Pediatric Moderate Sedation

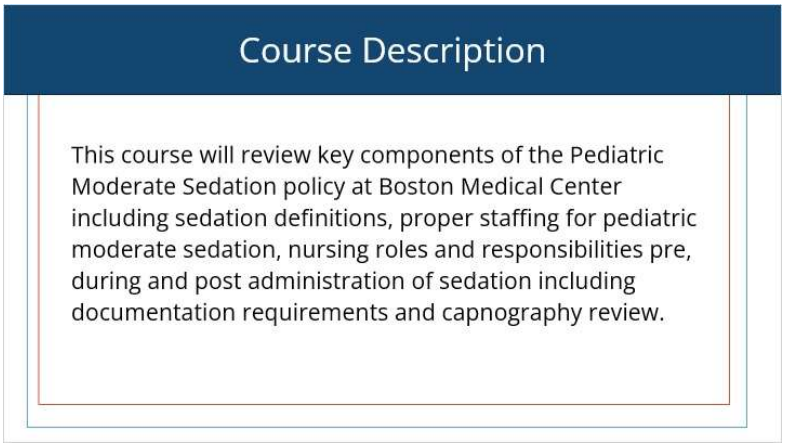
1. Course

1.1 Home



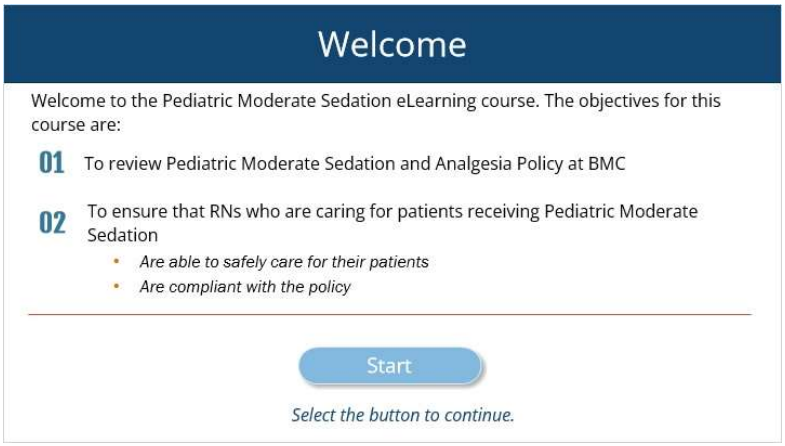
Notes:

1.2 Course Description



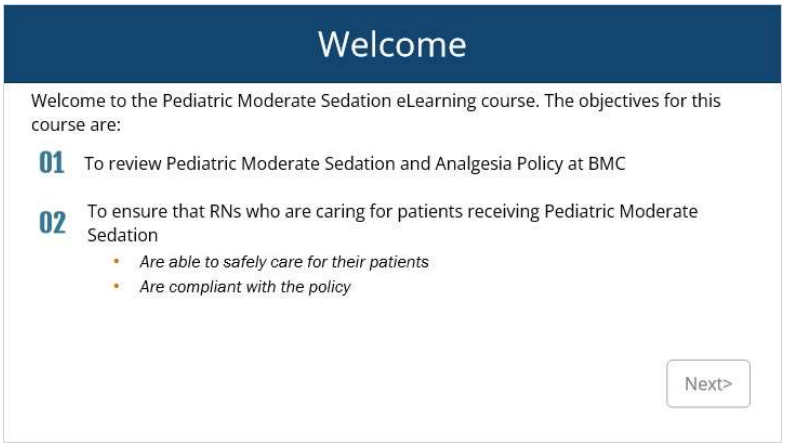
Notes:

1.3 Learning Objectives

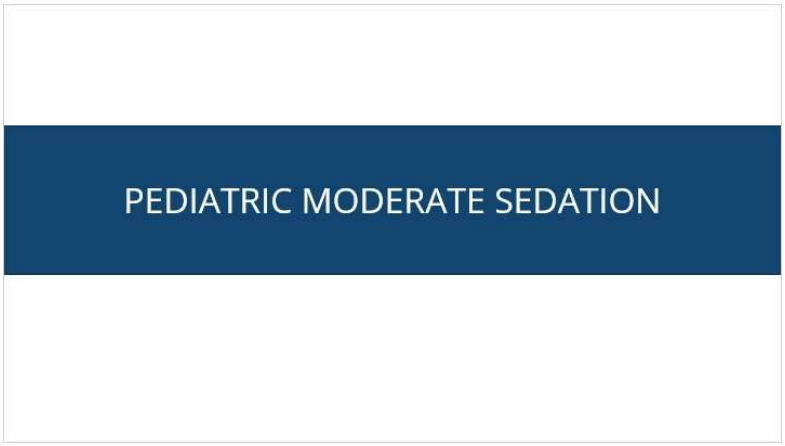


Notes:

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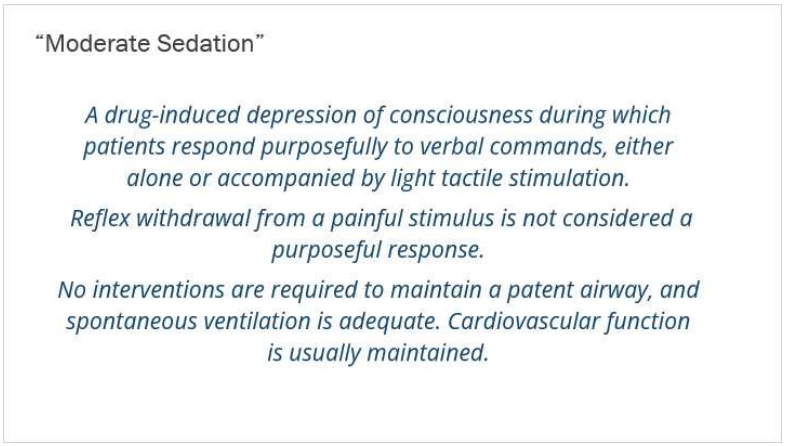


