SICU Orientation

West Virginia University


Välkommen!
Bem-vindo!
Witamy!
Willkommen!
Velkom!
Fáilte!
Welcome!
Bine ai venit!
Benvenuti!
Velkommen!
Üdvözöljük!
Tervetuloa!
Bienvenue!
Sveigt!
Vitejte!
Добре дошли!
Καλώς ήρθατε!
DOBRODOSLI!
Sveiki atvykę!
Bienvenido!
Vitajte!

These are YOUR patients

They are a Mom, Dad, Brother, Sister, Son, or Daughter

Patients need YOU to give 100%

Check and recheck results

Follow-up with consults until you get an answer

Communicate effectively and often with patients, families, nurses, and consultants

Clinical Faculty

- Alison Wilson, MD – Director CCTI, Vice Chair – Department of Surgery
- Greg Schaefer, DO – Medical Director, Surgical Critical Care
- Jennifer Knight, MD – Trauma Medical Director
- Dan Grabo, MD, Director, Fresh Tissue Training Program & Trauma Education
- Connie DeLa'O, MD
- Kathrin Allen, MD – Anesthesia/CC Faculty
- Jim Bardes, MD – Chair, CCTI Research Committee
- Amanda Palmer, MD – Medical Director, Rapid Response
- Darby McDowell – Clinical Dietician
- Karen Petros, PharmD. – Clinical Pharmacist
- Lauren Dudas, MD – Chair, CCTI Education Committee
- Mike Russell, MD, Anesthesia/CC Faculty

SICU Faculty Notifications

- New admissions – within 20 minutes of arrival
  - Please see the patient and give a brief outline and plan
- Hypotension persisting after 1 liter of fluid boluses
- Starting or adding additional vasopressor
- All procedures (i.e., lines, bronchoscopy, chest tube)
- Transfusion of blood or blood products
- Worsening oxygenation or ventilation
  - Escalating to BiPAP
  - Need for intubation

Daily Expectations

- Keep the general and detailed view
- **Communicate regularly with faculty**
  - **Faculty phone: 71899**
- Communicate frequently with primary teams, consultants & families
- Don’t regurgitate data; review it, filter it, integrate it
- This is the interface between learning and patient care – **you are never alone or unsupported unless YOU create that situation**

Educational Responsibilities

- Read something…EVERY day…preferably about your patients but anything about critical care is best
- Didactics are VIRTUAL during the pandemic – please review these
- Key topics to take away
  - Identify types of shock and the causes
  - Recognize acute respiratory failure & how to begin management
  - Resuscitation and source control in septic patients
  - Hemostatic resuscitation guided by thromboelastography (TEG)
  - Unique characteristics of postop patients and how to
  - Optimize physiology of critically ill patients for operative intervention

- New admissions – SICU Consult
- Daily Progress Note
- Event Note
  - Significant events – hypoxia, hypotension, symptomatic dysrhythmias
- Procedure Notes
- Death Notes
- Family Update Notes
  - Especially important during limited visition and to address changes in code status

Daily Progress Notes

- You are PHYSICIANS, not scribes - document YOUR plan
  - Do your best in developing a plan – it reflects your effort
  - Faculty responsible for documenting their thoughts & plans
- BEWARE copy forward…YOU are responsible for incorrect information copied forward
- Notes written by students should be reviewed and cosigned using .resperf

Downtime…it happens…occasionally

- Problem List – Update Daily
  - Essential to track key problems
  - Organ System Dysfunction/Failure, Infections, Injuries
- Clean up orders
  - Remove meds no longer appropriate
  - Spine precautions / mobility orders / PT and OT
  - DVT prophylaxis
  - GI prophylaxis
  - Ensure plan for SAT/SBT
  - HOB > 30 degrees
  - Nutrition
  - Is surrogate needed
  - Antibiotic end dates

Postoperative Patients

Bedside checkout from surgical and anesthesia teams

- Review anesthesia flowsheet in Chart Review Tab

Key information

- Blood lost / given
- Pressors during case
- Intraoperative hypoxia or hypotension
- Activity restrictions
- Drains / tubes
- Nutrition does and don’ts
- Anticoagulation start/stop
- Extubation plan

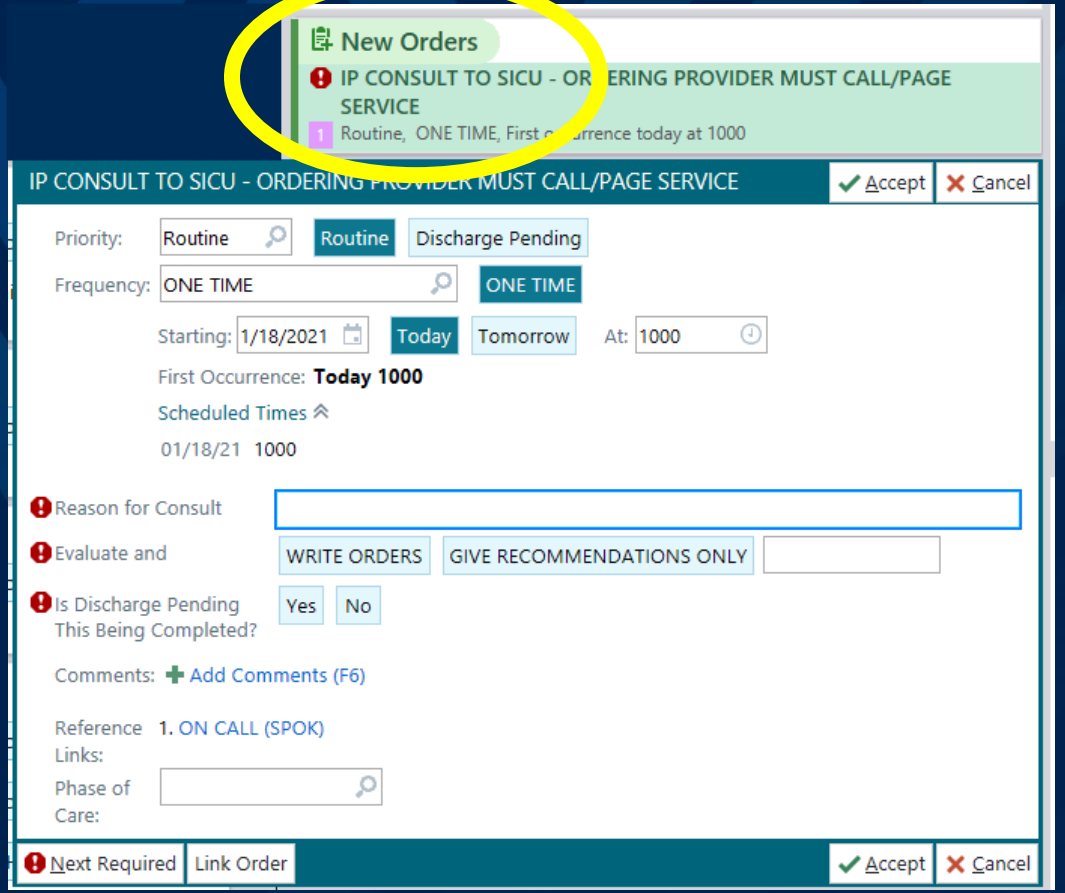
Restraints - NOT a welcome to the ICU gift

