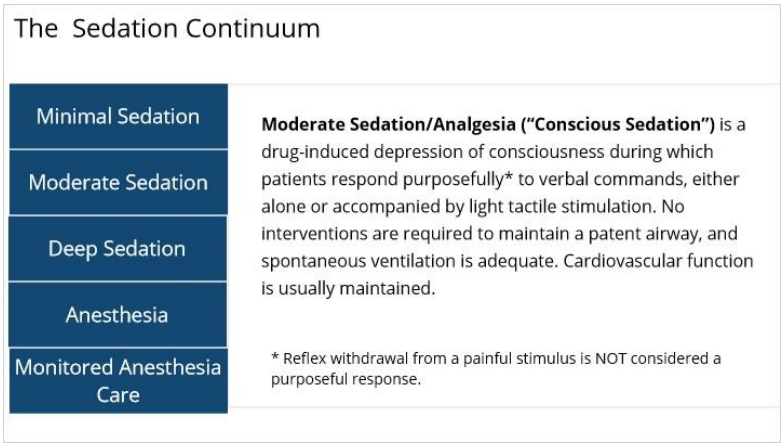
## *1.8 The Sedation Continuum*



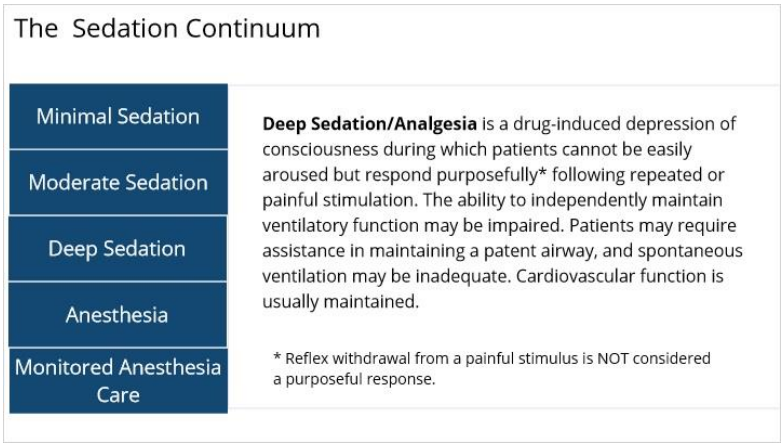

### Step 01 (Slide Layer)



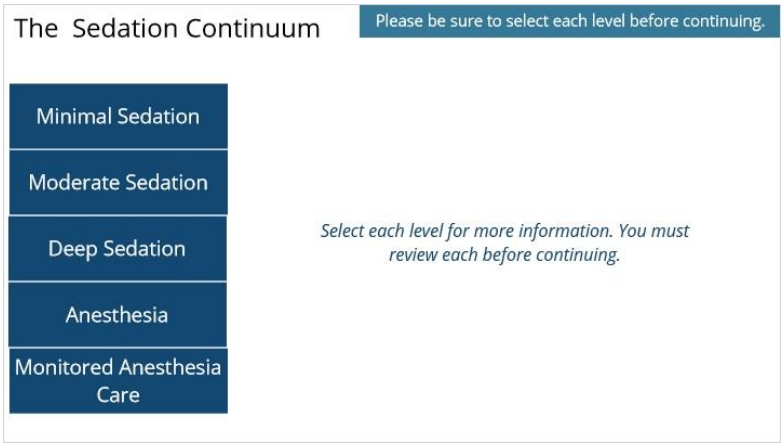

### Step 02 (Slide Layer)



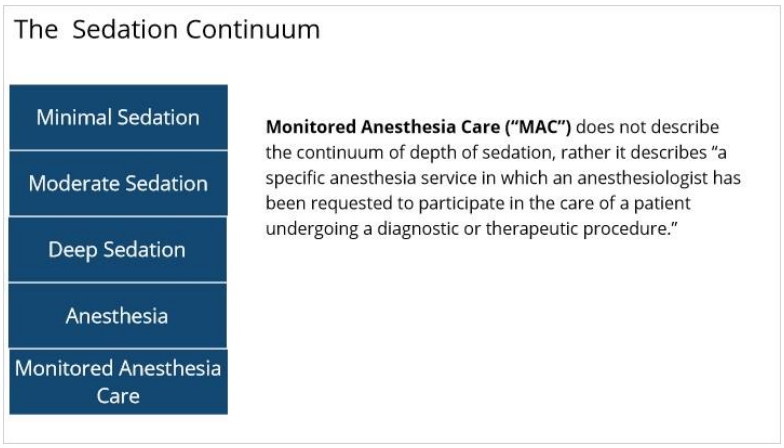
## Step 03 (Slide Layer)



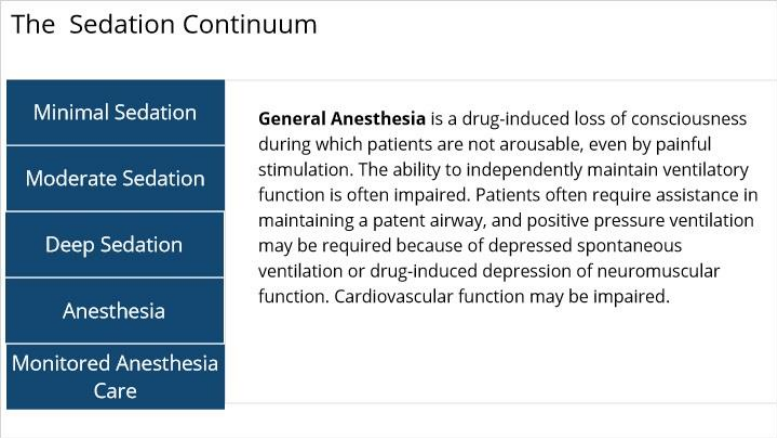

## Reminder (Slide Layer)




## Step05 (Slide Layer)



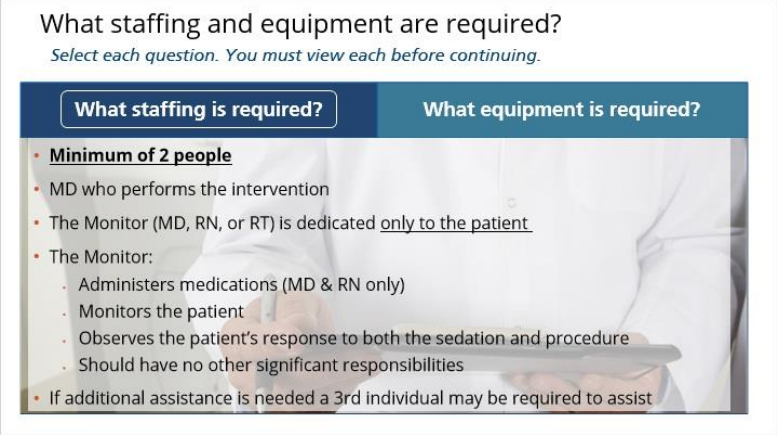
## Step 04 (Slide Layer)



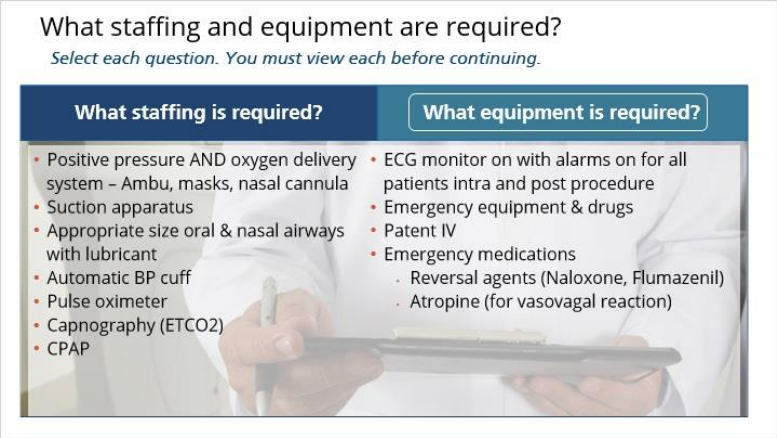

## *1.9 What staffing and equipment are required?*




## Staffing (Slide Layer)



## Equipment (Slide Layer)




## Reminder (Slide Layer)

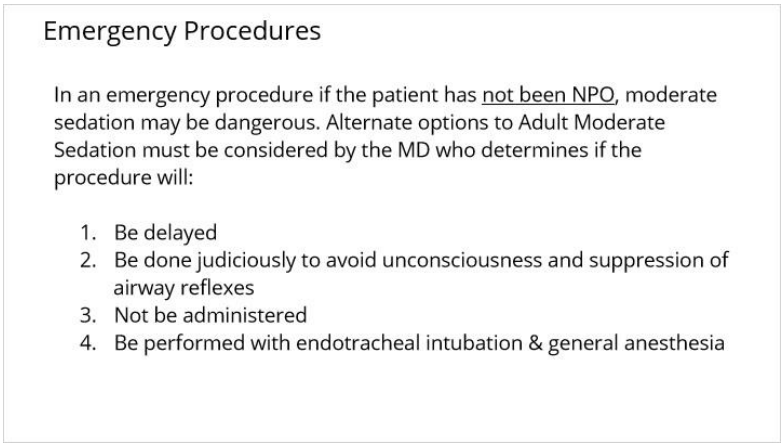



## *1.10 NPO Guidelines*

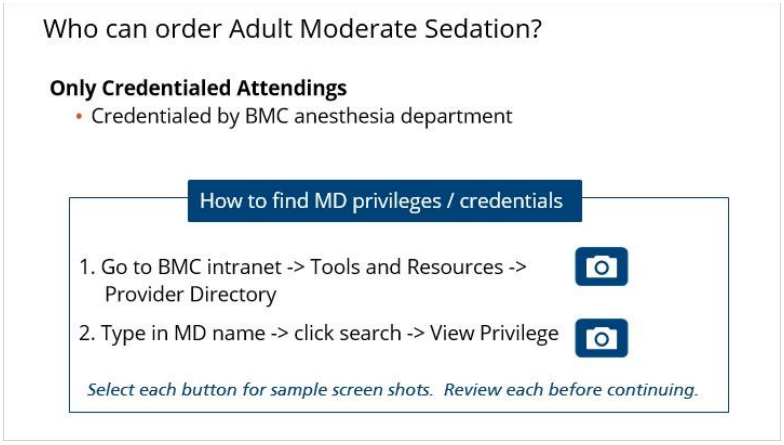
NPO Guidelines

| Ingested Material | Minimum Fasting Period |
|---|---|
| Clear liquids | 2 hours |
| Breast milk | 4 hours |
| Infant formula | 6 hours |
| Non-human milk | 6 hours |
| Light meal | 6 hours |
| High fat or protein content meal | Clinician may consider > 6 hours |
| MD may determine meds may be taken with a sip of water | |