1.4 Pediatric Moderate Sedation



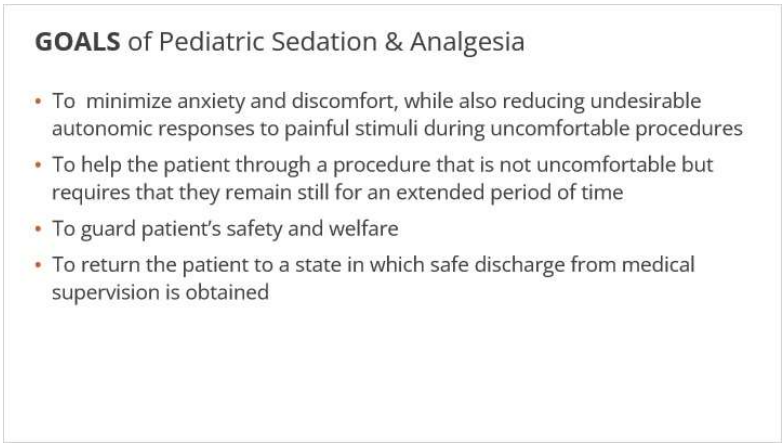
Notes:

1.5 "Moderate Sedation"



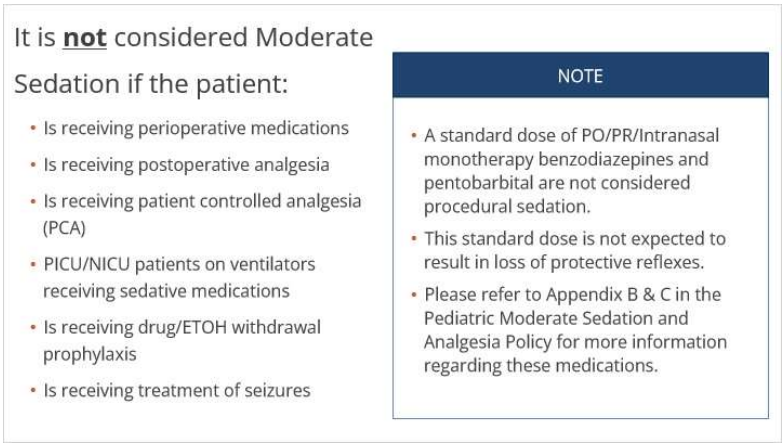
Notes:

1.6 Goals of Pediatric Sedation & Analegesia

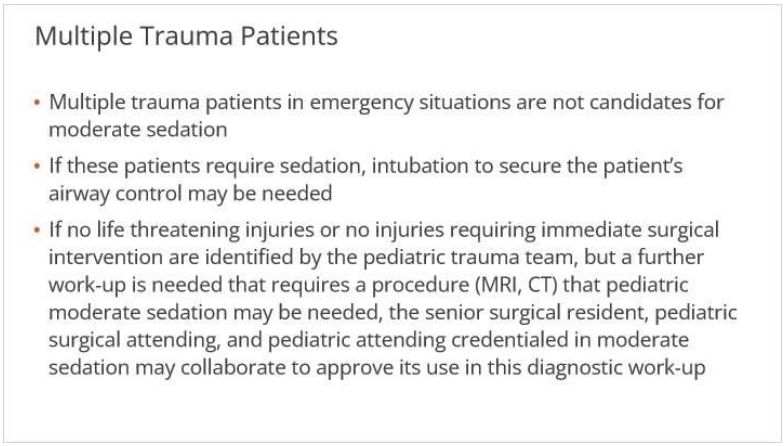


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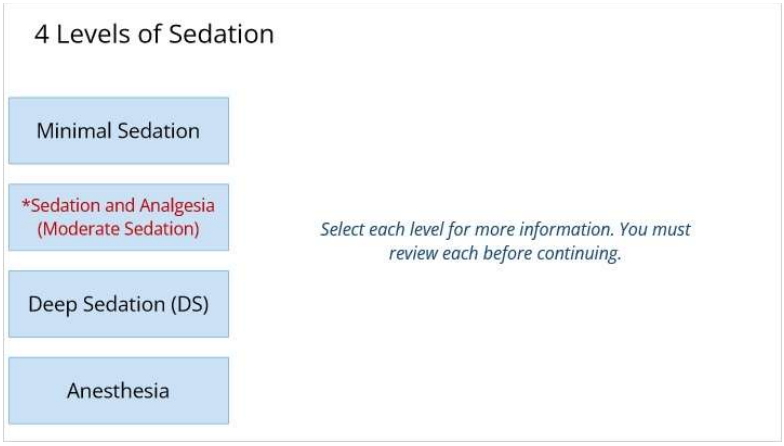
1.7 It is Not Considered Moderate Sedation if...