- Consider origin of agitation
  - Hypoxia
  - Glucose – High or Low
  - Constipation
  - Pain
  - Bladder Distention
  - Hot/Cold
- Consequences of continued agitation
  - Extubation
  - Line dislodgement
  - Tube / Drain dislodgement
  - Bleeding / Injury

- Consider alternatives
  - PRN anti-psychotics & sedation BEFORE saying OK to restraints
- Restrain only one extremity?
- Use mittens instead?
- Sensory assist devices available?
  - Glasses
  - Hearing aids
- Could family presence to deescalate
- Restraints associated with prolonged ICU and hospital length of stay, ⇧ mortality

SICU Consult Order

Enter this order on ALL patients on whom you enter SICU admission orders!!!



WestVirginiaUniversity.

EMERGENT CONSENT IS FOR EMERGENCIES

Consent

- Informed consent is expected for all procedures unless emergent. It is part of the time out process
- Consent forms in SICU work room and on SOLE site
- Consent process
  - Emergent consent should be a last resort
  - Please write a brief note if emergent consent used
  - Discuss procedure with patient/surrogate including benefit, risk, alternatives

Blood Consent

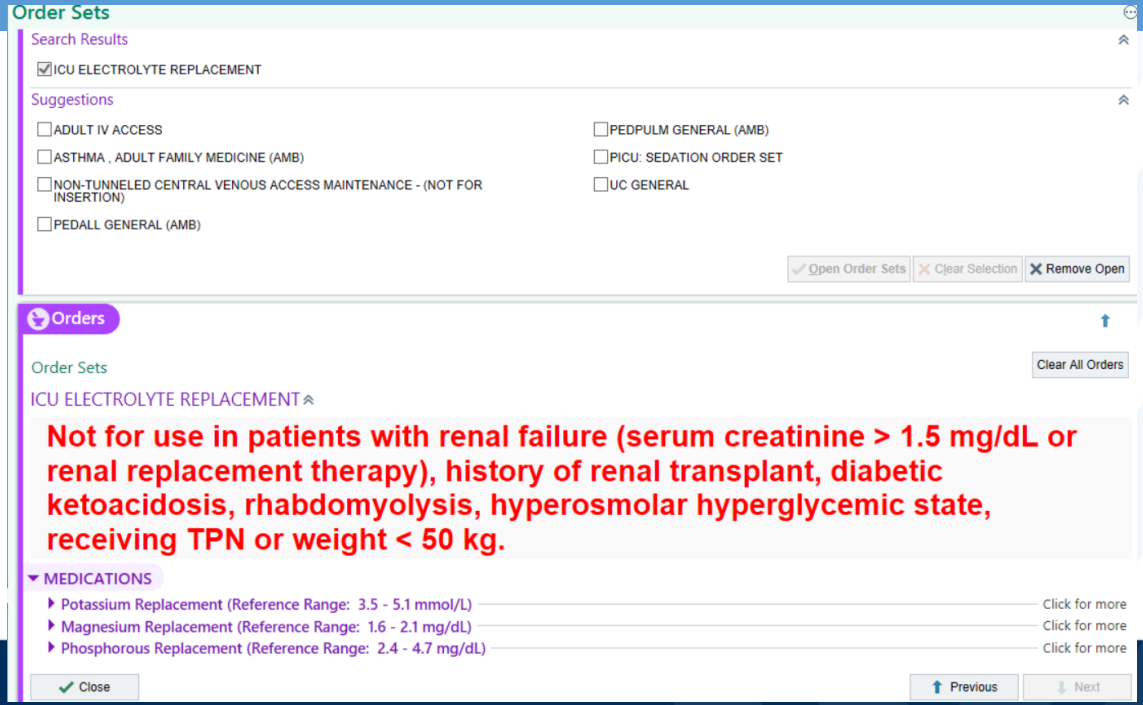
- Must be obtained for *non-emergent* transfusion of blood products, valid for 30 days
- Patient or HCS/MPOA may refuse transfusion or revoke consent at any time
- Consent for transfusion is the responsibility of the physician.
- Surgical patients: OR consent covers transfusion intra- and post-op related to blood loss.
  - If not related to surgical procedure → separate consent for transfusion necessary
  - Document EBL during surgery and other clarifying factors
- Emergent Consent – patient unable to consent, no HCS/MPOA available & the patient's condition is likely to deteriorate if transfusion is delayed
  - Document clearly why transfusion is indicated and why an emergent condition exists
  - Recommend having a 2nd physician document as a concurrent opinion
- NOT required for coagulation factors, PCC3/4(e.g. K-centra).