## *1.11 Emergency Procedures*




## *1.12 Who can order Adult Moderate Sedation?*

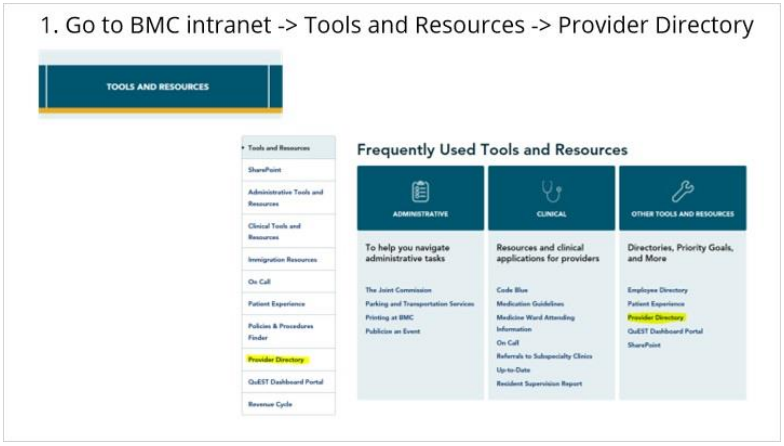



**Notes:**

## Reminder (Slide Layer)




## *1.13 1. Go to BMC intranet*




**Notes:**

## *1.14 2. Type in MD name*

2. Type in MD name -> click search -> View Privilege and the following credential should be listed: Moderate sedation



PROVIDER

| | | | Last Name | First Name | Middle Name | Department | Section | Degree | Status | NPI Number |
|---|---|---|---|---|---|---|---|---|---|---|
| Edit | View Profile | View Privilege | Pande | Ashvin | N | Medicine | Cardiology | MD | Staff | 1194705087 |

PROVIDER PRIVS

| Section Description | Detail Description | Release Date | Expire Date | Dept Name |
|---|---|---|---|---|
| INTERNAL MEDICINE | Internal Medicine with subspecialty-Cardiology | 08/01/2019 | 07/31/2020 | Medicine |
| PROCEDURES IN MEDICINE | Balloon Mitral Valvuloplasty (Setting 3) | 08/01/2019 | 07/31/2020 | Medicine |
| PROCEDURES IN MEDICINE | Carotid Artery Stenting (Setting 3) | 08/01/2019 | 07/31/2020 | Medicine |
| PROCEDURES IN MEDICINE | Diagnostic Cardiac Catheterization with coronary (and Cardiovascular) Angiography (Setting 3) | 08/01/2019 | 07/31/2020 | Medicine |
| PROCEDURES IN MEDICINE | Elective electric cardioversion (Setting 3) | 08/01/2019 | 07/31/2020 | Medicine |
| PROCEDURES IN MEDICINE | Fluoroscopy* (Setting 5) | 08/01/2019 | 07/31/2020 | Medicine |
| PROCEDURES IN MEDICINE | Moderate Sedation* (Setting 3) | 08/01/2019 | 07/31/2020 | Medicine |
| | Official electrocardiographic | | | |

## *1.15 ASA Classification*

ASA Classification

| Class | Description |
|---|---|
| Class I | a normally healthy patient |
| Class II | a patient with mild systemic disease |
| Class III | a patient with severe systemic disease that limits but is not incapacitating |
| Class IV | a patient with severe systemic disease that is in a constant threat to life |
| Class V | a morbid patient who is not expected to survive with or without the operation/procedure |

*BMC Policy & Procedure Adult Moderate Sedation (Conscious sedation) Policy, Section 3.0 Clinical Care/Patient Rights #3.11

## *1.16 Patient Selection for Adult Moderate Sedation/Analgesia*

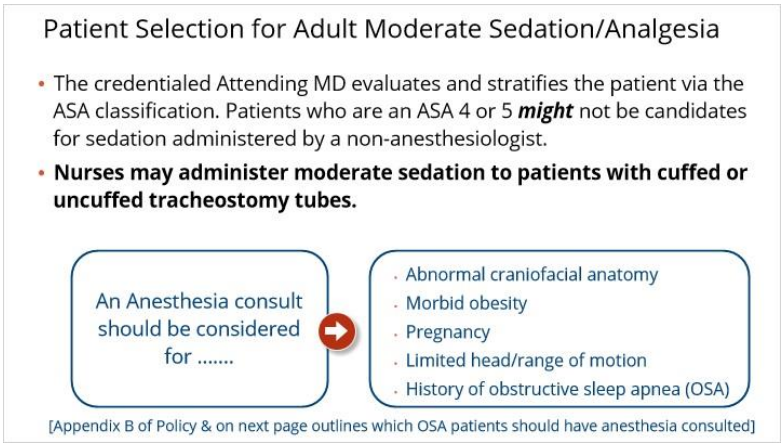
Patient Selection for Adult Moderate Sedation/Analgesia

- The credentialed Attending MD evaluates and stratifies the patient via the ASA classification. Patients who are an ASA 4 or 5 ***might*** not be candidates for sedation administered by a non-anesthesiologist.
- **Nurses may administer moderate sedation to patients with cuffed or uncuffed tracheostomy tubes.**

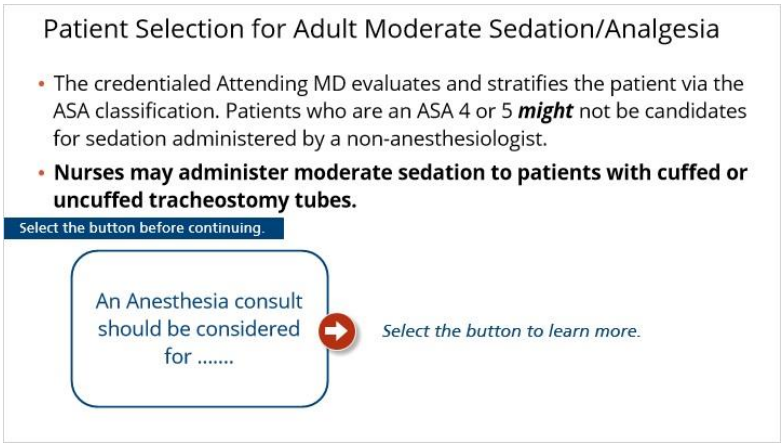
An Anesthesia consult should be considered for .....

*Select the button to learn more.*

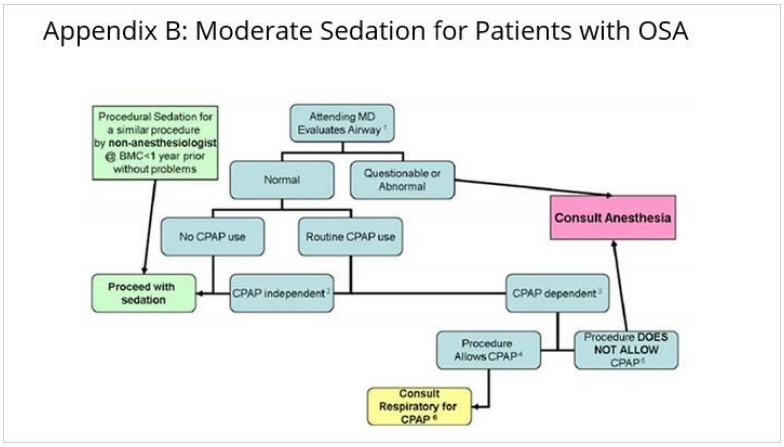
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## Reminder (Slide Layer)




## *1.17 Appendix B: Moderate Sedation for Patients with OSA*



## *1.18 Documentation and Roles*




## *1.19 Pre -Moderate Sedation Documentation*

Pre -Moderate Sedation Documentation is required, located in either a **Moderate Sedation note or H&P**, and includes:

- Documentation of the patient's state of consciousness and medical condition
- A pre-procedure focused physical exam including an ASA classification
- Review of the medical patient's history and physical for:
  - Allergies & previous allergic reactions
  - Concurrent medications
  - Time of last oral intake
  - Pertinent medical history including history of tobacco, alcohol or substance abuse
  - History of sedation/anesthesia problems
  - History of obstructive sleep apnea
- A sedation plan of care & discharge plan

## *1.20 Pre -Moderate Sedation Documentation*

Pre -Moderate Sedation Documentation is required, located in either a **Moderate Sedation note or H&P**, and includes:

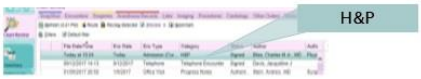
(continued)

- The initial dose of medication(s) to be administered is listed in this document NOT on the MAR
  - New TJC regulations do not allow initial doses to be a verbal order unless it's an emergency. MDs must identify the initial dose of medication(s) to be given in the documentation. Verbal orders are allowed during the procedure.
- Required before the procedure
- Must be signed by the Credentialed Physician prior to the procedure if completed by a Fellow, Resident, or PA

## *1.21 Required Physician/LIP pre-procedure documentation*

Required Physician/LIP pre-procedure Documentation

- Located in the Chart's Note Section
  - GI (Endoscopy) doctors document in their H & P




- All other MDs will complete a note titled Moderate Sedation



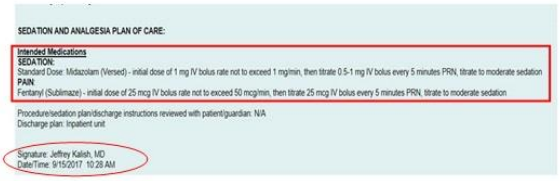

- Consent must be obtained & address both the procedure & moderate sedation – on paper

## *1.22 Nursing Workflow*

Nursing Workflow

Review the note for 2 things:

1) The Credentialed Physician has signed the note
2) The Initial Medication orders


SEDATION AND ANALGESIA PLAN OF CARE:

Intended Medications
SEDATION:
Standard Dose: Midazolam (Versed) - initial dose of 1 mg IV bolus rate not to exceed 1 mg/min, then titrate 0.5-1 mg IV bolus every 5 minutes PRN, titrate to moderate sedation
PAIN
Fentanyl (Sublimaze) - initial dose of 25 mcg IV bolus rate not to exceed 50 mcg/min, then titrate 25 mcg IV bolus every 5 minutes PRN, titrate to moderate sedation

Procedure/sedation plan/discharge instructions reviewed with patient/guardian: N/A
Discharge plan: Inpatient unit

Signature: Jeffrey Kalish, MD
Date/Time: 9/15/2017 10:28 AM

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## *1.23 Role of the Credentialed Attending Physician*

Role of the Credentialed Attending Physician

Prior to the initiation of moderate sedation:

Validates

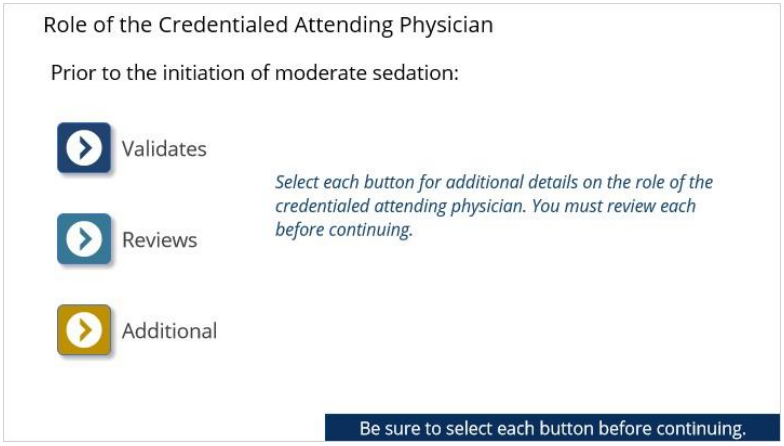
Reviews

Additional

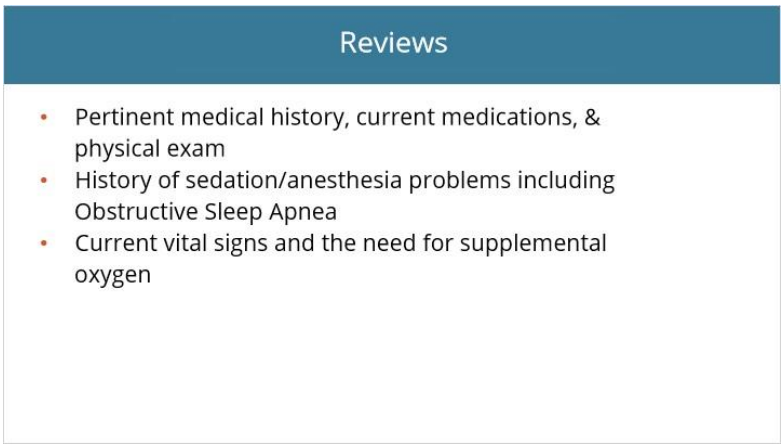
*Select each button for additional details on the role of the credentialed attending physician. You must review each before continuing.*

**Notes:**

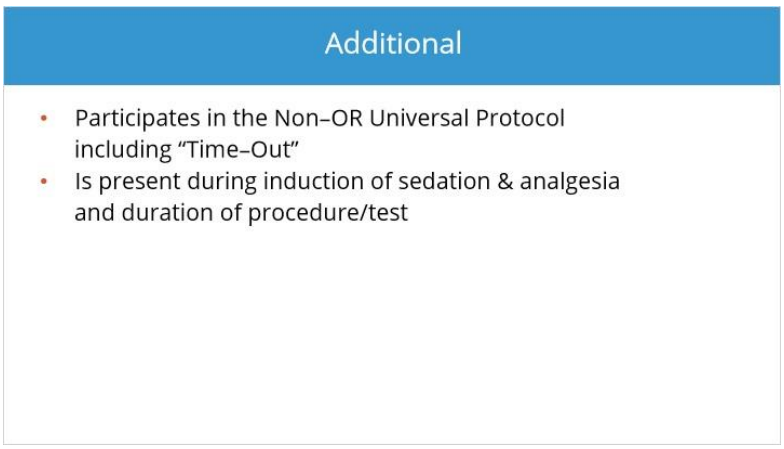
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## *1.24 Reviews*




## *1.25 Additional*



## *1.26 Role of the Monitor - Pre-procedure*

Role of the Monitor - Pre-procedure

- Complete the below pre-procedure documentation:
  - Vital Signs, $ETCO_2$, and oxygen saturation
    - Outpatient areas document weight (Kg), obtain/review prior to Admission (PTA) medications, valuables, language barriers
  - Pain Assessment
  - Primary Physical Assessment
  - Pre-procedure Checklist
  - Care plan
  - Insure a functioning IV
- Participate in and documents the Non OR Universal Protocol (time out)

## *1.27 Validates*

Validates

- The patient's state of consciousness & medical condition are appropriate for moderate sedation
- The pre-procedure focused physical exam
- ASA classification
- The individualized sedation plan (indicating medications to be used)
- Allergies and time of last oral intake
- A consent has been obtained addressing the procedure and the actual/possible need for moderate sedation

## *1.28 The Monitor Documents Moderate Sedation*

The Monitor Documents Moderate Sedation

| Inpatient areas | Non Epic areas or if Epic is down |
| --- | --- |
| Document in the sedation narrator in Epic or other outpatient Epic tools | Utilize paper Moderate Sedation Procedure Record |





*Click images to zoom / Click images to unzoom*

## *1.29 Documentation of Timeout*

Documentation of Timeout

***ALL STAFF IN ROOM MUST PAUSE AND FULLY PARTICIPATE IN THE TIMEOUT***

- Epic area- utilize the Non-OR Universal Protocol built into the Epic tools
- Non-Epic areas or if Epic is down - green timeout sticker or Non-OR Universal Protocol section in the Moderate Sedation Procedure Record (see below).







*Click images to zoom / Click images to unzoom*

## *1.30 Role of the Monitor - During the Procedure*

Role of the Monitor - During the Procedure

- Administer/document medications (MD or RN only)
- Assess IV access
- Continually monitor the patient's response to medications and the procedure
  - Monitors response to verbal commands
  - When a verbal response is not possible the ability to give a thumbs up or respond to verbal or light tactile (light tap) stimulation suggests the patient will be able to maintain his airway and take deep breaths if necessary
- The monitor has no other significant responsibility from the initiation of sedation until the completion of recovery

## *1.31 Role of the Monitor - During the Procedure: Monitoring and Documentation*

Role of the Monitor - During the Procedure: Monitoring and Documentation

| Continuously Monitor | Document |
|---|---|
| • VS including oxygen saturation and $ETCO_2$<br>  · Set the NBP to refresh at least every 5-10 minutes during the procedure (Recommendation from American Society of Anesthesiologists)<br>• Cardiac rhythm<br>• Sedation level<br>• Pain level | Document at the Start of the procedure and every 5-10 MINUTES<br>• BP<br>• HR<br>• Cardiac Rhythm<br>• RR<br>• $O_2$ SAT<br>• $ETCO_2$<br>• Sedation Scale<br>• Pain Scale |

## *1.32 What does the Monitor assess during recovery?*

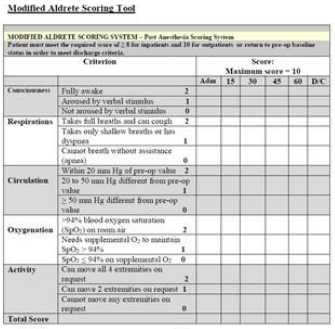
What does the Monitor assess during recovery?

| Continuously Monitor | Document |
| --- | --- |
| **Continuously monitor** the patient for a minimum of 30 minutes since the last dose of sedation **AND** until the patient attains the target Recovery Score. | **Document** the following items at the end of the procedure and every 15 minutes until the target Recovery Score and discharge/recovery criteria are met to end the recovery period.<br>• Heart rate<br>• Blood pressure<br>• Respiratory rate<br>• Oxygen saturation<br>• Cardiac rhythm<br>• Pain level<br>• Recovery Score |

## *1.33 Modified Aldrete Score (MAS)*

Modified Aldrete Score (MAS)

Boston Medical Center uses the MAS for adult recovery.



**Modified Aldrete Scoring Tool**

| MODIFIED ALDRETE SCORING SYSTEM - Post Anesthesia Scoring System<br>Patient must meet the required score of ≥ 8 for inpatient and 10 for outpatient or return to pre-op baseline status in order to meet discharge criteria. | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Criterion | | Score: Maximum score = 10 | | | | | | |
| | | | Adm | 15 | 30 | 45 | 60 | D/C |
| Consciousness | Fully awake | 2 | | | | | | |
| | Aroused by verbal stimulus | 1 | | | | | | |
| | Not aroused by verbal stimulus | 0 | | | | | | |
| Respirations | Takes full breaths and can cough | 2 | | | | | | |
| | Takes only shallow breaths or has dyspnea | 1 | | | | | | |
| | Cannot breath without assistance (apnea) | 0 | | | | | | |
| Circulation | Within 20 mm Hg of pre-op value | 2 | | | | | | |
| | 20 to 50 mm Hg different from pre-op value | 1 | | | | | | |
| | ≥ 50 mm Hg different from pre-op value | 0 | | | | | | |
| Oxygenation | >94% blood oxygen saturation ($SpO_2$) on room air | 2 | | | | | | |
| | Needs supplemental $O_2$ to maintain $SpO_2$ > 94% | 1 | | | | | | |
| | $SpO_2$ ≤ 94% on supplemental $O_2$ | 0 | | | | | | |
| Activity | Can move all 4 extremities on request | 2 | | | | | | |
| | Can move 2 extremities on request | 1 | | | | | | |
| | Cannot move any extremities on request | 0 | | | | | | |
| Total Score | | | | | | | | |

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**Notes:**

## *1.34 How long is the Recovery phase?*

How long is the Recovery phase?

- Patients must be recovered for a minimum of 30 minutes since the last dose of sedation **AND** until the patient attains the target Recovery Score
- **Patient's requiring reversal of narcotics or benzodiazepines will require a minimum recovery period of 2 hours following the administration of the reversal agent.**
- If patients are transferred for further recovery, they will be accompanied by a MD, PA, RT, or RN to a designated area with personnel performing recovery care/monitoring.

## *1.35*

The Discharge Criteria listed below is required on all patients & must be met to end the recovery period

- The patient must have achieved an MAS of ≥ 8 for inpatient, 10 for outpatients, or baseline pre-procedure state
- A note should document the reason for a score less than 10
- Patient is alert
- Stable vital signs and $O_2$ saturation
- Swallow, cough, gag reflexes present
- Nausea-dizziness minimal
- Dressing/procedure site checked
- Able to sit unaided if appropriate to baseline & procedure
- Minimal pain - managed by appropriate analgesics



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## *1.36 Outpatient Discharge Criteria also includes:*

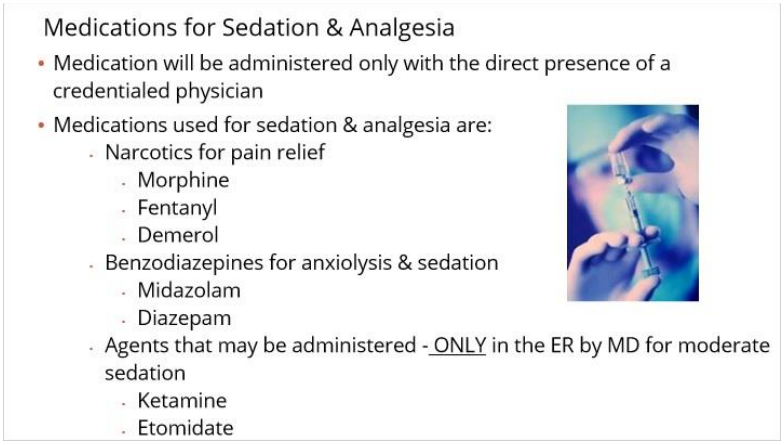
Outpatient Discharge Criteria also includes:

- MAS of 10 or pre-procedure state
- Hydration adequate (able to drink fluids)
- Voided or unable to void but comfortable
- A written D/C order
- Discharge instructions explaining anticipated activity limitations are documented and given to patient, caregiver or family
- A 24 hour emergency contact
- Patients may not leave the hospital unless accompanied by a responsible designated adult
- Follow up phone call is recommended within 24 hours post procedure

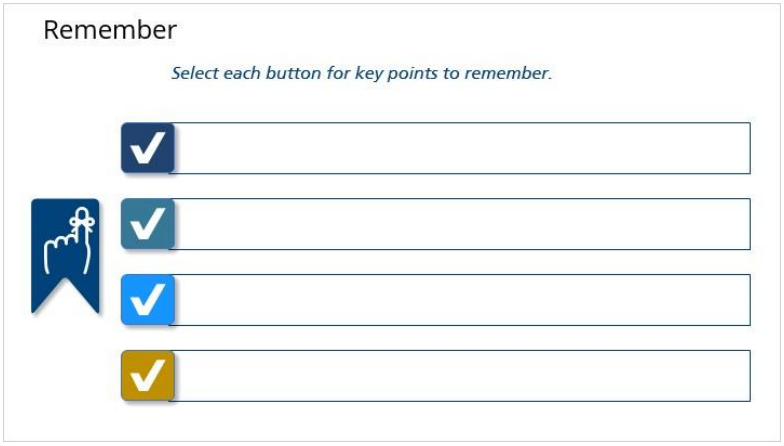
## *1.37 Medications*



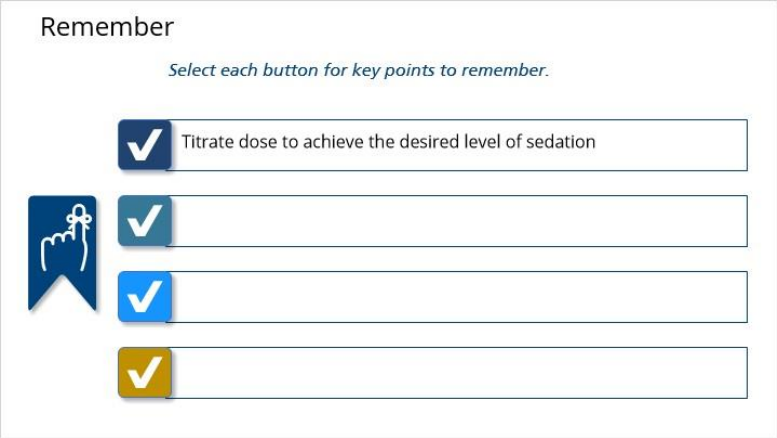

## *1.38 Medications for Sedation & Analgesia*



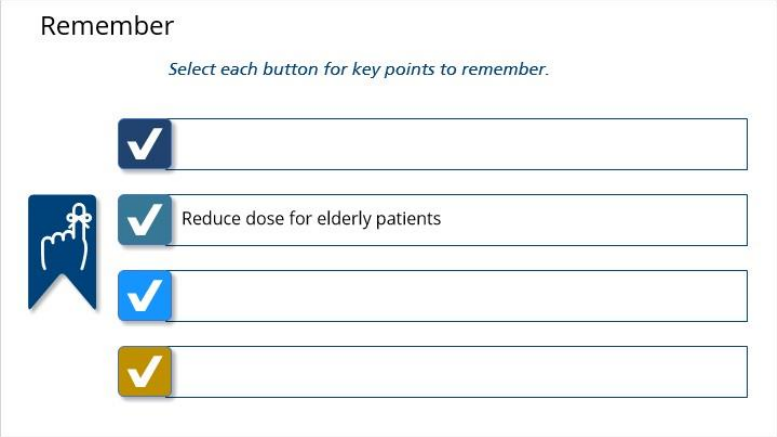

## *1.39 Remember*



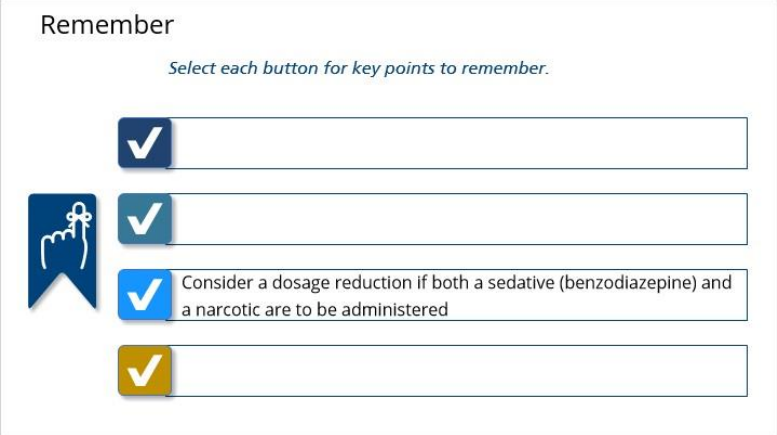
## Titrate (Slide Layer)



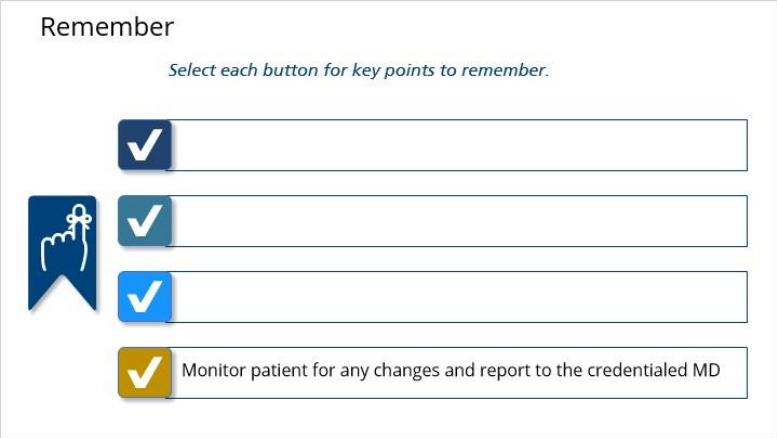

## Reduce (Slide Layer)



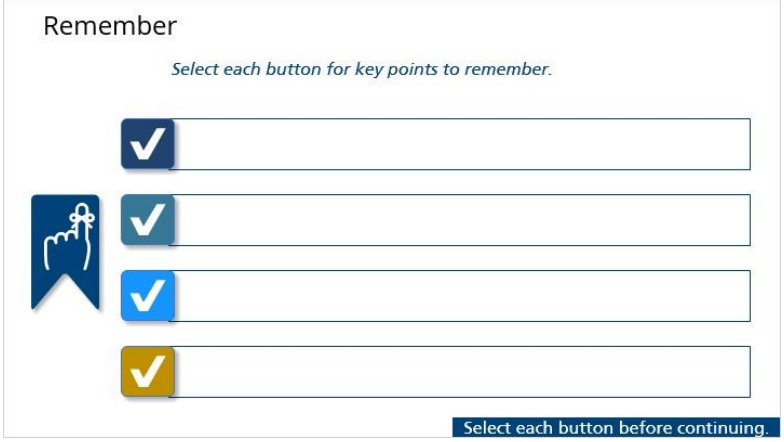

## Consider (Slide Layer)



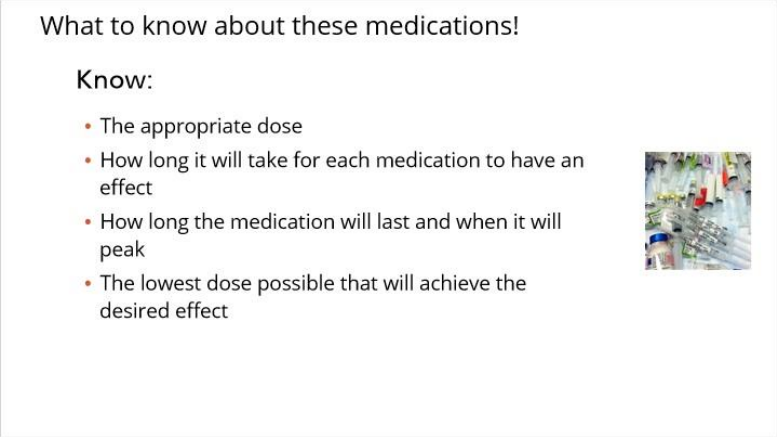
## Monitor (Slide Layer)




## Reminder (Slide Layer)




## *1.40 What to know about these medications !*

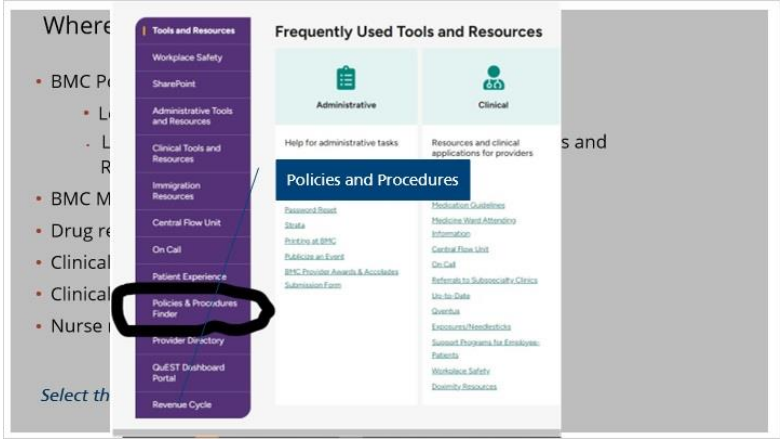


## *1.41 Where are your resources?*

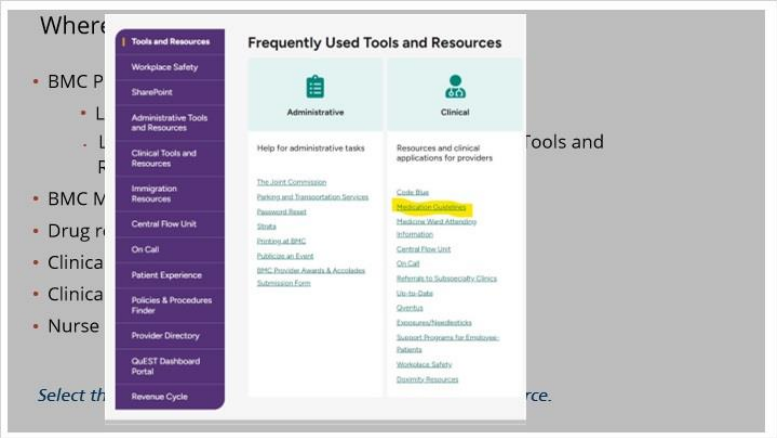



**Notes:**

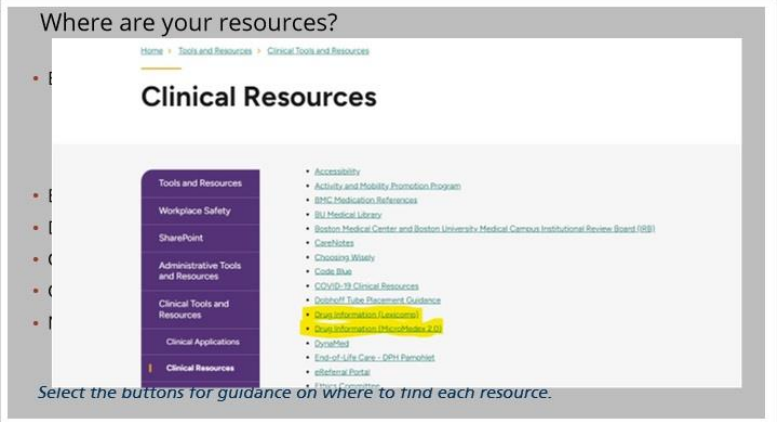
## BMC policies (Slide Layer)