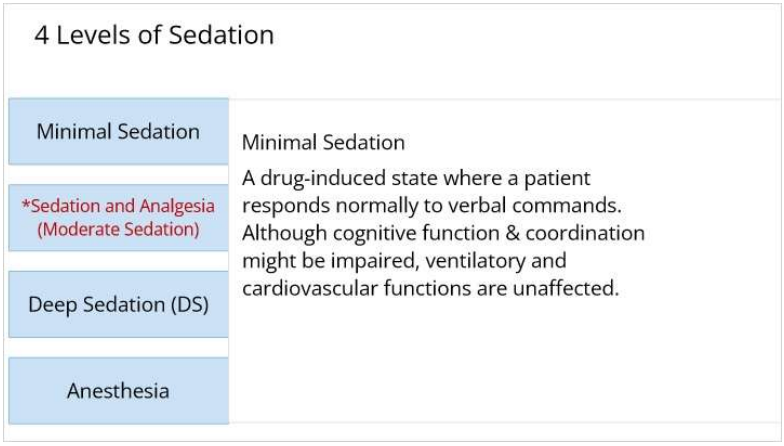
1.8 Multiple Trauma Patients



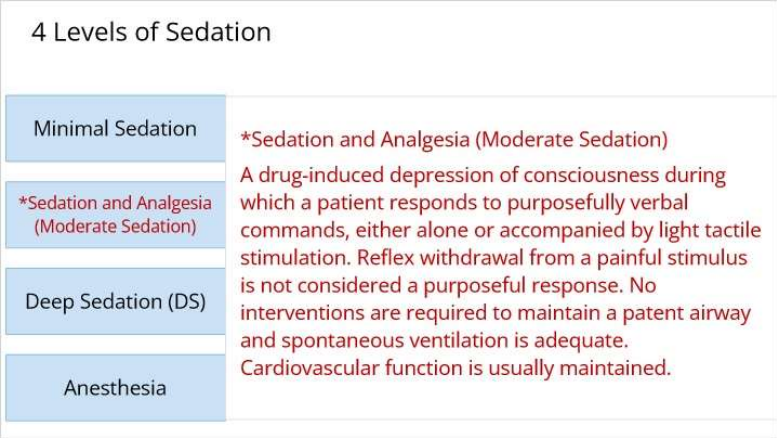
1.9 4 Levels of Sedation



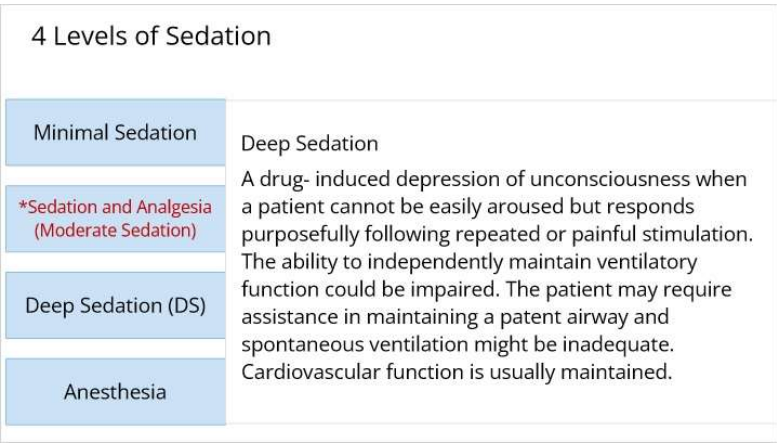
Step 01 (Slide Layer)



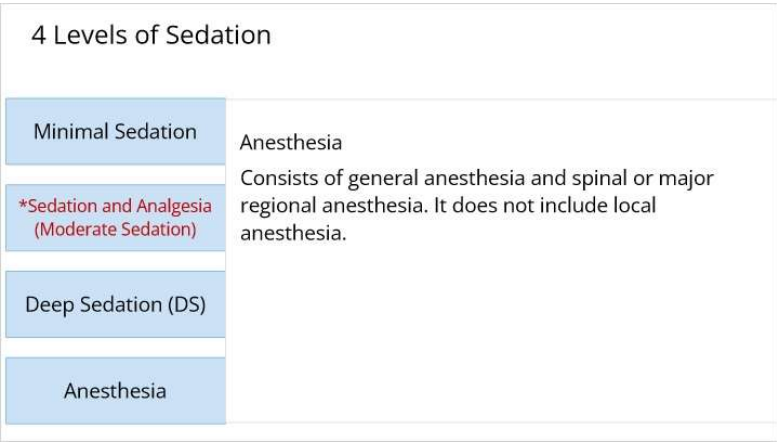
Step 02 (Slide Layer)



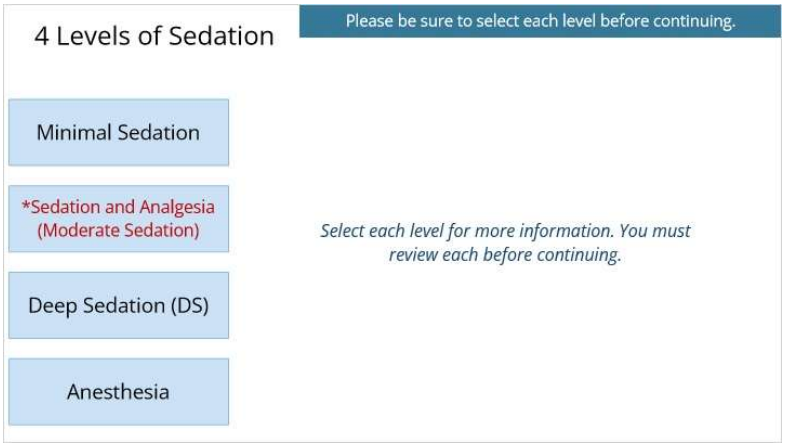
Step 03 (Slide Layer)



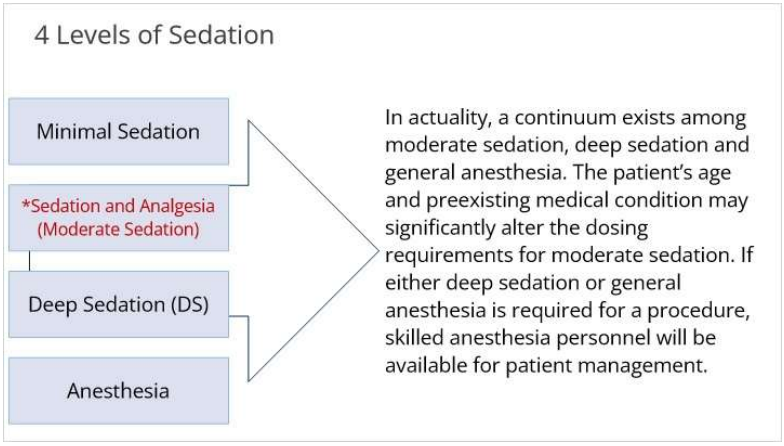
Step 04 (Slide Layer)



Reminder (Slide Layer)