MPOA/Health Care Surrogate

- If patient arrives intubated or with AMS and not expected to have decision making capacity within 24 hours, contact social worker at time of patient arrival to establish Health Care Surrogate (HCS) or clarify if a Medical Power of Attorney (MPOA) exists.
- SICU Case Manager - 75532

Electrolyte Replacement Orderset

Please Order this unless exclusion criteria present

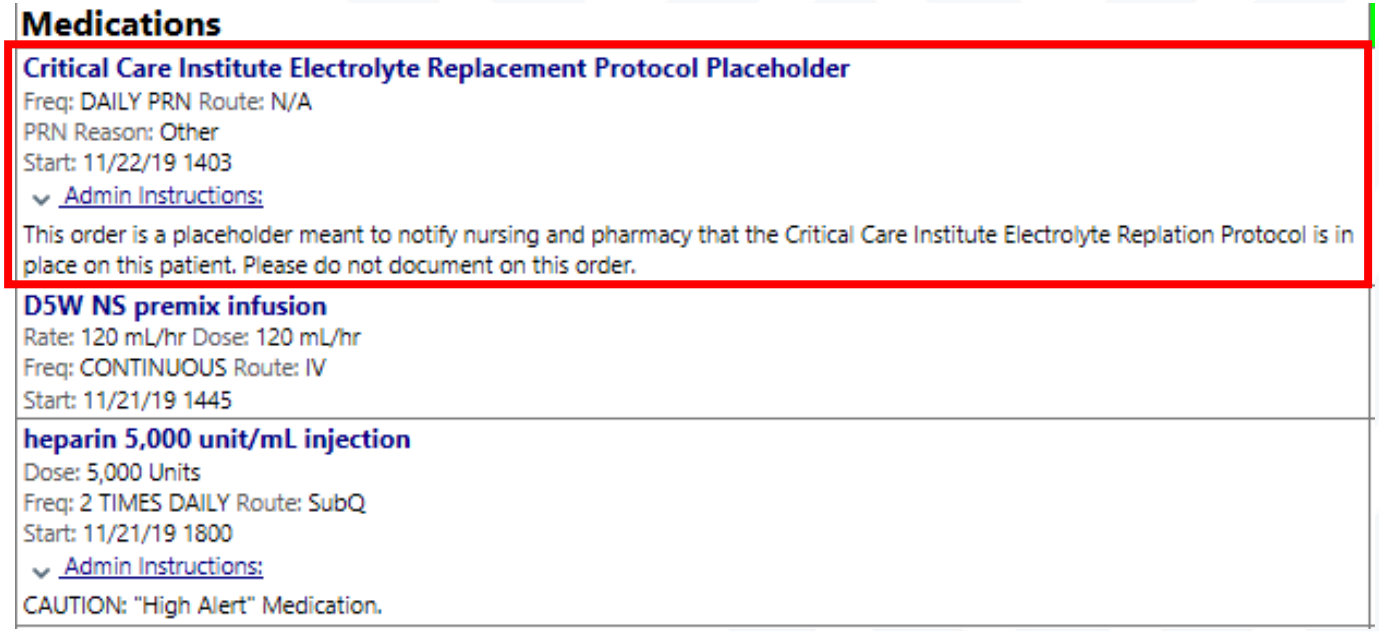


Electrolyte Replacement Orderset

- Exclusion criteria:
  - SCr > 1.5 mg/dL or RRT
  - History of renal transplant
  - DKA/HHS
  - Rhabdomyolysis
  - Receiving TPN
  - Weight < 50 kg

Inclusion: Be an ICU Patient

What you'll see in the MAR



Procedures

- Notify faculty – PGY-1 must have supervision
- Time out process includes consent review
  - Fill out yellow procedure report card with
- Hand hygiene & PPE is MANDATORY
  - Handwashing prevents infections and saves lives!!!
  - Proceduralist/Assistant: Gown, Hat, Mask, Gloves
  - Everyone else in room: Gown, Hat, Mask
- Antibiotics as appropriate

Procedure is not to be conducted until this form has been completed.

Pre-Procedure Huddle

Place Patient ID Sticker Below	Date:
	Procedure

Physician / Advanced Practice Professional Component

Service: _____ (SICU/MICU/NCCU/CVICU)

Anesthesia: _____ (General/Local/Conscious/Other)

Required Equipment: _____

Back up Equipment: _____

Required Medications: _____

Anticipated Duration of Procedure: _____ Hour(s) _____ Minutes

Procedures Requiring sedation or airway manipulation:

Emergency Contingency Plan: (i.e., fluid bolus on standby for hypotension, supplemental O2 if not intubated)

Respiratory Therapy Component

Ventilated Patients

Respiratory Available: Yes No

Vent Adjustment Required: (change mode or place on rate) _____

Non-ventilated Patients

Respiratory aware of procedure: Yes No

O2 Available: Yes No

Confirm if any respiratory medications are required: Yes No

Nursing Component

Notified Charge Nurse of Procedure:	Yes	No
EPIC Documentation Completed:	Yes	No
Confirm all required medications are at hand:	Yes	No
Confirm Emergency Contingency Plan:	Yes	No