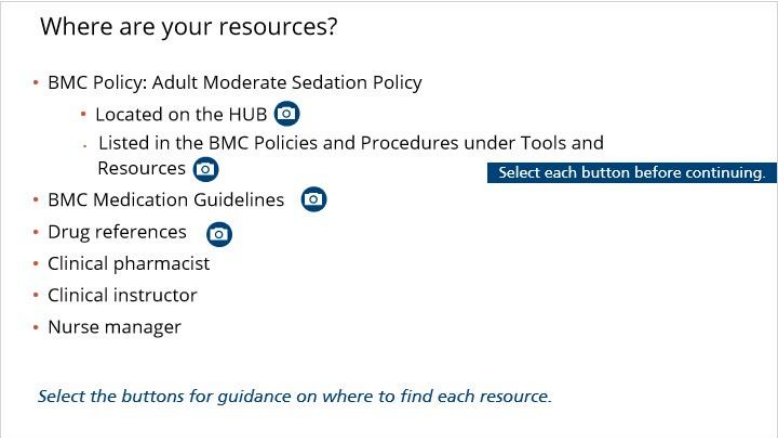
## Med Guidelines (Slide Layer)



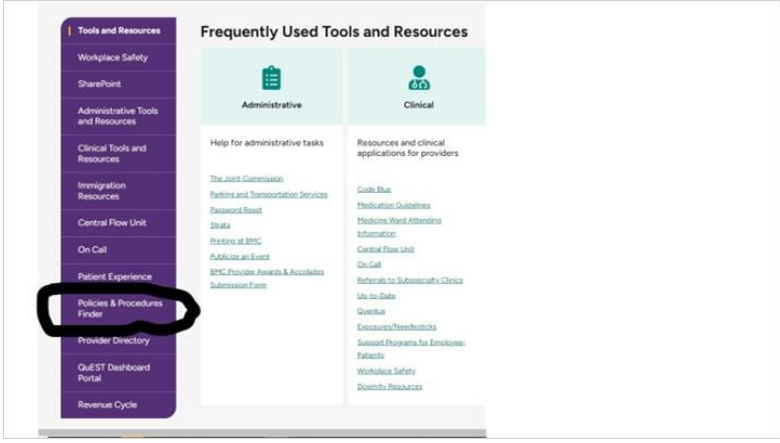

## Drug references (Slide Layer)



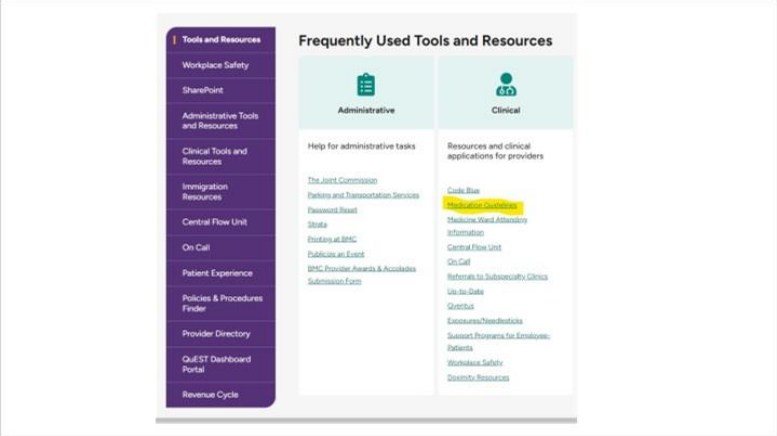

## reminder (Slide Layer)



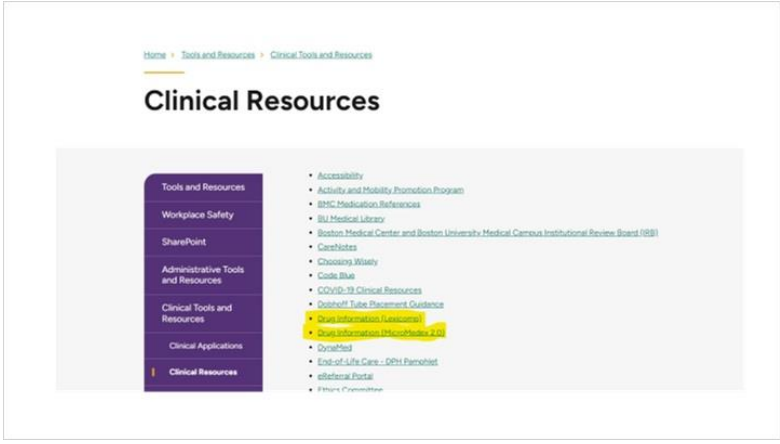
## *1.42 Policies Screen Shot*



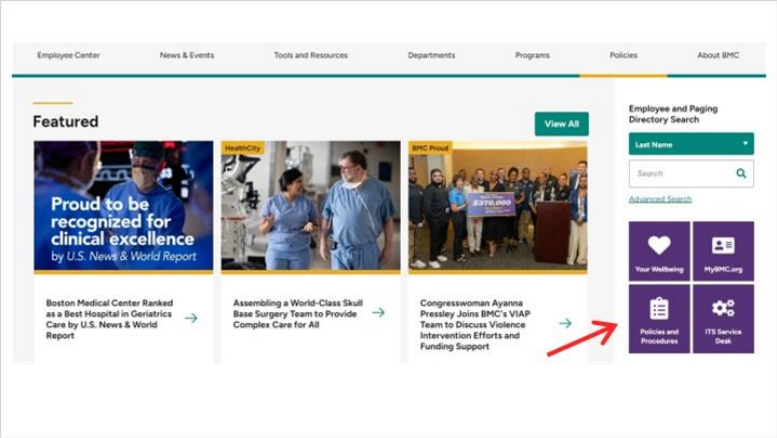

## *1.43 Meds Screen Shot*



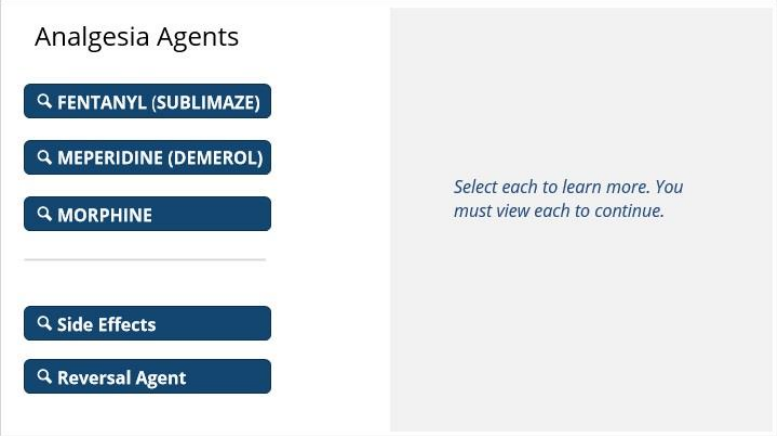

## *1.44 Clinical Resources Screen Shot*



## *1.45 HUB*

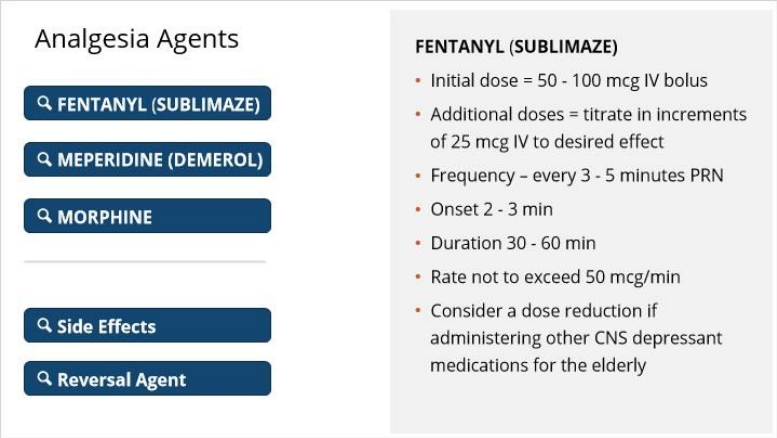



## *1.46 Analgesia Agents*

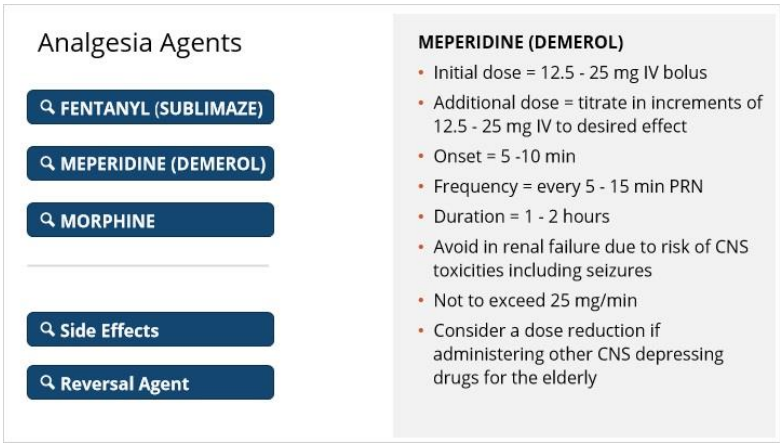



**Notes:**

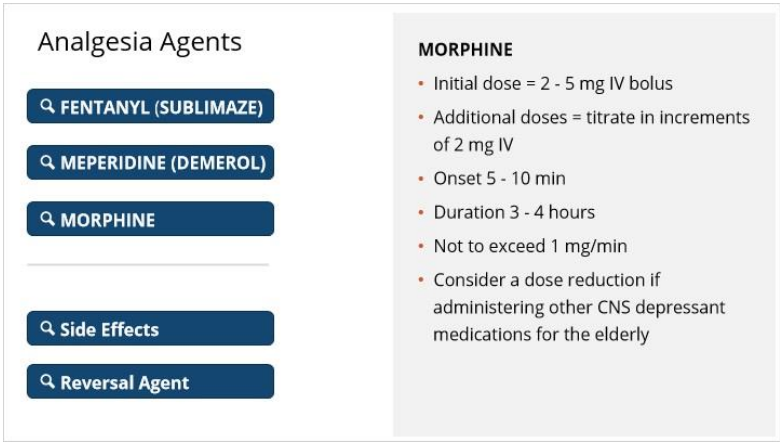
## Fentanyl (Slide Layer)



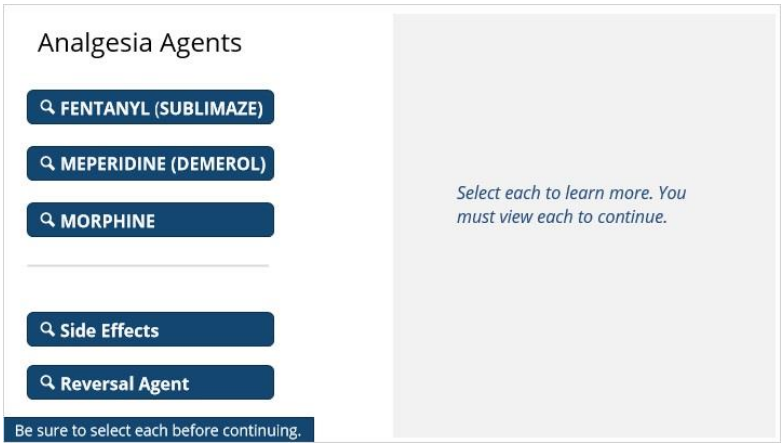

## Meperidine (Slide Layer)



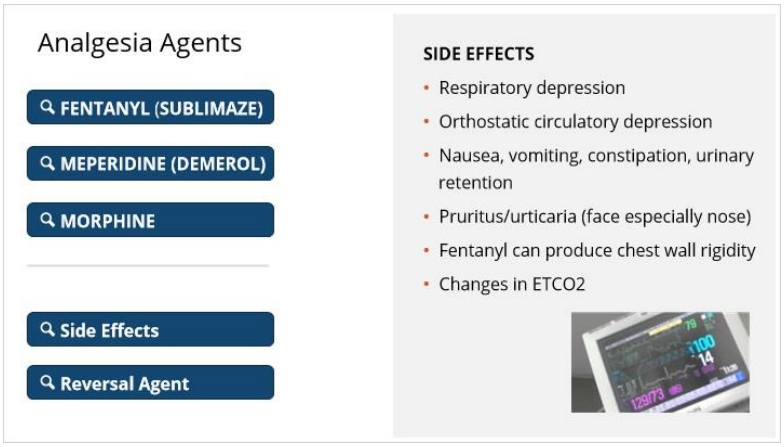

## Morphine (Slide Layer)



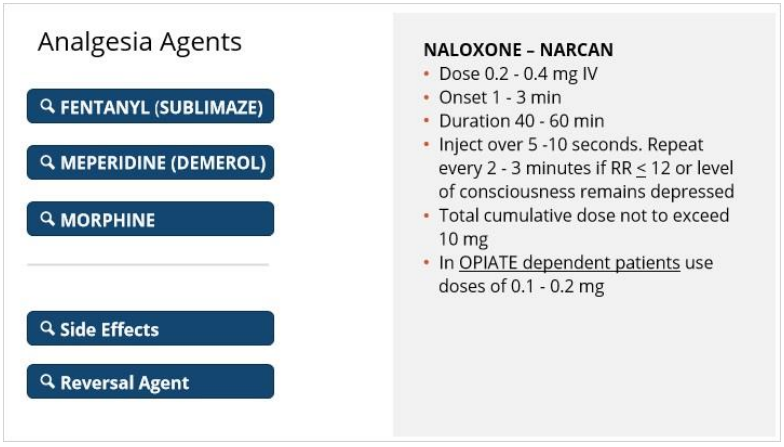
## Reminder (Slide Layer)



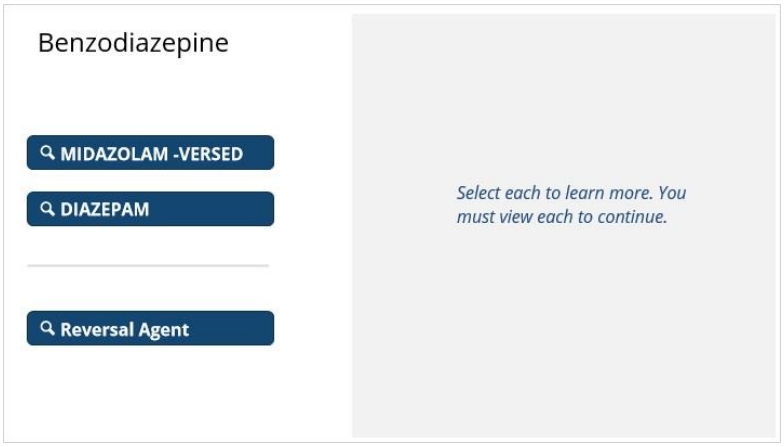

## Side Effects (Slide Layer)




## Reversal Agents (Slide Layer)

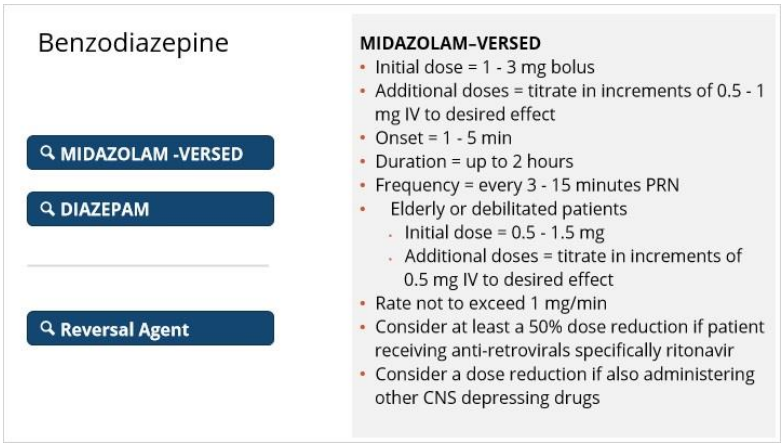


## *1.47 Benzodiazepine*

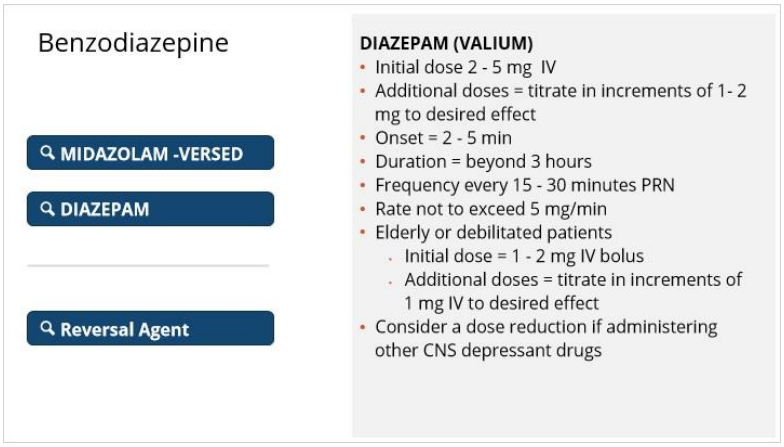



**Notes:**

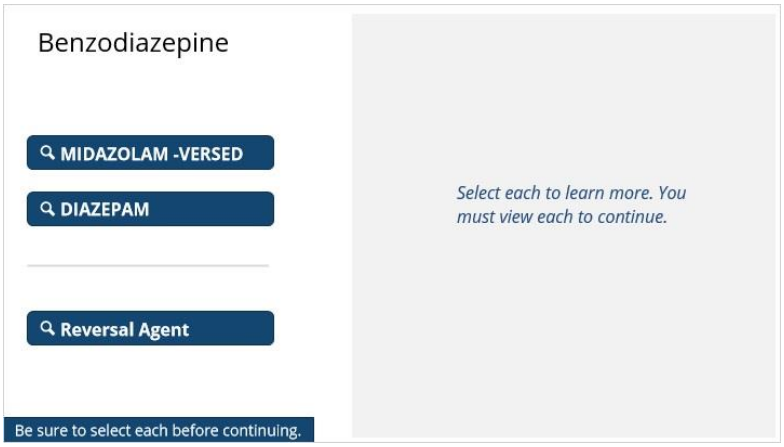
## MIDAZOLAM (Slide Layer)



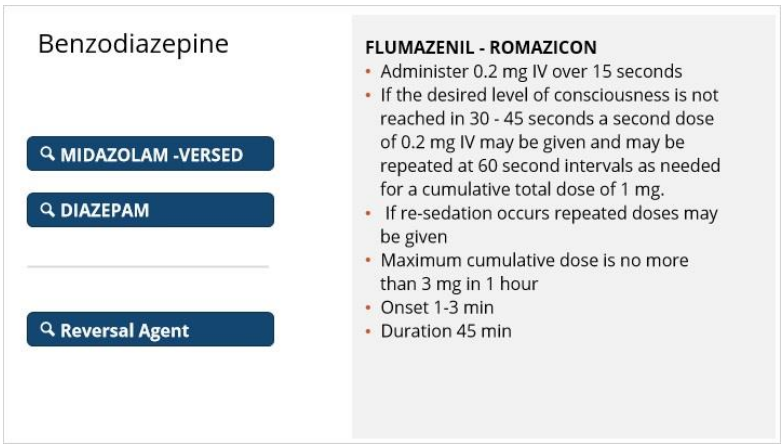
## DIAZEPAM (Slide Layer)




## Reminder (Slide Layer)




## Reversal Agents (Slide Layer)



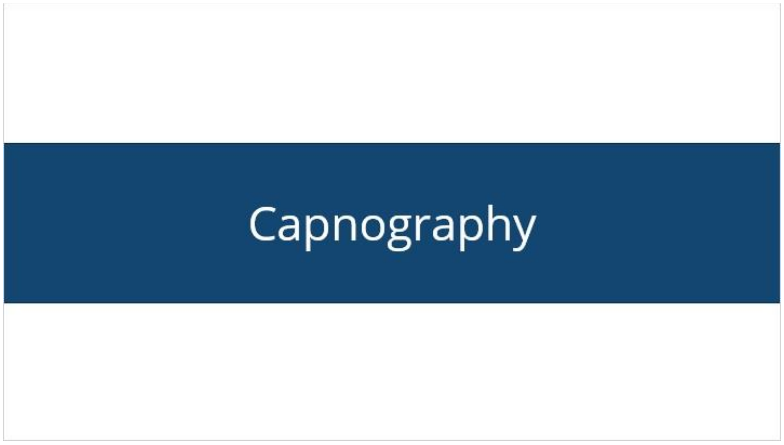
## *1.48 Reminder about Propofol (Diprivan)*

Reminder about Propofol (Diprivan)

**PROPOFOL**

- Refer to Pharmacy guideline "Pain, Agitation and Delirium in the ICU/ IMCU"
- Propofol is a highly lipophilic compound with general anesthetic properties
- RNs do **NOT bolus propofol EVER!**
- RNs do **NOT administer propofol to NON-intubated patients**
- Onset of Action: within 1 minute
- Duration of Action: 20 - 30 minutes

## *1.49 Capnography*



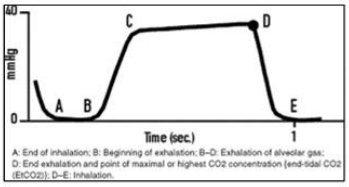

## *1.50 Capnography*

Capnography

- The measurement of the Carbon Dioxide ($CO_2$) concentration in the airway throughout ventilation
- Displays numerically or via a waveform
- $PACO_2$ – partial pressure of alveolar $CO_2$
- $PETCO_2$ – partial pressure of $CO_2$ measured at end expiration

## *1.51 Analysis of ETCO2 Waveforms*

### Analysis of $ETCO_2$ Waveforms




*Click image to zoom / Click image to unzoom*

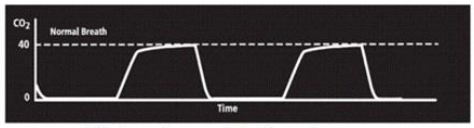
- **Phase 1 (AB)** – Dead space ventilation
- **Phase 2 (BC)** – Rapid rise in $CO_2$ as air from alveolar region of lungs is exhaled
- **Phase 3 (CD)** – $CO_2$ concentration equalizes in the exhaled breath – Point D = $ETCO_2$
- **Phase 4 (DE)** – Inspiratory cycle

ICON

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## *1.52 Normal Capnography Wave*

### Normal Capnography Wave




*Click image to zoom / Click image to unzoom*

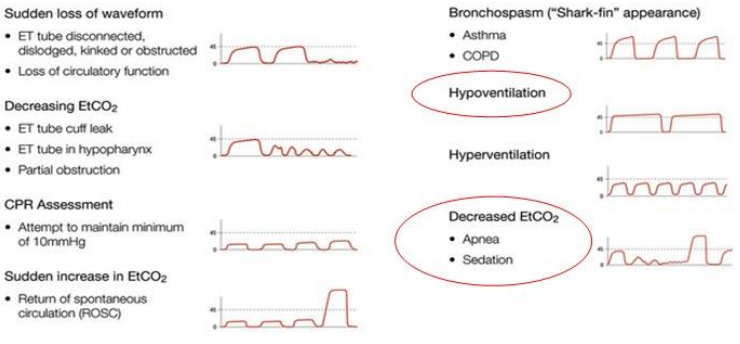
The exhaled $CO_2$ in the normal individual will have a pattern as shown above. Notice the square and boxlike trend.

ICON

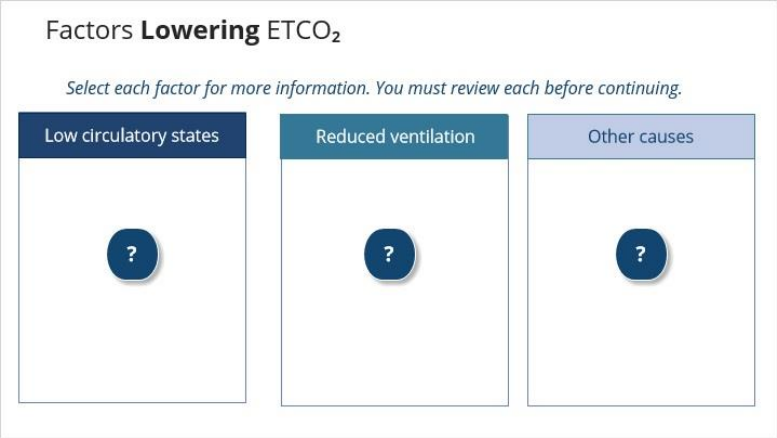
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## *1.53 Capnography Waveform Examples*

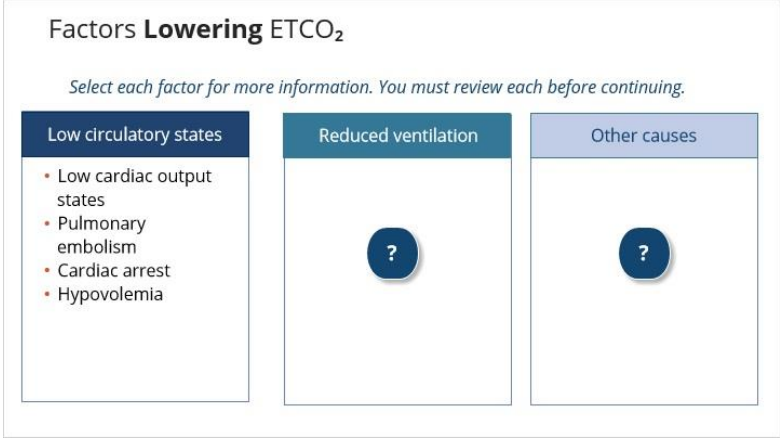
### Capnography Waveform Examples



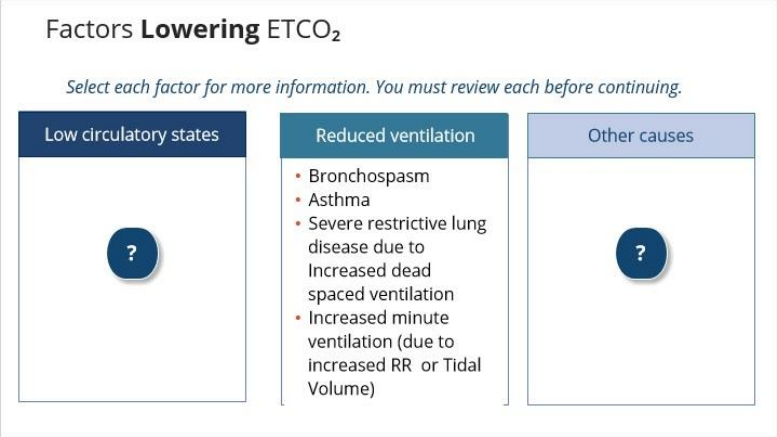
## *1.54 Factors Lowering ETCO2*



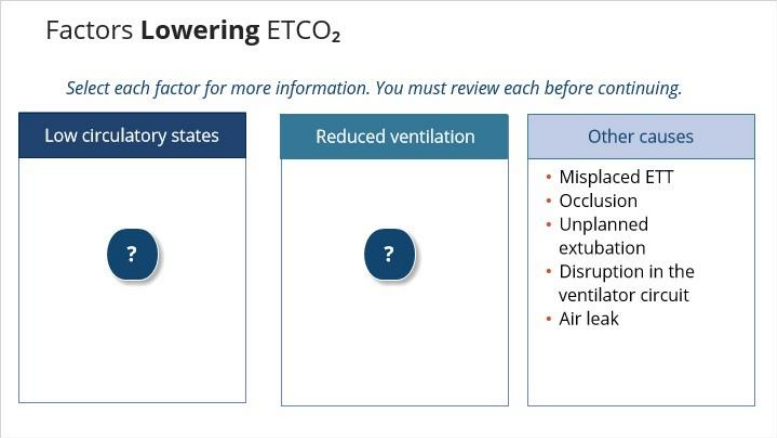

**Low Circ (Slide Layer)**



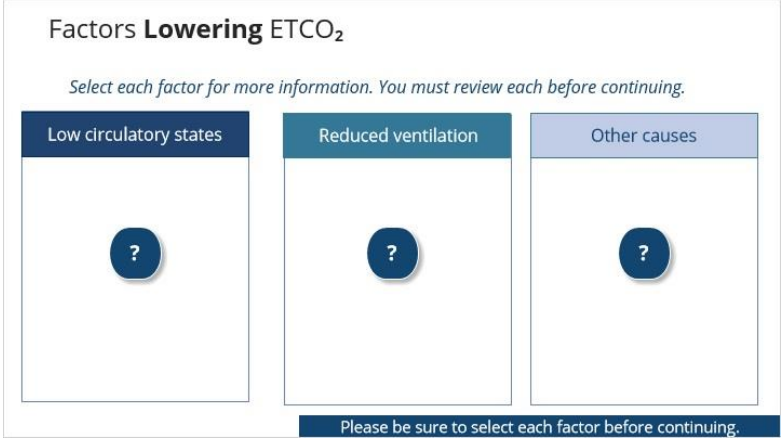

**Reduced Vent (Slide Layer)**



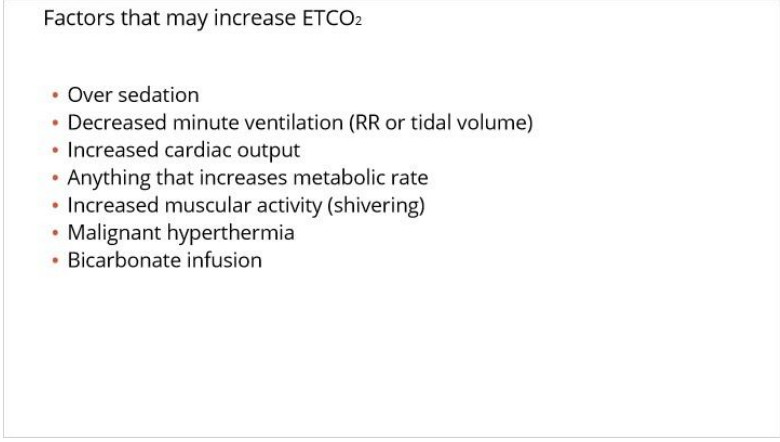
## Other (Slide Layer)




## Reminder (Slide Layer)



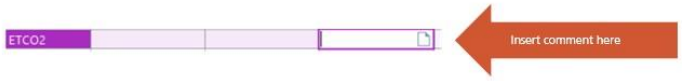

## *1.55 Factors that may increase ETCO2*



## *1.56 How do I use Capnography monitoring with adult moderate sedation?*

How do I use Capnography monitoring with adult moderate sedation?

- Ensure equipment is intact with alarms on
- Obtain a pre-sedation baseline $ETCO_2$ value
- Assess the pre-sedation baseline $ETCO_2$ waveform
- Monitor $ETCO_2$ value & waveform with VS and PRN
- Verify, report & intervene for any change in $ETCO_2$ value or waveform
- If $ETCO_2$ value or waveform does not reflect the clinical situation document with a comment




## *1.57 What change in the ETCO2 value will I see if my patient is over-sedated?*

What change in the $ETCO_2$ value will I see if my patient is over-sedated?