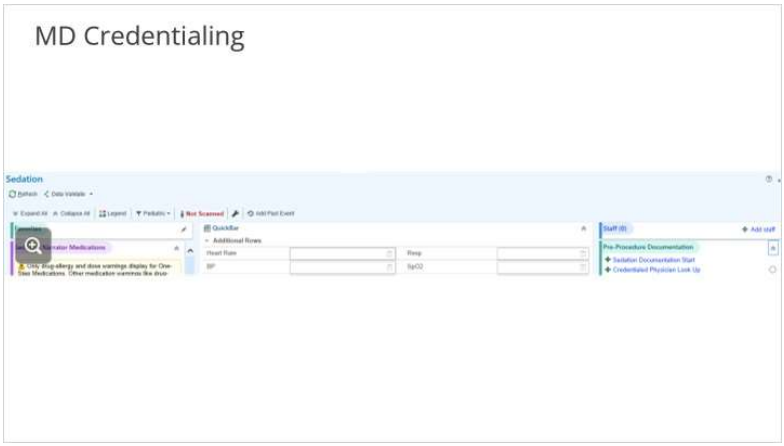


1.10 4 Levels of Sedation

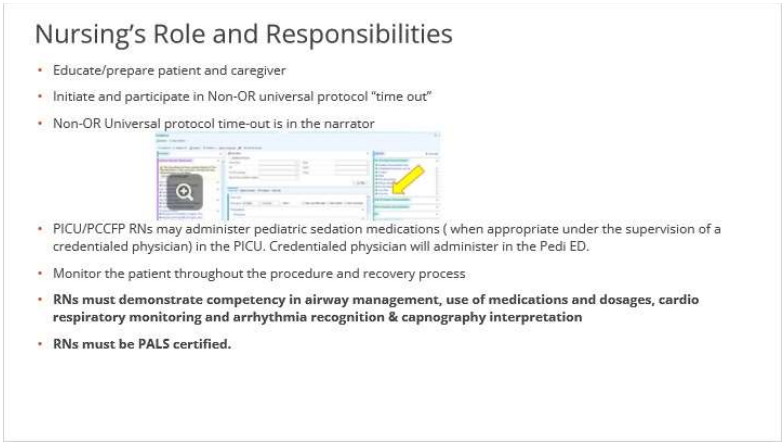


Notes:

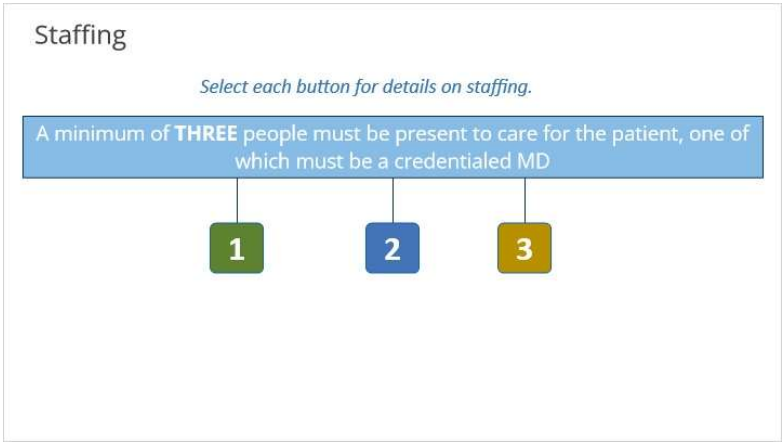
1.11 MD Credentialing



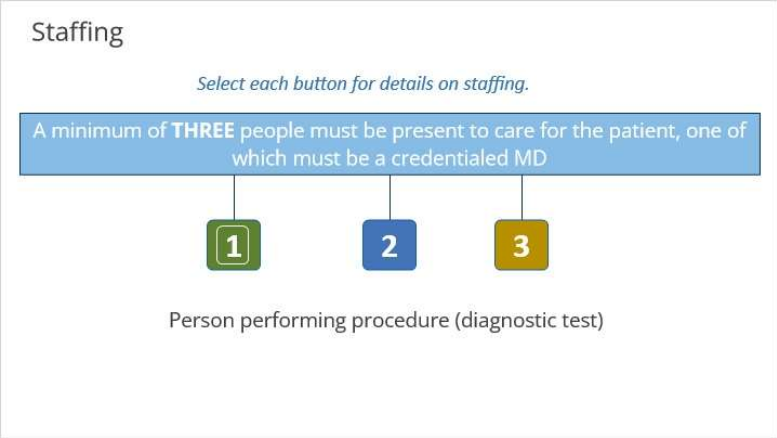
1.12 Nursing's Role and Responsibilities