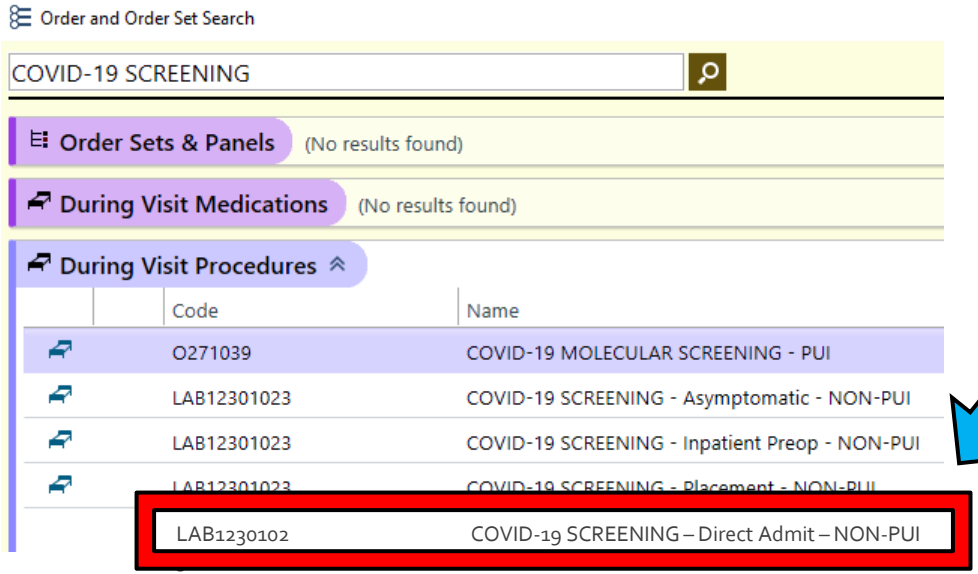
Post Procedure Evaluation

Were appropriate medications/equipment available? Yes No

Any concerns or suggestions for improvement?

*Not to be incorporated into patient chart.

Admission COVID Screening



- ✓ For **ALL** admissions who are **ASYMPTOMIC / NON-PUI UNLESS NEGATIVE PCR COVID** test done in WVU Medicine system hospital within **24 hours**
  - ✓ Cannot be a rapid test
  - ✓ Must have hard copy of test if from outside WVU Medicine system

WVU Critical Care & Trauma Institute

§61-12-8. Certain deaths to be reported to medical examiners; failure to report deaths; investigations and reports

- When any person dies in this state:
  - By violence or by apparent suicide
  - suddenly when in apparent good health
  - when unattended by a physician (i.e. found dead at home)
  - when an inmate of a public institution (i.e. jail or state psych facility)
  - disease which might constitute a threat to public health (i.e. COVID)
  - any suspicious, unusual or unnatural manner
  - Patients who have recently been admitted or had surgery are not necessarily ME cases

If in doubt, call the M.E.!

Patient Death Documentation Checklist

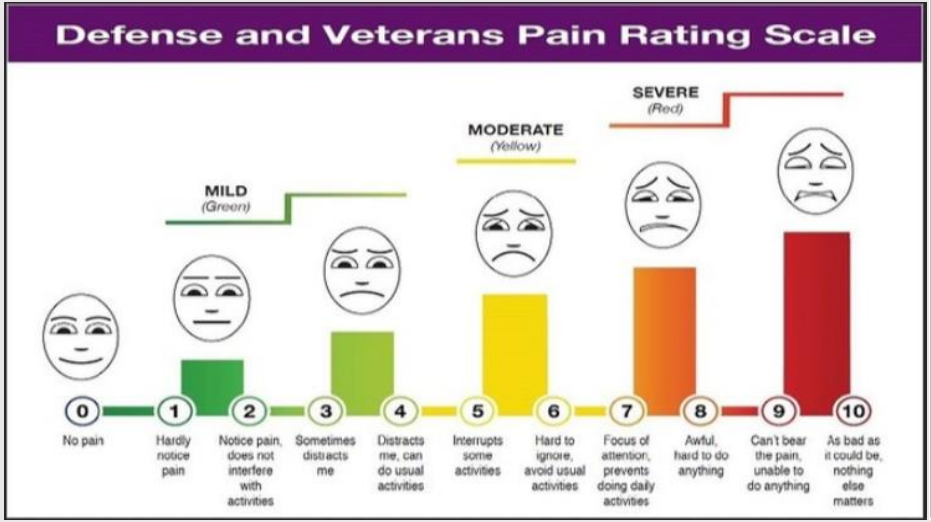
- ✓ Notify family
- ✓ Death note in EPIC
  - ✓ .Time/Date of Death
  - ✓ Cardiac Death or Brain Death
  - ✓ Physical exam confirming death
- ✓ Discharge order in EPIC
- ✓ Report of Death form - Obtained from unit clerk
- ✓ Notify Medical Examiner (if appropriate) – 304-558-6921
- ✓ Death certificate
  - ✓ MUST be completed in black ink
  - ✓ Can certify death ONLY if licensed MD/DO or NP
  - ✓ Print certifiers name under signature
  - ✓ MUST include the signature and title of pronouncing person
- ✓ Primary Service Responsibilities
  - ✓ Notify Service Attending
  - ✓ Be available to address any questions from family
  - ✓ Complete Expiration Summary in EPIC

Pain Assessments

- Every 4 hours
- PAIN-AD & CPOT for altered mental status or comatose
- WVU-PRS - all others, even if intubated
- Educate & establish expectations early
- Follow trends in pain assessments

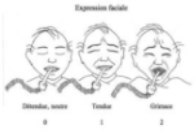
Pain Assessment Tools

↓ Gold Standard ↓



Critical Care Pain Observation Tool

Indicator	Score		Description
Facial expression	Relaxed, neutral	0	No muscle tension observed
	Tense	1	Presence of frowning, brow lowering, orbit tightening and levator contraction or any other change (e.g. opening eyes or tearing during nociceptive procedures)
	Grimacing	2	All previous facial movements plus eyelid tightly closed (the patient may present with mouth open or biting the endotracheal tube)
Body movements	Absence of movements or normal position	0	Does not move at all (doesn't necessarily mean absence of pain) or normal position (movements not aimed toward the pain site or not made for the purpose of protection)
	Protection	1	Slow, cautious movements, touching or rubbing the pain site, seeking attention through movements
	Restlessness/Agitation	2	Pulling tube, attempting to sit up, moving limbs/thrashing, not following commands, striking at staff, trying to climb out of bed
Compliance with the ventilator (intubated patients)	Tolerating ventilator or movement	0	Alarms not activated, easy ventilation
	Coughing but tolerating	1	Coughing, alarms may be activated but stop spontaneously
	Fighting ventilator	2	Asynchrony: blocking ventilation, alarms frequently activated
OR			
Vocalization (extubated patients)	Talking in normal tone or no sound	0	Talking in normal tone or no sound
	Sighing, moaning	1	Sighing, moaning
	Crying out, sobbing	2	Crying out, sobbing
Muscle tension	Relaxed	0	No resistance to passive movements
Evaluation by passive flexion and extension of upper limbs when patient is at rest or evaluation when patient is being turned	Tense, rigid	1	Resistance to passive movements
	Very tense or rigid	2	Strong resistance to passive movements or incapacity to complete them
TOTAL		___ / 8	