- Initially the $ETCO_2$ may rise due to shallow breaths & hypoventilation due to an increase in dead space
- If the patient becomes apneic the $ETCO_2$ will fall
- Validate, Report & Intervene on any change from a patient's baseline $ETCO_2$
- If $ETCO_2$ value or waveform does not reflect the clinical situation document enter a comment

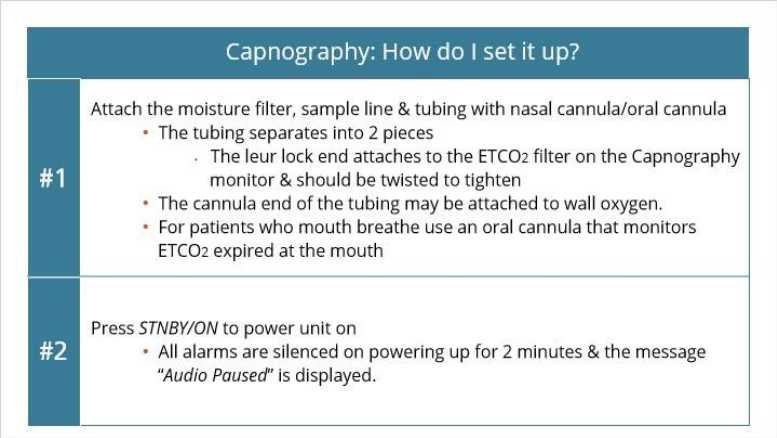
## *1.58 "Capnography Plus" Monitor*

"Capnography Plus" Monitor

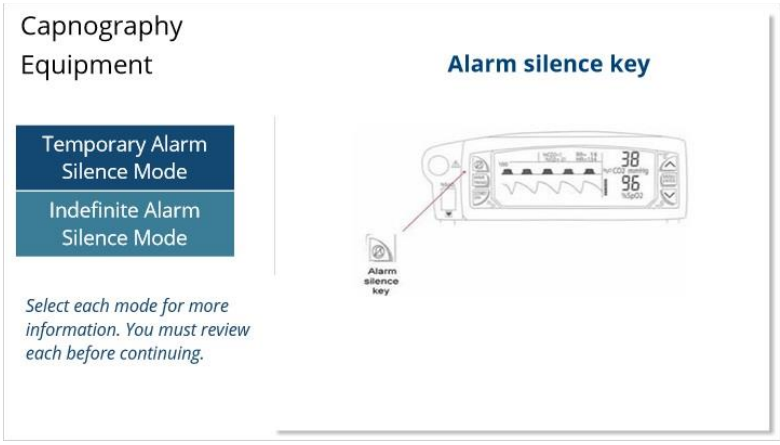


- Displays the following values:
  - $ETCO_2$ - numerical value & waveform
  - Respiratory rate
  - Messages & Alarm Limits
- BMC's Respiratory therapy has set the defaulted high & low $ETCO_2$ alarm limits.
- Battery lasts 2 hours - **PLEASE KEEP PLUGGED IN AT ALL TIMES**
- Disinfect monitor surfaces with isopropyl alcohol.

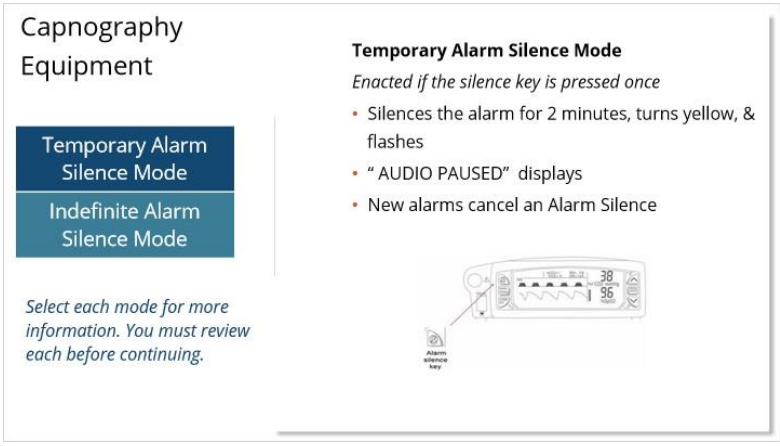
## *1.59 Capnography: How do I set it up?*



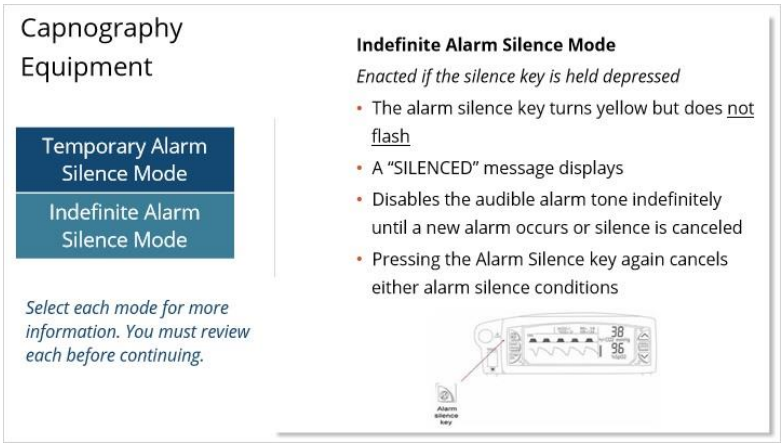

## *1.60 Capnography Equipment*




### Temp Alarm (Slide Layer)



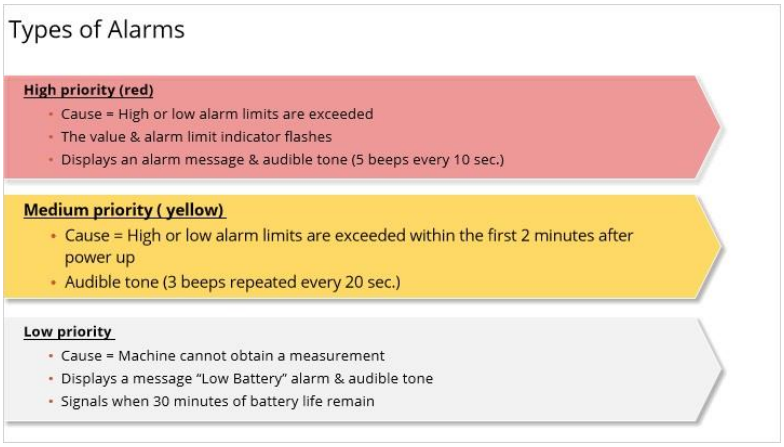
## Indef Alarm (Slide Layer)



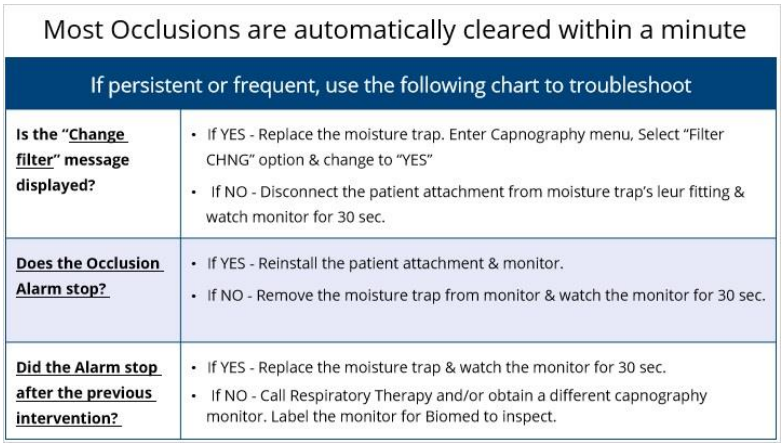

## Reminder (Slide Layer)



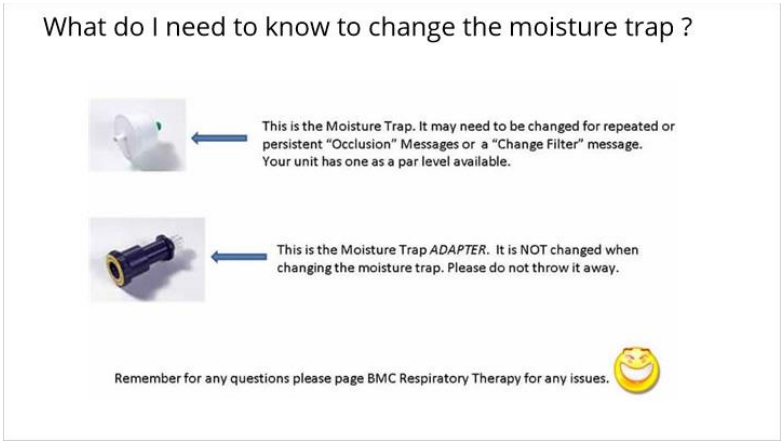

## *1.61 Types of Alarms*



## *1.62 Most Occlusions are automatically cleared within a minute.*

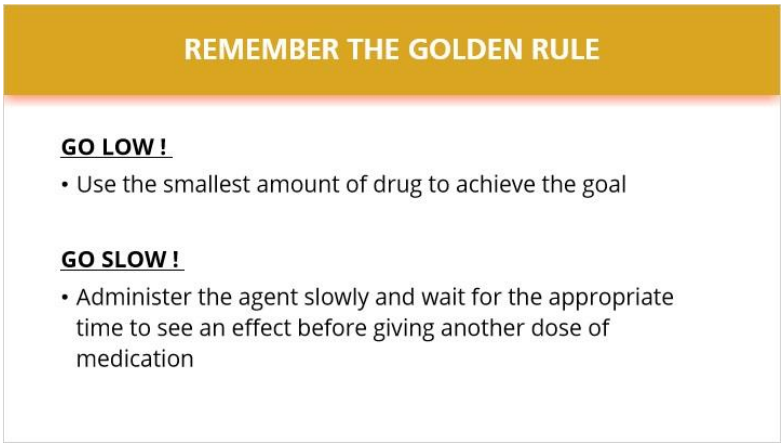



## *1.63 What do I need to know to change the moisture trap ?*

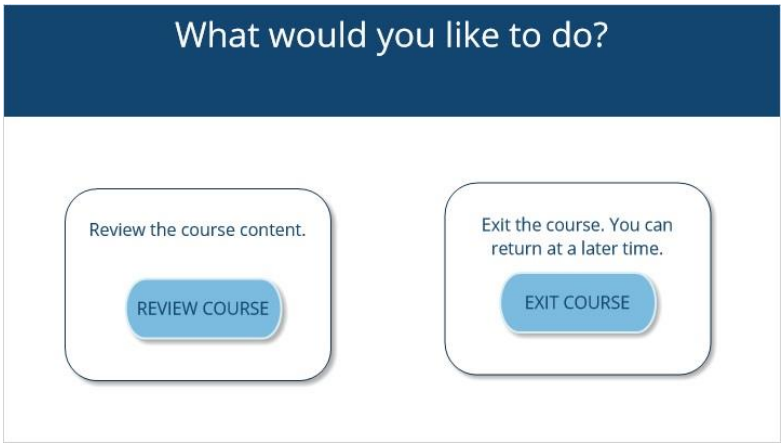



**Notes:**

## *1.64 Remember the Golden Rule*




**Notes:**




**Notes:**