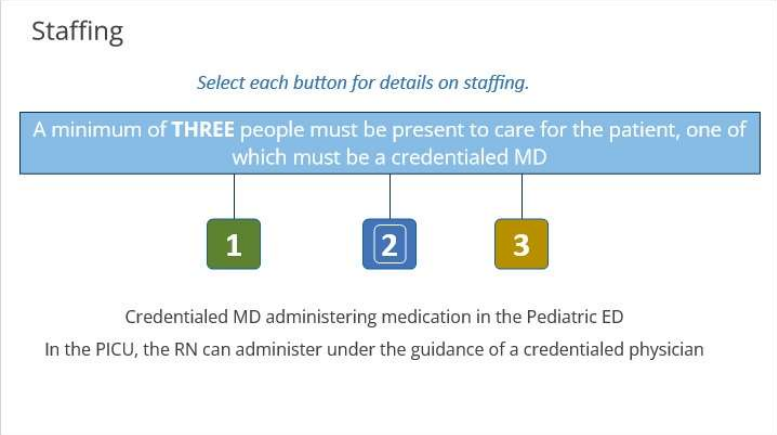
1.13 Staffing



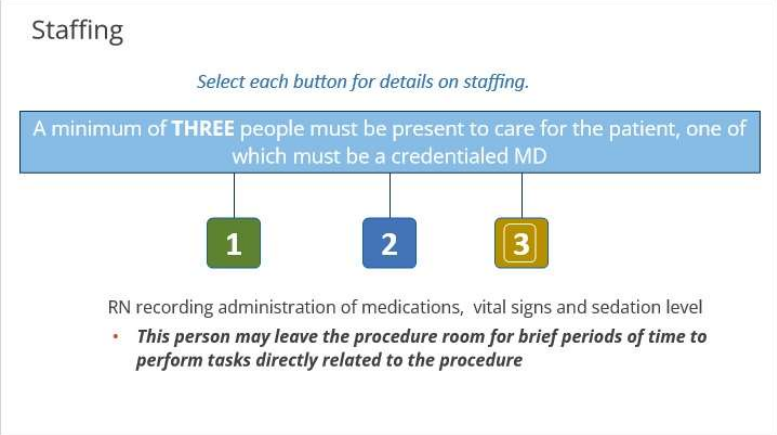
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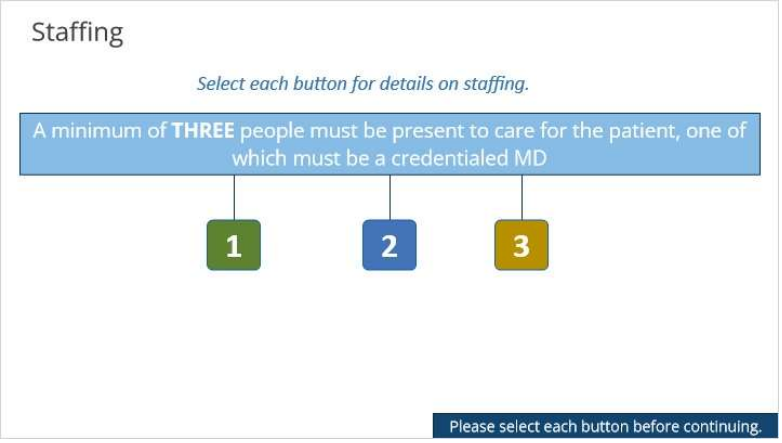
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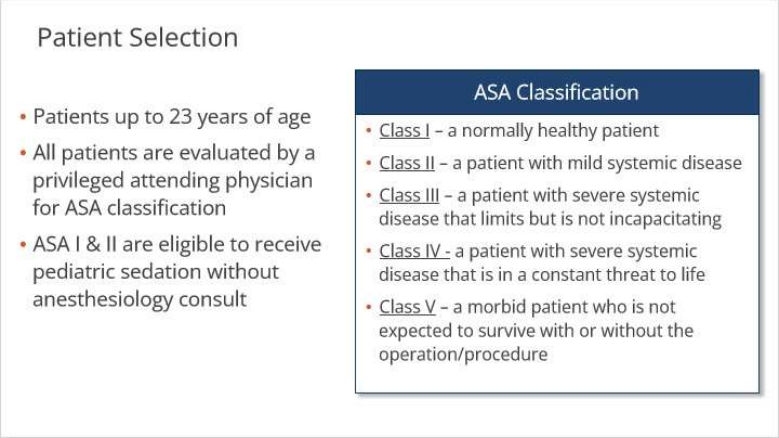
3 (Slide Layer)



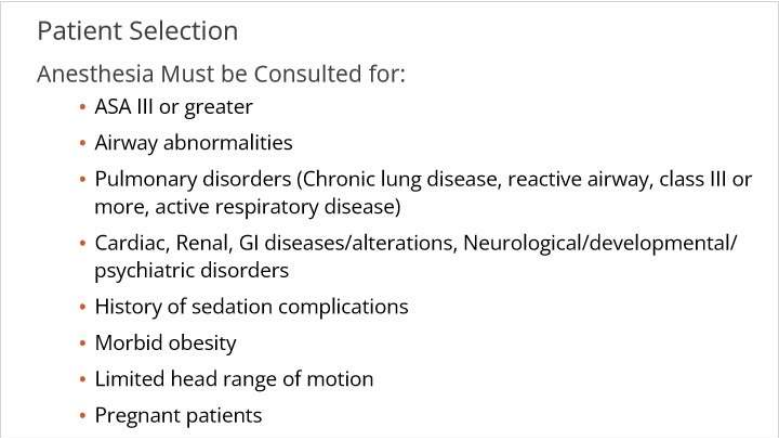
Reminder (Slide Layer)