Caroline Arbour, RN, B.Sc., PhD(student)
School of Nursing, McGill University

Pain Management

- Do NOT use drip titration for managing acute pain
- Acute Pain = Bolus Analgesia
- Drips titrate ONLY if 3 PRN's given in previous hour
- Minimize narcotics
- Convert to enteral narcotics
- Avoid scheduling narcotics
- Non-narcotic adjuncts – Tylenol, Motrin, Muscle Relaxants, Lidoderm Patches, Diclofenac topical gel

Sedation and Sleep

- Sleep is restorative, Sedation is NOT…it is NOT sleep
- Promote sleep – minimize night interruptions
- Melatonin, mobility, dark rooms, noise reduction
- Adequate analgesia often precludes need for sedatives

STEP **1**

RICHMOND AGITATION-SEDATION SCALE (RASS)

Level of Consciousness Assessment

Scale	Label	Description	
+4	COMBATIVE	Combative, violent, immediate danger to staff	
+3	VERY AGITATED	Pulls to remove tubes or catheters; aggressive	
+2	AGITATED	Frequent non-purposeful movement, fights ventilator	
+1	RESTLESS	Anxious, apprehensive, movements not aggressive	
0	ALERT & CALM	Spontaneously pays attention to caregiver	
-1	DROWSY	Not fully alert, but has sustained awakening to voice (eye opening & contact >10 sec)	VOICE
-2	LIGHT SEDATION	Briefly awakens to voice (eyes open & contact <10 sec)	VOICE
-3	MODERATE SEDATION	Movement or eye opening to voice (no eye contact)	VOICE

If RASS is ≥ -3 proceed to CAM-ICU (Is patient CAM-ICU positive or negative?)

-4	DEEP SEDATION	No response to voice, but movement or eye opening to physical stimulation	TOUCH
-5	UNAROUSABLE	No response to voice or physical stimulation	TOUCH

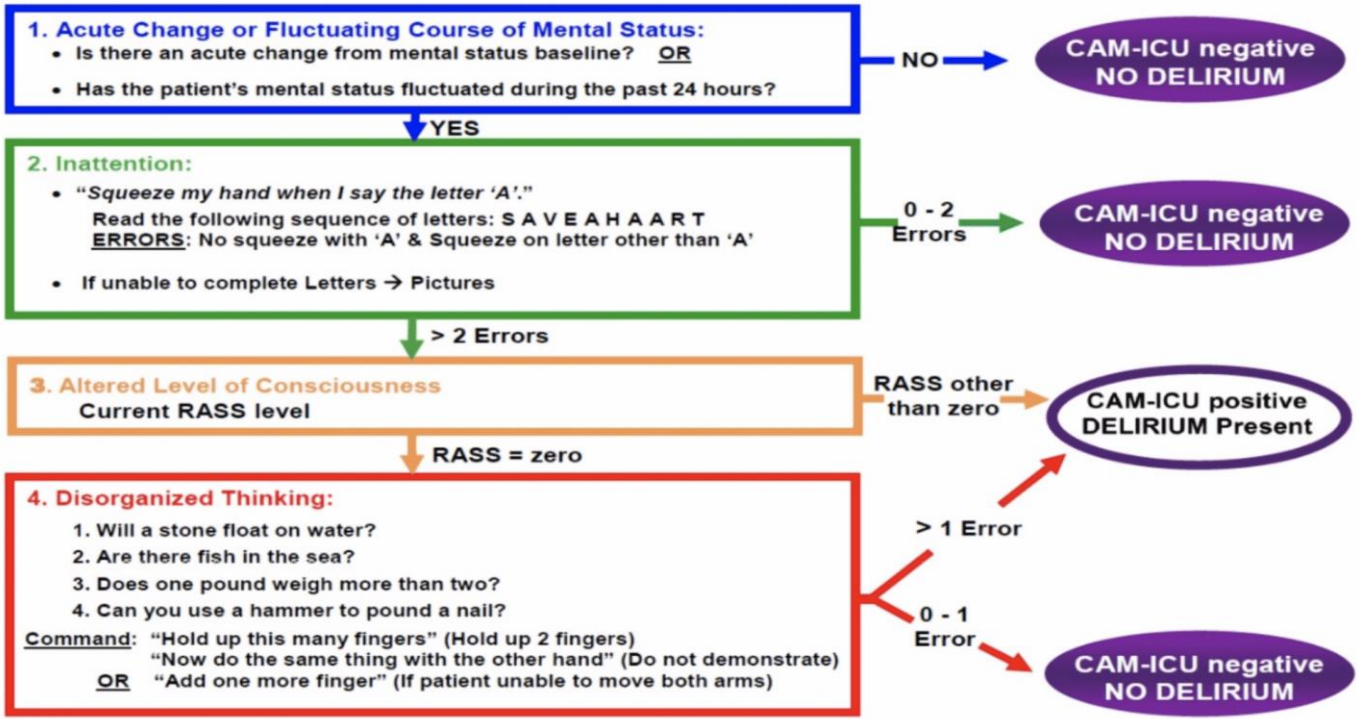
If RASS is -4 or -5 → STOP (patient unconscious), **RECHECK later**

Sessler, et al., Am J Repir Crit Care Med 2002, 166: 1338-1344 Ely, et al., JAMA 2003; 286, 2983-2991

Delirium

- Acute onset of inattention and confusion
- Prolongs mechanical ventilation, hospitalization, and increases mortality
- Hyperactive, Hypoactive, or Mixed
- ICU patients have MANY risk factors
- Good sleep is critical
- Prevention is BEST treatment

Confusion Assessment Method for the ICU (CAM-ICU) Flowsheet



SICU M&M

- List kept in SICU workroom
  - Add complications and deaths at 0600 and 1800
- Focus on system failures and barriers to care
  - Chief submits list to Dr. Schaefer 3 days prior to M&M Conference
  - Chief will assign cases for presentation by Residents
- Virtual meeting – MICU Conference Room
- Attended by all members of ICU Team

Daily Task List

Call resident responsible for keeping track of all tasks for follow-up

- Consults
- Imaging studies
- Labs
- Medications – Coordinate with Pharmacists

Review list with Service Chief at 1500 daily for completed and outstanding tasks

Rounding

Speak up & project - everyone needs to hear

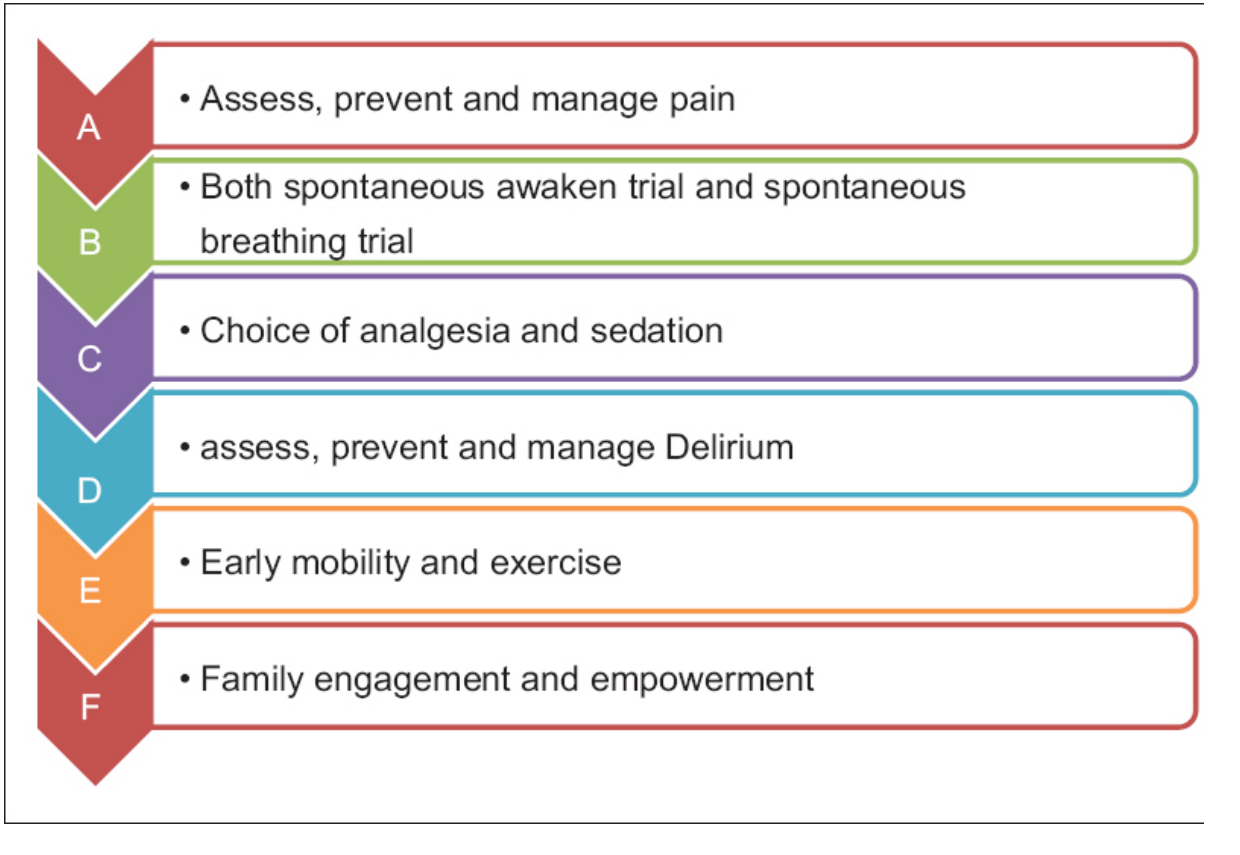
RT presents Inspiratory Pause (Respiratory Roadmap)

RN presents Brain Roadmap to begin @ each patient

- Overnight events
- Pain, Agitation, and Delirium assessments
- Mobility plans and Family Concerns
- Nursing requests – include line, tube, drain, and foley removal

Face the room to see updated information.