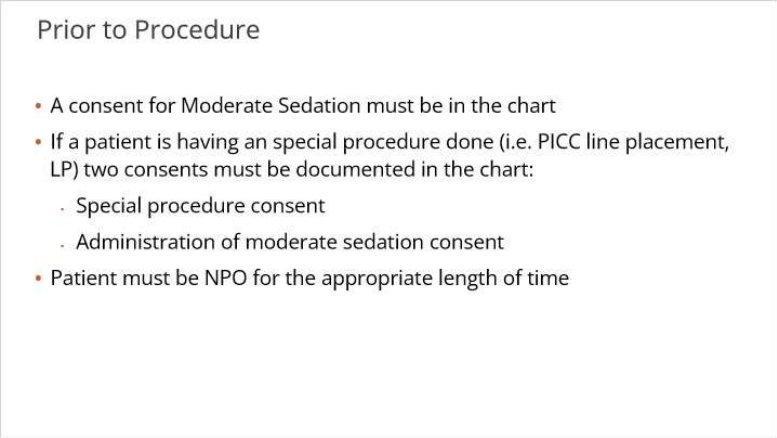
1.14 Patient Selection



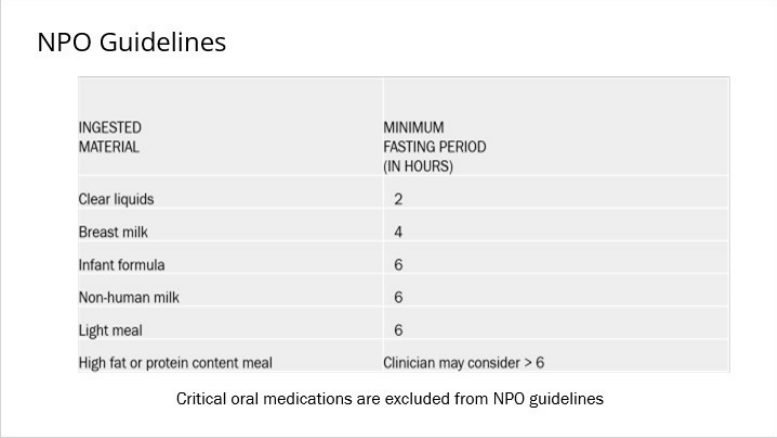
1.15 Patient Selection



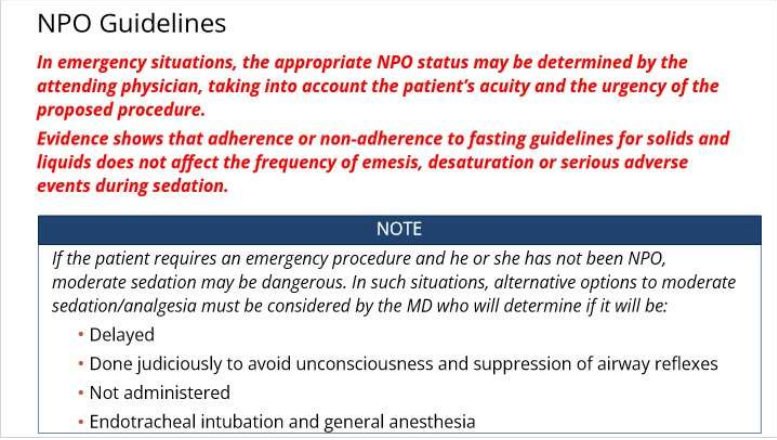
1.16 Prior to Procedure



1.17 NPO Guidelines



1.18 NPO Guidelines



Notes:

1.19 Equipment

Equipment

- Pulse Ox
- Cardiac/Respiratory Monitor
- Bag-valve-mask system (Ambu, Mapleson)
- Suction
- Airways
- Automatic BP cuff
- Code Cart
- Reversal Agents
- Non-invasive end tidal CO_2 Monitor
- O_2 Source: capable of administering 90% or greater at 15/L minute for at least 60 minutes



1.20 Pre Procedure Assessment

Pre Procedure Assessment

Validate that the patient is an appropriate candidate by utilizing Pre-Procedure Checklist located in the Sedation Narrator.

- Appropriate state of consciousness and medical condition
- Written consent from self, parent or guardian and NPO status
- Presence of a Sedation Plan: What is the patient's intended level of sedation and strategy to achieve intended level?
- Written sedation order, signed by credentialed attending
- Absence of allergies/sensitivities to prescribed meds
- IV line or saline lock
- Appropriate H&P (within 48 hours of procedure) which includes: Wt (Kg), Allergies, Current meds, Medical hx, History or problems r/t sedation/ anesthesia, Baseline vital signs, Physical exam and ASA category
- Airway assessment
- Establish and document a competent adult who will be taking the patient home if patient discharged post-procedure.
- The patient and/or caregiver has been educated in concepts of moderate sedation
- Perform a "Time Out" verification

1.21 During the Procedure

During the Procedure

Continuously monitor, q 5-10 minutes:

- HR, RR, BP, O_2 Sat, EKG Rhythm, Pain, End tidal CO_2
- LOC—Clinical Sedation Scale (q 1 minute during onset and after administration of meds), once sedation level is achieved monitor sedation level q5-10min
- Head position, airway and chest expansion
- Document all IV fluids
- Record any O_2 therapy
- Document any changes from baseline and notify MD

1.22 Capnography

Capnography

- The measurement of Carbon Dioxide (CO_2) concentration in the airway throughout ventilation
- Displayed numerically or via a wave form
- Normal value 35-45

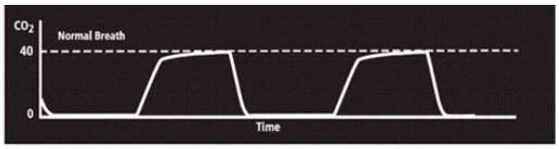
Normal Capnography Wave



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

1.23 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.

1.24 How do I use Capnography monitoring with Moderate Sedation?

How do I use Capnography monitoring with 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 stating this

1.25 What changes in the ETCO2 value will I see if my patient is over sedated?

What changes 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 with a comment stating this



1.26 Post Procedure: The Recovery Period

Post Procedure: The Recovery Period

- Begins at the completion of the procedure
- Immediately after completion of the procedure, the RN will record frequent vital signs for a minimum of every 15 minutes and for a minimum of 30 minutes following the administration of the last dose of medication.
- 30 minutes following completion of the procedure, vital signs, if stable, should then be recorded every 15 minutes until discharge criteria is met.
- Recovery Score is documented at the end of the procedure and every 15 minutes until target score met

Documentation:



Recovery Score



Click on magnifying glass to enlarge image

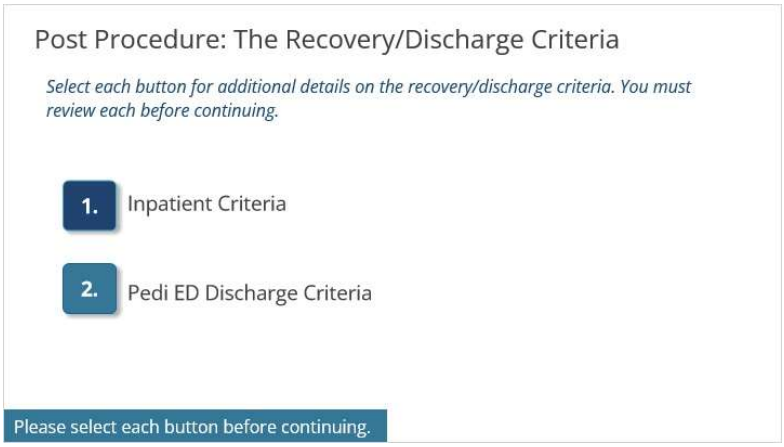
1.27 Post Procedure: The Recovery/Discharge Criteria