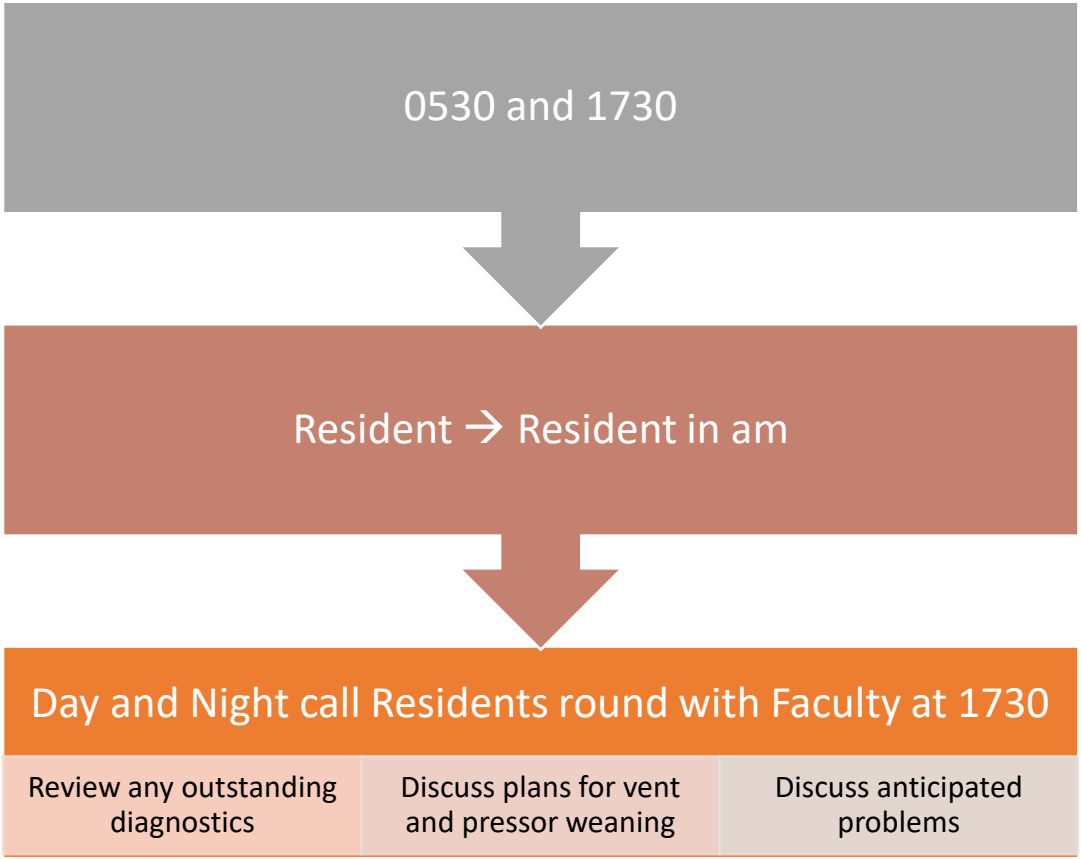
Brain Roadmap



Inspiratory Pause

- Overview of respiratory events from last shift
- Current respiratory support devices
- Ventilator mode & settings
- Supplemental Oxygen
- Respiratory medications
- Airway Clearance Devices
- Respiratory parameters

Handoff


0530 and 1730
Resident → Resident in am
Day and Night call Residents round with Faculty at 1730
Review any outstanding diagnostics
Discuss plans for vent and pressor weaning
Discuss anticipated problems

Patients to OR

- Chief should be aware in the am of ALL cases planned for the day
- OR Prep Review – AM Sign-out
  - Confirm continuous or therapeutic anticoagulation held
  - Confirm NPO since midnight – OK for meds PO or NG
  - Check H&H and Electrolytes
    - Correct electrolytes, Hb should generally be ≥ 8 gm/dL

SAT Safety Screen

a. No active seizures – clinical or on EEG
b. Alcohol withdrawal –
    a. Taper ok, hold if on Symptom based
c. Agitation – 2 consecutive RASS < 2
d. Chemical Paralytics
e. Myocardial ischemia – rising troponin, EKG changes
f. ICP < 20, no interventions last 6 hours
g. Planned procedure or OR within 2 hours of SAT

SBT Safety Screen

a. Patient on BiVent/APRV (MAP > 15)
b. Patient on Pressure Control (MAP > 15)
c. Patient Hemodynamically unstable
d. FiO2 >50% with oxygen saturations <88%
e. pH <7.25
f. Uncontrolled agitation
g. Physician request – Check with Faculty

Spontaneous Awakening Trial (SAT)

- How
  - Stop sedatives if SAT safety screening passed
  - Include narcotic infusion if being used for sedation
- Benefits
  - Wakes people up so they can be extubated
- **Successful** → STOP sedation → Spontaneous Breathing Trial (SBT)
- **Failure** → resume sedation at 50% of pre-SAT dose/rate

Spontaneous Breathing Trial (SBT)

- How
  - Successful SAT pre-requisite, pass SBT safety screen
  - Place on PS 5, PEEP 5, & FiO2 ≤ 40%
- Benefits
  - Earlier liberation from mechanical ventilation
- **Successful** → ABG & weaning parameters
  - Notify resident for possible extubation
- **Failed** → return to pre-SBT settings

Hey SICU,

WE WANT YOU!

SAT & SBT

SAT ± SBT done by 0600

SAT & SBT **PASSED**

ABG & Parameters

Call SICU Resident

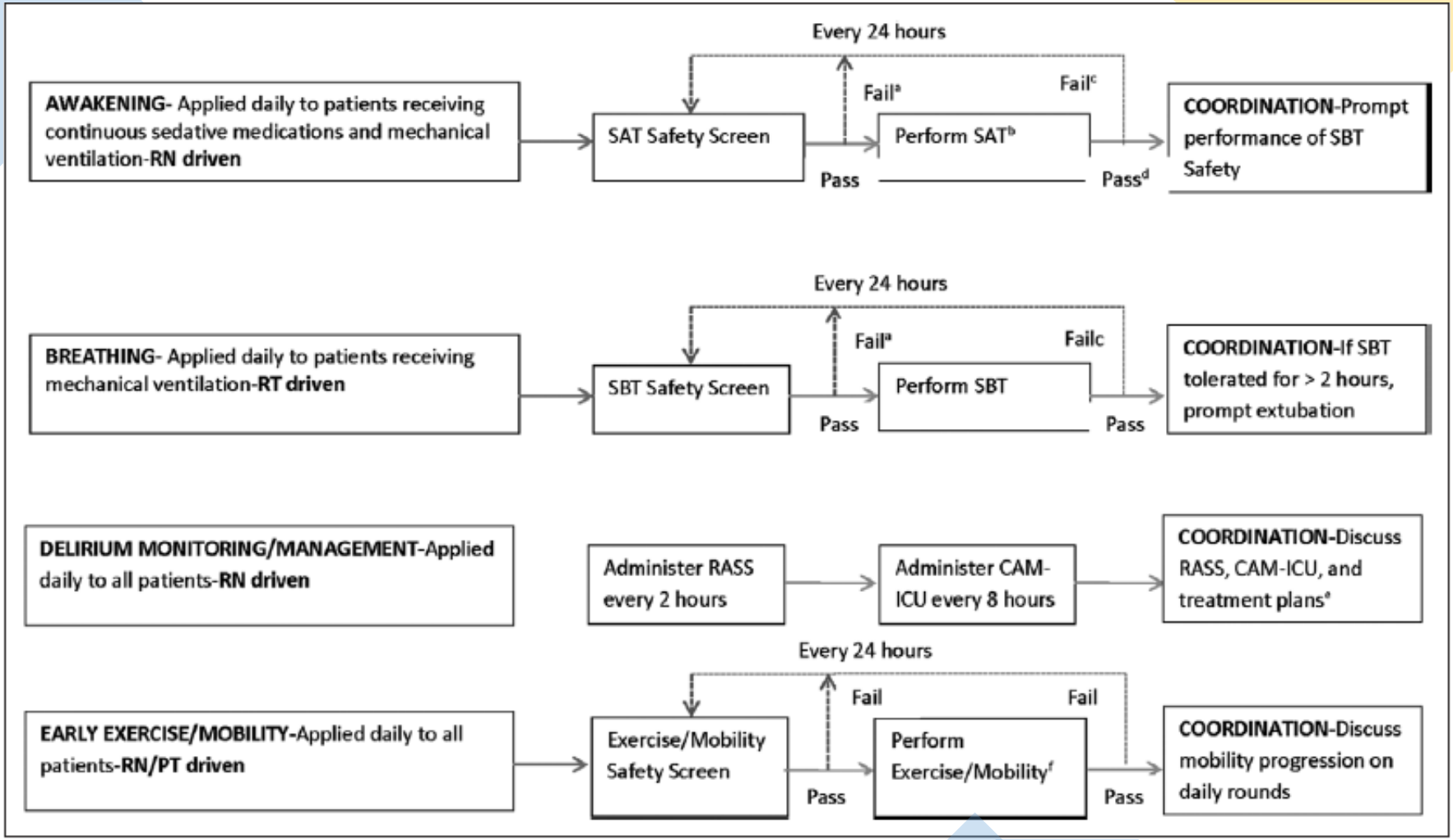
Call SICU Faculty

Extubate ?

Yes

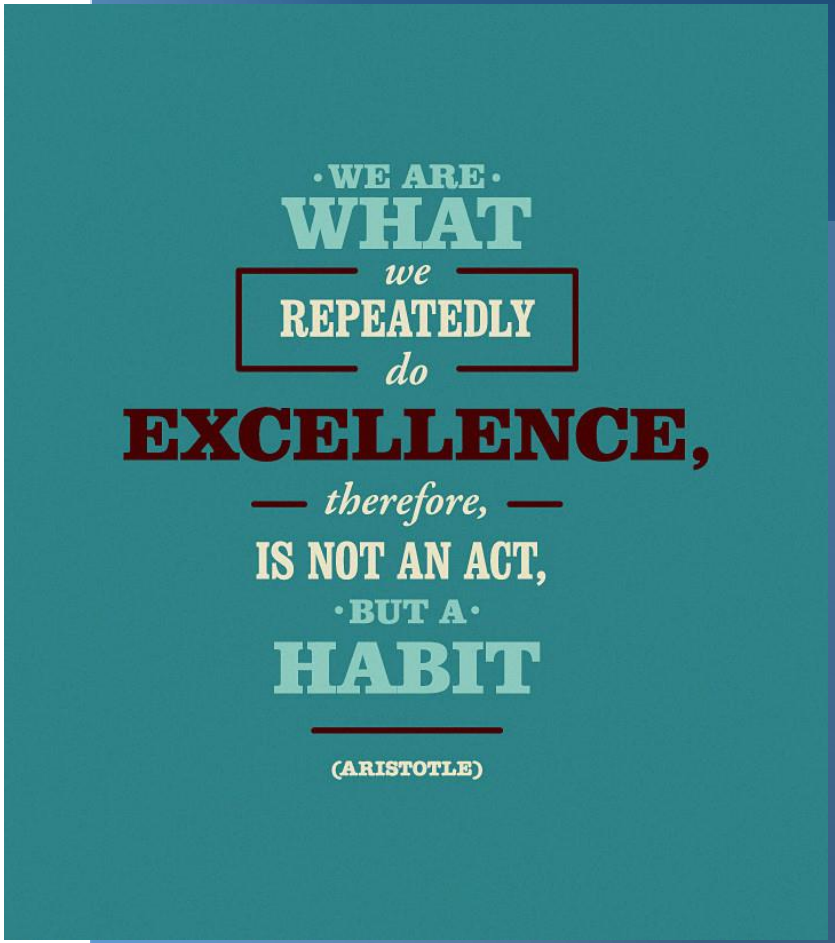
Notify RT

No


Every 24 hours
AWAKENING- Applied daily to patients receiving continuous sedative medications and mechanical ventilation-RN driven
SAT Safety Screen
Fail[a]
Perform SAT[b]
Fail[c]
Pass
Pass[d]
COORDINATION-Prompt performance of SBT Safety
Every 24 hours
BREATHING- Applied daily to patients receiving mechanical ventilation-RT driven
SBT Safety Screen
Fail[a]
Perform SBT
Failc
Pass
Pass
COORDINATION-If SBT tolerated for > 2 hours, prompt extubation
DELIRIUM MONITORING/MANAGEMENT-Applied daily to all patients-RN driven
Administer RASS every 2 hours
Administer CAM-ICU every 8 hours
COORDINATION-Discuss RASS, CAM-ICU, and treatment plans[e]
Every 24 hours
EARLY EXERCISE/MOBILITY-Applied daily to all patients-RN/PT driven
Exercise/Mobility Safety Screen
Fail
Perform Exercise/Mobility[f]
Fail
Pass
Pass
COORDINATION-Discuss mobility progression on daily rounds

Updated Visitation Policies

- Check CONNECT Webpage
- Do not offer visitation unless you are sure it meets current policy and check with RN first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(ARISTOTLE)