Post Procedure: The Recovery/Discharge Criteria

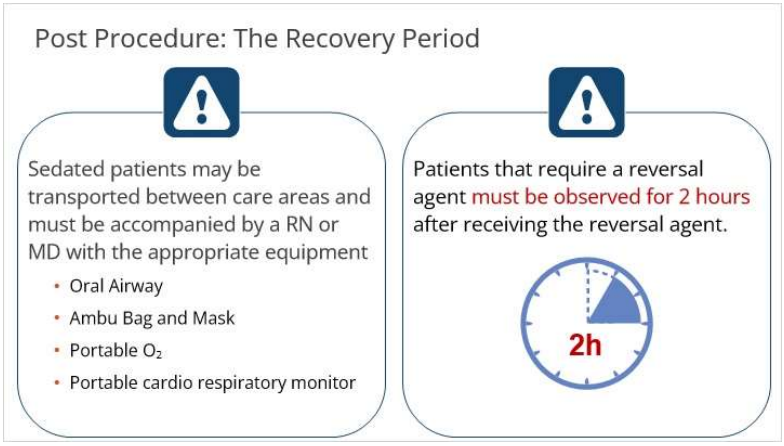
Select each button for additional details on the recovery/discharge criteria. You must review each before continuing.

1. Inpatient Criteria
2. Pedi ED Discharge Criteria

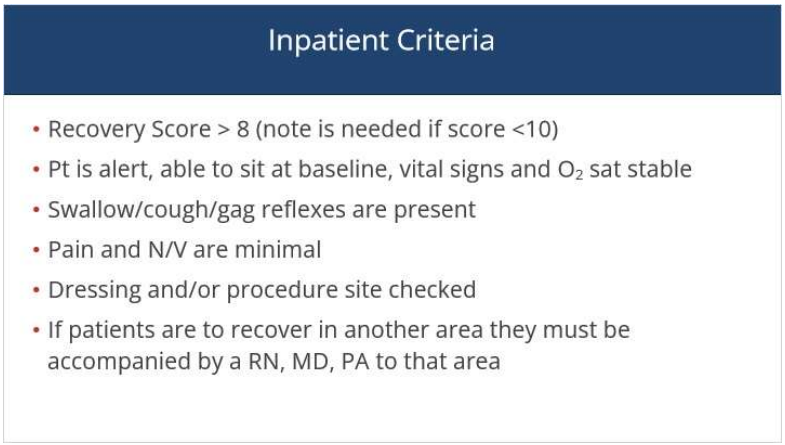
Reminder (Slide Layer)



1.28 Post Procedure: The Recovery Period



1.29 Muscle Contracture Test



Notes:

1.30 Recovery Score

Recovery Score

Respiration	Able to breath deeply and cough freely Dyspnea or limited breathing Apneic	2 1 0
Circulation	BP± 20% of preanesthetic level BP± 21%-49% of preanesthetic level BP± 50% of preanesthetic level	2 1 0
LOC	Fully Awake Arousable on calling/responds to stimuli Not responding	2 1 0
Activity	Moves all extremities Moves 2 extremities Unable to move extremities	2 1 0
02 Sat	Pediatric Only 100-98% on RA 98%-95% on RA <95% on RA	2 1 0

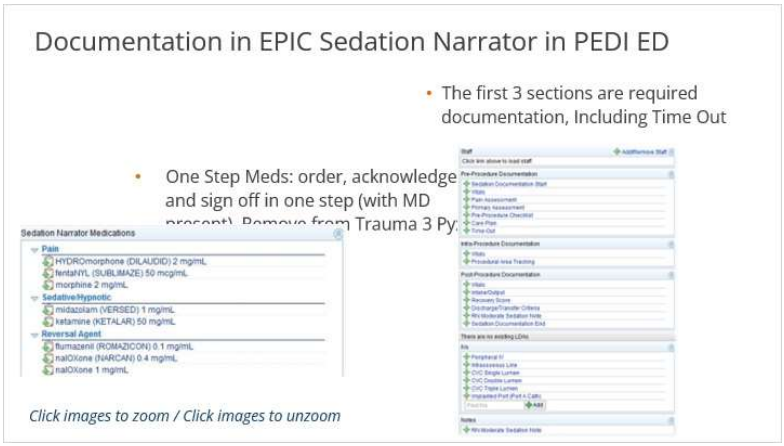
1.31 Documentation, Moderate Sedation

Documentation, Moderate Sedation

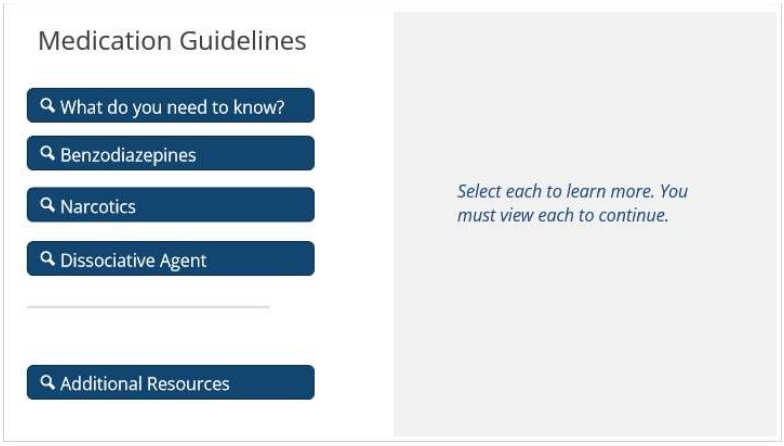
Pediatric ED	PICU, Pedi
The EPIC Sedation Narrator will be used to ensure documentation of all critical components	The written Moderate Sedation Procedure Record is used. All critical components must be completed, including Universal Protocol (Time Out)

Notes:

1.32 Documentation in EPIC Sedation Narrator in PEDI ED



1.33 Medication Guidelines

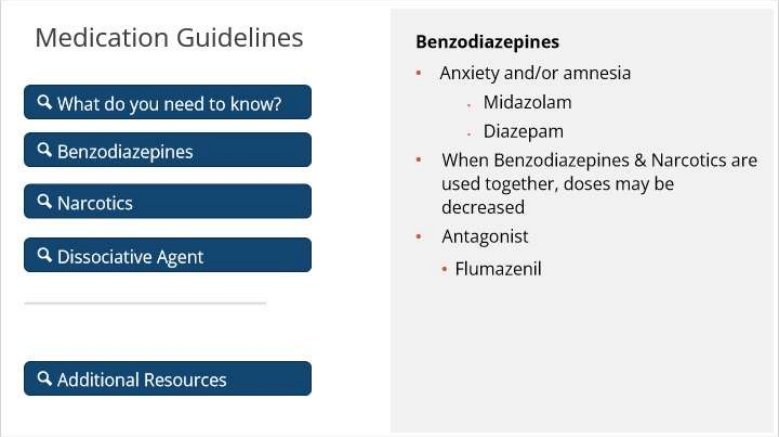


Notes:

What do you need to know (Slide Layer)



Benzodiazepines (Slide Layer)



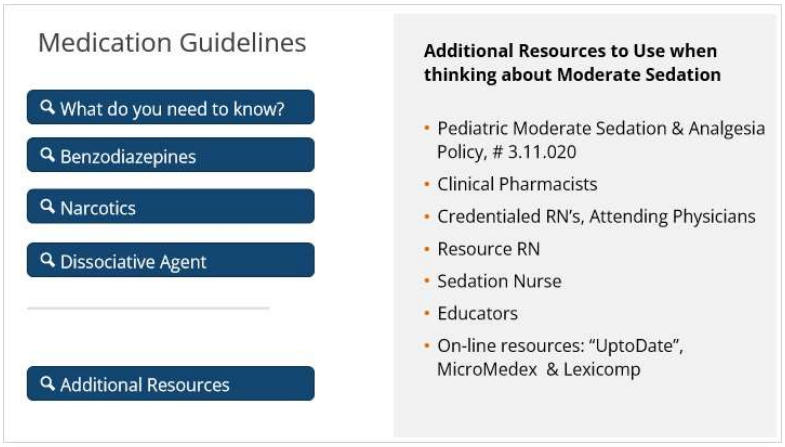
Narcotics (Slide Layer)



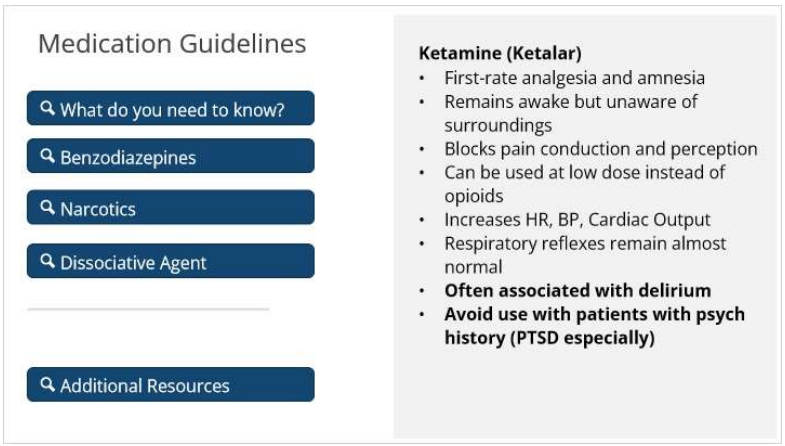
Reminder (Slide Layer)



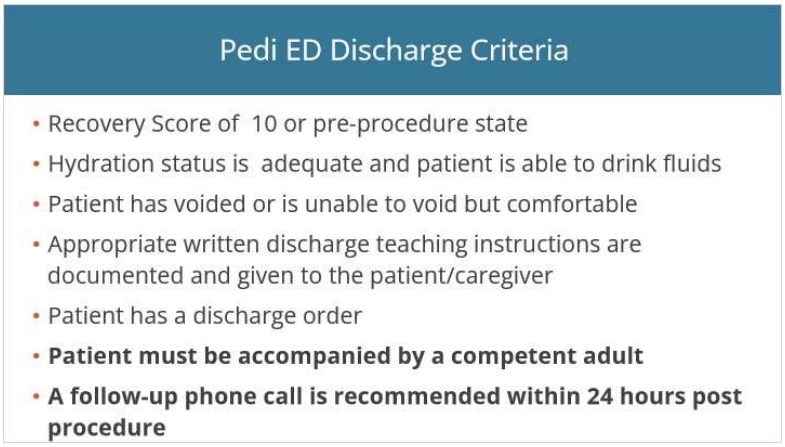
Additional Resources (Slide Layer)



Dissociative Agent (Slide Layer)

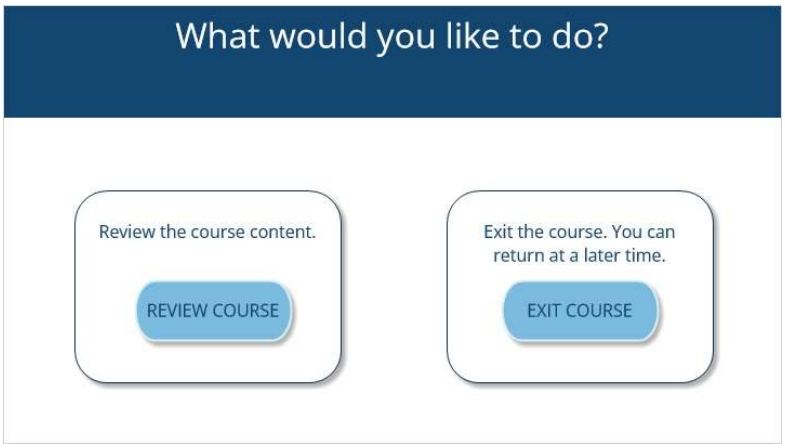


1.34 Genetic Testing



2. ThankYou

2.1 Thank you



Notes: