VENTURA COUNTY
MEDICAL CENTER
SANTA PAULA HOSPITAL
A Division of Ventura County Health Care Agency

Ventura County Health Care System Oversight Committee
Administrative Policies

July 13, 2023

The following administrative policies were reviewed and recommended for approval by appropriate departments and committees.

1. 107.086 Communications Downtime Plan
2. PH.104 Impaired Driving Warning on Medication Labels
3. PH.15 Pharmaceutical Ordering and Receiving

Status **Active** PolicyStat ID **13738306**

VENTURA COUNTY HEALTH CARE AGENCY

Origination	5/31/2023
Last Approved	5/31/2023
Effective	5/31/2023
Last Revised	5/31/2023
Next Review	5/30/2026
Owner	Jason Arimura: Associate Hospital Administrator-AncillaryServices
Policy Area	Administrative - Operating Policies

107.086 Communications Downtime Plan

POLICY:

Ventura County Medical Center, Santa Paula Hospital and the Inpatient Psychiatric Unit has systems and processes in place in the event of a system-wide or facility wide outage of the network and/or phone systems.

PROCEDURE(S):

A. In the event the network and/or phone system goes down across the entire facility, the Nursing Supervisor shall notify the Administrator on Duty (AOD).

B. The AOD shall contact the on-call Information Technology (IT) Manager to notify of the facility-wide network/phone outage.

1. The AOD shall send a general communication to the following individuals:
    a. Chief Executive Officer
    b. Chief Operating Officer
    c. Chief Nurse Executive
    d. Chief Medical Officer
    e. Associate Chief Nurse Executive
    f. Associate Hospital Administrator
    g. Safety Officer
    h. Facilities Manager
    i. Patient Access Manager

2. The on-call IT Manager shall send a general communication of network/phone downtime to the following individuals:
    a. Chief Information Officer
    b. Infrastructure-Network & Systems IT Manager
    c. HCA IT Manager
    d. Hospital Systems IT Supervisor

C. The Patient Access Manager shall notify the paging team. Paging team shall overhead page *"Attention all staff. The network and phone system is currently down. Backup communication devices are being deployed."*
    1. In the event the paging system is down, the nursing supervisor shall notify the departments of the communications downtime.

D. IT Department to set up Communication Bridge for communication of ongoing updates.
    1. Primary Communication Bridge phone number: (877) 411-9748.
        a. Access code: 6712181
        b. Host PIN: 4124
    2. Back up Communication Bridge phone number: (877) 402-9757.
        a. Access code: 5244377
        b. Host PIN: 5698

E. Back up communication devices shall be used during communication downtime.
    1. The analog phone system is designated as the primary backup system for communication between departments. See Attachment A for Backup Phone System Directory.
    2. In the event the analog phone system is not working or is not meeting operational needs, downtime cell phones shall be deployed by the Nursing Supervisor according to Attachment B Downtime Cell Phone Directory.
    3. In the event both the analog phone system is down and cell service is not available, walkie talkies shall be deployed by the Facilities Department. See Attachment C Walkie Talkie Instructions.

F. Upon recovery of the network and phone systems, the departments shall be responsible for returning the deployed communication devices to the nursing supervisor office.

All Revision Dates

5/31/2023

Attachments

Attachment A Backup Phone System Directory

Attachment B Downtime Cell Phone Directory

Attachment C Walkie Talkie Instructions

Approval Signatures

Step Description	Approver	Date
Hospital Administration	Diana Zenner: Chief Operating Officer, VCMC & SPH	5/31/2023
Policy Owner	Jason Arimura: Associate Hospital Administrator-AncillaryServices	5/30/2023

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VENTURA COUNTY HEALTH CARE AGENCY

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Owner	Patricia Bollendorf-Perez: Pharmacy Supervisor
Policy Area	Pharmacy Services

PH.104 Impaired Driving Warning on Medication Labels

POLICY:

To comply with California Business and Professional Code section 4074 requiring that pharmacists must add a warning label to notify patients that a drug – when used by itself or when combined with alcohol – may impair a person's ability to operate a vehicle or vessel.

A pharmacist must exercise his or her professional judgment to make this determination and include the written ancillary label on the prescription container indicating that the drug may impair a person's ability to operate a vehicle or vessel.

PROCEDURE:

The following drugs shall be dispensed with an alcohol warning.

1. The following drug classes may impair a person's ability to drive a motor vehicle or operate machinery when taken alone or in combination with alcohol (16 CCR §1744):
    a. Muscle relaxants.
    b. Antipsychotic drugs including phenothiazines with central nervous system depressant effects.
    c. Antidepressants with central nervous system depressant effects.
    d. Antihistamines, motion sickness agents, antipruritics, anti-nauseants, anticonvulsants and antihypertensive agents with central nervous system depressant effects.
    e. All Schedule II, III, IV and V depressant or narcotic controlled substances as set forth in Health and Safety Code at Section 11055 et seq. prescribed in doses which could have an adverse effect on a person's ability to operate a motor vehicle.
    f. Anticholinergic agents and other drugs which may impair vision.

g. Based on pharmacist's professional judgement, any other drug that may impair a patient's abillity to operate a motor vehicle or operate machinery

2. The following are examples of drugs which may have harmful effects when taken in combination with alcohol. These may or may not affect a person's ability to operate a motor vehicle.
    a. Disulfiram and other drugs (e.g. chlorpropamide, metronidazole) which may cause a disulfiram-like reaction.
    b. Mono amine oxidase inhibitors.
    c. Nitrates.
    d. Cycloserine
    e. Antidiabetic agents including insulin and sulfonylureas (due to risk of hypoglycemia)

All Revision Dates

6/13/2023, 1/1/2017

Approval Signatures

Step Description	Approver	Date
Hospital Administration	Jason Arimura: Associate Hospital Administrator-AncillaryServices	6/13/2023
Pharmacy Services	Sul Jung: Associate Director of Pharmacy Services	5/31/2023
Pharmacy Services	Patricia Bollendorf-Perez: Pharmacy Supervisor	5/30/2023

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VENTURA COUNTY HEALTH CARE AGENCY

Origination	6/1/1995
Last Approved	6/13/2023
Effective	6/13/2023
Last Revised	6/13/2023
Next Review	6/12/2026
Owner	Sul Jung: Associate Director of Pharmacy Services
Policy Area	Pharmacy Services

PH.15 Pharmaceutical Ordering and Receiving

POLICY:

The Department of Pharmacy Services shall purchase products directly from the manufacturer or from a wholesaler who provides pedigree products directly from the manufacturer. The ordering process will be defined and established to ensure that pharmaceuticals are obtained in a cost-effective manner and that the drugs will be available to treat the patients.

PROCEDURE:

A. Each Pharmacy Department staff member is responsible for placing an order with the Pharmacy Buyer when any drug inventory is low in stock.

B. Ordering from the drug wholesaler:

1. Cardinal Health is the primary drug wholesaler for Ventura County Medical Center (VCMC) and Santa Paula Hospital (SPH).
2. The drug wholesaler ordering system is password protected.
3. The Pharmacy Buyer enters the wholesaler item numbers into the wholesaler computer ordering system. The Buyer transmits the order each afternoon, Monday through Friday.
    a. Ventura County Medical Center only: Urgent orders may be transmitted before 11:00 a.m. to obtain same day delivery.
4. The Department of Pharmacy Services has established a separate account with the drug wholesaler for Group Purchasing Organization (GPO), Wholesale Acquisition Cost (WAC) and 340B drug purchases for each of its pharmacy locations. Orders are split according to historical utilization prior to submitting the order to the drug wholesaler. See policy *PH.18 340B Drug Pricing Program: Disproportionate Share Hospital* for more information.

5. Clinic medications for 340B locations shall be ordered by the VCMC Pharmacy Buyer and purchased on a 340B account.
6. Clinic medications for non-340B locations shall be ordered by the VCMC Pharmacy Buyer and purchased on a non-340B account.

C. Ordering from a manufacturer or other vendor
   1. Direct orders with drug manufacturers shall follow policy *PH.17 Direct Ordering Procedure*.
   2. Orders for 503A and 503B facilities shall be submitted directly to the vendor.

D. After-hours and emergency drug orders
   1. Emergency orders can be placed anytime.
      a. Cardinal Health emergency phone number is 877-772-0346. An answering service will take the message and a Cardinal Health staff member will promptly return the call.
      b. Provide the following information:
         i. For Ventura County Medical Center
         Distribution Center: Valencia, CA
         Account Name: Ventura County Medical Center
         Account Number: 2057190798 (Legacy: 74108) WAC
         Your contact name and a call back phone number.
         ii. For Santa Paula Hospital
         Distribution Center: Valencia, CA
         Account Name: Santa Paula Hospital
         Account Number: 2057191412 (Legacy: 74493) WAC
         Your contact name and a call back phone number.
         iii. Pharmaceuticals may be borrowed amongst the VCMC pharmacy locations if the drug is needed before it can be acquired using regular channels. Refer to policy *PH.16 Pharmaceutical Borrowing and Loaning*.
   2. Schedule II Controlled Substances may be transferred from another VCMC pharmacy location if the C-II controlled substance is required immediately. Form DEA-222 must be completed and submitted with the order.

E. Receiving pharmaceuticals
   1. Check products received and compare each product with the packing slip or invoice. Record the date of receipt and initials on the packing slip/invoice.
   2. Place products into inventory stock. All drugs shall be stored according to manufacturer's recommendations. 340B purchases for the clinics will be stored separately from the hospital inventory.
   3. All controlled drugs are secured in the narcotic vault or secured cabinet space. Quantity received shall be automatically logged by the narcotic vault or manually logged in each medication's perpetual inventory log. Copies of Schedule II invoices

are attached to the DEA-222 order form.

F. Reconciliation of orders

1. The Pharmacy Buyer compares the signed packing slip or invoice with the order to verify that ordered pharmaceuticals have been received. The Buyer shall follow up on any discrepancies between product ordered and product received. Significant discrepancies shall be brought to the attention of the Director of Pharmacy Services or Pharmacy Supervisor within 24 hours of discovery.
2. Pricing data shall be reviewed and updated in the electronic health record as needed.
3. Invoices are signed and submitted to VCMC Accounts Payable. A copy of the invoice and packing slip shall be filed.

G. Items not Received

1. If an item is temporarily out, the Pharmacy Buyer shall get an estimated date of arrival and place the item on backorder.
2. If an item is backordered by the manufacturer, an alternative strength or size is considered. If no alternative is available, the Buyer will notify the Director of Pharmacy Services, Pharmacy Supervisor and Pharmacy staff.

All Revision Dates

6/13/2023, 9/20/2021, 5/31/2017, 2/1/2014, 11/1/1997

Approval Signatures

Step Description	Approver	Date
Hospital Administration	Jason Arimura: Associate Hospital Administrator-AncillaryServices	6/13/2023
Pharmacy Services	Sul Jung: Associate Director of Pharmacy Services	6/10/2023

VENTURA COUNTY MEDICAL CENTER

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Medical Executive Committee Document Approvals

July 13, 2023

a. Policies & Procedures / Forms / Orders

The following were reviewed and recommended for approval by the appropriate Departments, Committees, and the Medical Executive Committee

1.	100.086 Rapid Response Team	page 2-5
2.	100.269 Suicide Prevention	page 6-11
3.	106.028 Isolation Precautions	page 12-17
4.	108.035 Patient Throughput (Intrafacility Admissions and Transfers)	page 18-19
5.	108.047 Centralized Telemetry Monitoring	page 20-25
6.	108.049 Peripherally Inserted Central Catheter Insertion	page 26-38
7.	108.050 Patient Safety Attendant Care	page 39-41
8.	AC.04 Ambulatory Care Specialty Care Referral Process	page 42-44
9.	CC.29 Vasopressor Intravenous Administration through Peripheral Line	page 45-48
10.	DM.008 Hypoglycemia Management in Adults	page 49-52
11.	ER.42 Standardized Nursing Procedures in the Emergency Department	page 53-59
12.	ICU.10 Intensive Care Unit Discharge and Transfer Criteria	page 60-61
13.	ICU.11 Intensive Care Unit Physician Consultations	page 62-63
14.	ICU.23 Intravenous Medication Titration in Intensive Care Areas	page 64-74
15.	ICU.24 The Intensive Care Unit	page 75-81
16.	IS.44 Diuretic Renal Scintigraphy	page 82-84
17.	MS.102.024 Non-affiliated Physicians as Assistant or Proctor	page 85-87
18.	N.17 Peripheral Arterial Line Management in the NICU	page 88-91
19.	N.23 Chest Tube Use in the NICU	page 92-97
20.	N.26 Infant Developmental Management in the NICU	page 98-101
21.	N.35 Gastric Lavage in the NICU	page 102-103
22.	N.36 Gavage/Enteral Gastric Tube Feeding in the NICU	page 104-108
23.	N.37 Monitoring Neonates in the NICU	page 109-113
24.	N.40 Ophthalmology Exams in the NICU	page 114-118
25.	PH.83 Intravenous Potassium Administration for Adults	page 119-121
26.	T.11 Request for Trauma Data Through the Trauma Registry	page 122-123
27.	T.12 Trauma Registry Data Management	page 124-127

VENTURA COUNTY HEALTH CARE AGENCY

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Effective:	*Upon Approval*
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Last Revised:	*5/3/2023*
Next Review:	*3 years after approval*
Owner:	*Danielle Gabele: Chief Nursing Executive, VCMC & SPH*
Policy Area:	*Administrative - Patient Care*
References:	

100.086 Rapid Response Team

POLICY:

The rapid assessment, treatment and stabilization of patients is essential to prevent respiratory and cardiovascular collapse and arrest. The purpose of this policy is to help staff ~~Identify~~identify pre-arrest states and activate the Rapid Response Team~~,~~ if needed~~, to decrease the overall code rate~~.

PROCEDURE:

If a patient exhibits hemodynamic, respiratory or neurologic instability or deterioration (see specific criteria below) or when there is concern about a patient, ~~healthcare~~health care staff shall activate the Rapid Response Team (RRT).

~~**Calling the RRT:**~~

Calling the RRT:

When a patient is deteriorating, the primary Registered Nurse (RN) will activate the RRT by calling:

- Ventura County Medical Center (VCMC) – "7-6666"
- Santa Paula Hospital (SPH) – "7-8666"

The role of the RRT is to help with the following:

- Assess situation and condition.
- Stabilize the patient.
- Transfer the patient, if necessary.

If the primary RN ~~is~~(or patient/family) are concerned for the patient's condition, but signs and symptoms may not warrant immediate RRT, the primary RN may call the ~~Intensive Care Unit (ICU) charge RN (or Nursing Supervisor for SPH) for evaluation of patient condition. The ICU charge RN will determine the need for the RRT activation upon~~Rapid Response Nurse to assist with assessment. The Rapid Response RN will determine the need for the RRT activation upon assessment.

~~The ICU charge nurse may be reached by calling the spectralink phone:~~

- ~~VCMC "7-8129"~~
- ~~SPH (805) 218-1712~~

The Rapid Response RN can be reached via Tiger Text or at 805-515-8212 (##8212)

RRT Members are Advanced Cardiovascular Life Support (ACLS) or Pediatric Advanced Life Support (PALS) certified.
RRT Team Members include:

- ~~VCMC (adult inpatients): ICU charge RN, Respiratory Therapist and ICU attending physician (when in house), and designated ICU resident~~
- ~~VCMC (pediatric patients): ICU Charge RN, ED RN, Pediatric Intensive Care Unit (PICU) attending (when in house), Pediatric/PICU Charge RN and Respiratory Therapist~~
- ~~For Inpatient Psychiatric Unit (IPU) and outpatient areas, the team will include the addition of the ED RN~~
- ~~SPH: Nursing Supervisor, Respiratory Therapist and Emergency Department (ED) attending physician~~

A. VCMC (adult inpatients):
   - Rapid Response RN
   - Respiratory Therapist
   - ICU attending Licensed Practitioner (LP) when in house
   - Designated ICU resident
   - Nursing supervisor and ICU charge nurse can attend if able but are not required.

B. VCMC (pediatric patients):
   - Rapid Response RN
   - Pediatric Intensive Care Unit (PICU) attending (when in house)
   - Pediatric/PICU Charge RN
   - Respiratory Therapist
   - Nursing supervisor can attend if able but is not required.

C. For Inpatient Psychiatric Unit (IPU) and outpatient areas, the team will include the addition of the ED RN

D. SPH: Nursing Supervisor, Respiratory Therapist and Emergency Department (ED) attending LP

Contact Nursing supervisor to designate a critical care RN to respond to the overhead page if a RRT RN is not available.

Criteria for Rapid Response Team Activation

A. Adults
   - Code Sepsis criteria
   - Heart rate <50 bpm or >130 bpm
   - Systolic blood pressure <90 mm Hg or acute changes >180 mm Hg
   - Respiratory rate <10 or >24
   - SaO2 <90%,increasing oxygen requirements or change in respiratory status
   - Acute significant bleed including postpartum hemorrhage
   - Failure to respond to therapy
   - Acute change in mental or neurologic status
   - Seizures, including eclamptic

- Change in level of consciousness
- New onset or increased weakness
- Loss of pulse in extremities
- New onset chest pain
- Concerned staff or family member

B. Pediatrics

- Acute change in mental or neurologic status
- SaO2 <90%,increasing oxygen requirements or change in respiratory status
- Seizures, unresponsive to previously ordered medications
- Acute hemodynamic instability
- If PEWS score 3 or greater~~—~~, activate RRT (see policy ~~P.36 Pediatric Early Warning System (PEWS) Scoring - activate RRT and do the following~~P.36 Pediatric Early Warning System (PEWS) Scoring):
  - For a PEWS score of 3, consult with PICU charge nurse
  - For a PEWS score of 4, notify Resident and/or Attending
  - For a PEWS score of 5 or greater, request evaluation at bedside by Resident or Attending, notify PICU attending
- Concerned staff or family member

~~Duty of the RRT RN:~~

- ~~The acting RRT RN will respond to the following overhead codes:~~
  - ~~RRT~~
  - ~~RRT Code Sepsis~~
  - ~~Code Stroke~~
  - ~~Code Blue~~
  - ~~Trauma tier 1 and 2~~
  - ~~Code Maternity~~
- ~~When the RRT is called overhead, the ICU charge nurse will respond~~
- ~~The acting RRT RN is required to document the event and outcomes on the RRT documentation record (see attached)~~
  - ~~If the Charge RN phone is called without activating an RRT code, the acting RRT RN will assess the patient and document on the RRT documentation record (see attached)~~

Duty of the RRT RN:

A. The acting RRT RN will respond to the following overhead codes:

- Rapid Response
- Code Sepsis
- Code Stroke
- Code Blue

- Code White
- Code Telemetry
- Trauma tier 1 and 2
- Code Maternity

B. When the RRT is called overhead, the ICU charge nurse will respond

- The acting RRT RN may be required to document the event and outcomes on the RRT documentation record (see attachment A or B) or can delegate this responsibility to another team member.
- If the RRT RN phone is called without activating an RRT code, the acting RRT RN will assess the patient and document on the RRT documentation record (see attachment A or B)

Magnetic Resonance Imaging (MRI)

Refer to policy 100.055 Code Blue - Adult Medical Emergency for process.

ATTACHMENTS:

- Attachment A - Pediatric Rapid Response Team Documentation Record
- Attachment B - Adult Rapid Response Team Documentation Record

All revision dates: 5/3/2023, 10/14/2020, 2/14/2018, 3/1/2015

Attachments

Attachment A - Pediatric Rapid Response Team Documentation Record.pdf
Attachment B - Adult Rapid Response Team Documentation Record.pdf

Approval Signatures

Step Description	Approver	Date
Medical Executive Committee	Tracy Chapman: VCMC - Med Staff	pending
Hospital Administration	Minako Watabe: Chief Medical Officer, VCMC & SPH	5/17/2023
Hospital Administration	Diana Zenner: Chief Operating Officer, VCMC & SPH	5/4/2023
Nursing Administration	Sherri Block: Associate Chief Nursing Executive, VCMC & SPH	5/3/2023
Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	5/3/2023
Policy Owner	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	5/3/2023

VENTURA COUNTY
HEALTH CARE AGENCY

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Owner:	*Sherri Block: Associate Chief Nursing Executive, VCMC & SPH*
Policy Area:	*Administrative - Patient Care*
References:	

100.269 Suicide Prevention

PURPOSE:

The purpose of this policy is to outline practices for the identification, assessment and prevention of self-harm or attempted suicide by at-risk patients during hospitalization.

POLICY:

Ventura County Medical Center and Santa Paula Hospital utilize consistent and evidence-based tools for screening and assessing the severity of risk for suicide and for protecting patients with potential for self-harm.

This includes:

~~1. Screen all patients for suicidal ideation using a validated screening tool.~~

~~2. Use an evidence-based process to conduct a suicide assessment of patients who have screened positive for suicidal ideation.~~

~~3. Document in the EHR (Electronic Health Record) the patietns' overall level of risk for suicide, suicidal ideation intensity, SAFE-T and the plan to mitigate risk for suicide.~~

~~4. Implement level of observation based on patient risk level.~~

~~5. Training, education of staff, and monitoring plan for ongoing compliance.~~

1. Screen all patients for suicidal ideation using a validated screening tool.
2. Use an evidence-based process to conduct a suicide assessment of patients who have screened positive for suicidal ideation.
3. Document in the EHR (Electronic Health Record) the patietns' overall level of risk for suicide, suicidal ideation intensity, SAFE-T and the plan to mitigate risk for suicide.
4. Implement level of observation based on patient risk level.
5. Training, education of staff, and monitoring plan for ongoing compliance.

TERM(S):

~~1. C.A.S.E.: Creating a Safe Environment Checklist~~

~~2. C-SSRS: Colombia-Suicide Severity Rating Scale~~

3. CSU: Crisis Stabilization Unit

4. EHR: Electronic Health Record

5. IPU: Inpatient Psychiatric Unit

6. LP: Licensed Practitioner

7. RASS: Richmond Agitation-Sedation Scale

8. RN: Registered Nurse

9. SAFE-T: Suicide Assessment Five-Step Evaluation and Triage

PROCEDURE(S):

A. **Suicide Screening**

1. All patients who are 12 years or older will be screened for suicidal ideation by the Registered Nurse (RN) utilizing a validated screening tool (Colombia-Suicide Severity Rating Scale/C-SSRS) in the EHR. The screening will identify the level of suicide risk (low, moderate or high).

2. If the patient is unable or unwilling to respond, other sources of information may be utilized in completing the suicide screening, such as family or police officers. If a patient initially is unable to respond and there is no one available for information, the RN must complete if/when the patients is able to respond or other information is available.

3. If the patient screens **"NO RISK"** on the -SSRS, this is considered to be a negative screen for suicidal ideation and no further suicide assessment is required unless the patient exhibits new behaviors, actions, or verbalizations that suggest suicidal ideation, or the patient is here for a behavioral health condition.

4. If a patient is screened to be 'AT RISK", notify the charge nurse and provider, initiate 1:1 monitoring and complete the 'Creating a Safe Environment" Checklist (C.A.S.E.). RN to obtain order for 1:1 Monitoring/Patient Safety Attendant from Licensed Practitioner.

B. **Suicide Assessment and Reassessment**

1. For patients who screen low, moderate or high risk for suicide on the C-SSRS, an evidenced-based suicide assessment (SAFE-T) will be completed by a Licensed Independent Practitioner (LIP) in the EHR. The assessment asks about suicidal ideation, plan, intent, suicidal or self-harm behaviors, risk factors, protective factors, and ideation intensity.

2. For Emergency Department and in-patient units, a re-assessent will be conducted each day, a change in patient condition, and/or at discharge. RN to notify Attending MD for a pending reassessment as needed.

3. For the Crisis Stabilization Unit (CSU) and Inpatient Psychiatric Unit (IPU) the SAFE-T is completed upon admission and re-assessment is conducted each shift, change in patient condition, and/or at discharge.

C. **Suicide Precautions for Emergency, Perioperative and In-Patient Units**

1. **1:1 Observation** - An assigned staff member (Patient Safety Attendant) stays within close proximity of the patient and provides direct observation at all times. Document observations every 15 minutes or more frequently as needed.

a. When a patient is in the bathroom or shower, a staff member will maintain observation

b. Continuous 1:1 observation is not indicated for ICU level patients with a Richmond Agitation-Sedation Scale (RASS) score of -3 (moderate sedation), -4 (deep sedation), or -5 (un-arousable). In these cases, 1:1 RN staffing may be appropriate.

2. **C.A.S.E. Safety Checklist** – Modification of the patient's environment to increase safety by using the C.A.S.E.

a. A C.A.S.E. Safety Checklist must be completed each shift by the Patient Safety Attendant with the Registered Nurse (RN).

b. The purpose of the C.A.S.E. Safety Checklist is to identify and temporarily remove from the patient's room items that could result in harm unless medically needed. Examples include patient clothing, shoes, jewelry; personal electronics; IV pumps and poles; call bell cords, including in the bathroom; linens and towels not required for patient warmth; trash bags; plastic bags; sharps containers. Items that cannot be easily removed will be identified and mitigated with 1:1 observation. Items required for the patient's care will remain in the room and will be monitored to ensure these items are not used for self-harm by a patient. Once these items are no longer needed, they should be removed from the room. Please refer to Policy 100.256 Patient Belongings.

c. The items identified and removed from a patient's room will be returned when the patient no longer requires 1:1 observation or is discharged.

3. **Licensed Practitioner Validation** - Once the provider validates the level of risk for suicide, suicide precautions will be continued on patients at risk of suicide.

4. **Licensed Practitioner Order** - A provider's order is required for the discontinuation of suicide precautions.

D. **Discharge**

1. Patients who are being discharged as a Low to High Risk for Suicide or are being treated for a psychiatric, emotional or behavior disorder complaint will be provided with written discharge instructions, which will include but not limited to:

a. Referrals and/or appointments for Behavioral Health follow-up as indicated.

b. Education on suicide prevention information to include but not be limited to a crisis hotline.

c. Provide counseling and follow-up care instructions to the patient at time of discharge in collaboration with support services as appropriate.

2. Patient/family education regarding suicide will be documented in the appropriate location in the EHR.

E. **Training, Education, and Monitoring**

1. **Training and Education**

a. All RN staff who could be assigned the care of a patient at risk for suicide will be educated and complete training/competency on suicide screening (C-SSRS) and mitigation upon hire and annually.

b. Staff who could be assigned the care of a patient at risk for suicide will be educated and evaluated for competency in suicide risk mitigation upon hire and annually.

2. **Monitoring**

a. Implementation and effectiveness of polices and procedures for screening assessment, and management of individuals served at risk for suicide will be monitored for compliance.

~~b. The Performance Improvement Coordinating Council will provide oversight of improvements and opportunities for change.~~

1. C.A.S.E.: Creating a Safe Environment Checklist
2. C-SSRS: Colombia-Suicide Severity Rating Scale
3. CSU: Crisis Stabilization Unit
4. EHR: Electronic Health Record
5. IPU: Inpatient Psychiatric Unit
6. LP: LIcensed Practitioner
7. RASS: Richmond Agitation-Sedation Scale
8. RN: Registered Nurse
9. SAFE-T: Suicide Assessment Five-Step Evaluation and Triage

PROCEDURE(S):

A. Suicide Screening

1. All patients who are 12 years or older will be screened for suicidal ideation by the Registered Nurse (RN) utilizing a validated screening tool (Colombia-Suicide Severity Rating Scale/C-SSRS) in the EHR. The screening will identify the level of suicide risk (low, moderate or high).
2. If the patient is unable or unwilling to respond, other sources of information may be utilized in completing the suicide screening, such as family or police officers. If a patient initially is unable to respond and there is no one available for information, the RN must complete if/when the patients is able to respond or other information is available.
3. If the patient screens "**NO RISK**" on the -SSRS, this is considered to be a negative screen for suicidal ideation and no further suicide assessment is required unless the patient exhibits new behaviors, actions, or verbalizations that suggest suicidal ideation, or the patient is here for a behavioral health condition.
4. If a patient is screened to be 'AT RISK", notify the charge nurse and provider, initiate 1:1 monitoring and complete the 'Creating a Safe Environment" Checklist (C.A.S.E.). RN to obtain order for 1:1 Monitoring/ Patient Safety Attendant from Licensed Practitioner.

B. Suicide Assessment and Reassessment

1. For patients who screen low, moderate or high risk for suicide on the C-SSRS, an evidenced-based suicide assessment (SAFE-T) will be completed by a Licensed Independent Practitioner (LIP) in the EHR. The assessment asks about suicidal ideation, plan, intent, suicidal or self-harm behaviors, risk factors, protective factors, and ideation intensity.
2. For Emergency Department and in-patient units, a re-assessent will be conducted each day, a change in patient condition, and/or at discharge. RN to notify Attending MD for a pending reassessment as needed.
3. For the Crisis Stabilization Unit (CSU) and Inpatient Psychiatric Unit (IPU) the SAFE-T is completed upon admission and re-assessment is conducted each shift, change in patient condition, and/or at discharge.

C. Suicide Precautions for Emergency, Perioperative and In-Patient Units

1. **1:1 Observation** - An assigned staff member (Patient Safety Attendant) stays within close proximity of the patient and provides direct observation at all times. Document observations every 15 minutes or more frequently as needed.
    a. When a patient is in the bathroom or shower, a staff member will maintain observation
    b. Continuous 1:1 observation is not indicated for ICU level patients with a Richmond Agitation-Sedation Scale (RASS) score of -3 (moderate sedation), -4 (deep sedation), or -5 (un-arousable). In these cases, 1:1 RN staffing may be appropriate.
2. **C.A.S.E. Safety Checklist** -- Modification of the patient's environment to increase safety by using the C.A.S.E.
    a. A C.A.S.E. Safety Checklist must be completed each shift by the Patient Safety Attendant with the Registered Nurse (RN).
    b. The purpose of the C.A.S.E. Safety Checklist is to identify and temporarily remove from the patient's room items that could result in harm unless medically needed. Examples include patient clothing, shoes, jewelry; personal electronics; IV pumps and poles; call bell cords, including in the bathroom; linens and towels not required for patient warmth; trash bags; plastic bags; sharps containers. Items that cannot be easily removed will be identified and mitigated with 1:1 observation. Items required for the patient's care will remain in the room and will be monitored to ensure these items are not used for self-harm by a patient. Once these items are no longer needed, they should be removed from the room. Please refer to Policy 100.256 Patient Belongings
    c. The items identified and removed from a patient's room will be returned when the patient no longer requires 1:1 observation or is discharged.
3. **Licensed Practitioner Validation** - Once the provider validates the level of risk for suicide, suicide precautions will be continued on patients at risk of suicide.
4. **Licensed Practitioner Order** - A provider's order is required for the discontinuation of suicide precautions.

D. Discharge

1. Patients who are being discharged as a Low to High Risk for Suicide or are being treated for a psychiatric, emotional or behavior disorder complaint will be provided with written discharge instructions, which will include but not limited to:
    a. Referrals and/or appointments for Behavioral Health follow-up as indicated.
    b. Education on suicide prevention information to include but not be limited to a crisis hotline.
    c. Provide counseling and follow-up care instructions to the patient at time of discharge in collaboration with support services as appropriate.
2. Patient/family education regarding suicide will be documented in the appropriate location in the EHR.

E. Training, Education, and Monitoring

1. **Training and Education**

a. All RN staff who could be assigned the care of a patient at risk for suicide will be educated and complete training/competency on suicide screening (C-SSRS) and mitigation upon hire and annually.

b. Staff who could be assigned the care of a patient at risk for suicide will be educated and evaluated for competency in suicide risk mitigation upon hire and annually.

2. **Monitoring**

a. Implementation and effectiveness of polices and procedures for screening assessment, and management of individuals served at risk for suicide will be monitored for compliance.

b. The Performance Improvement Coordinating Council will provide oversight of improvements and opportunities for change.

REFERENCE(S):

The Lighthouse Project--The Colombia Lighthouse Project/Colombia-Suicide Severity Rating Scale (C-SSRS) https://cssrs.colombia.edu

Richmond Agitation-Sedation Scale (RASS) graphic obtained from www.icudelirium.or/docs/RASS.pdf

The Joint Commission: Suicide Prevention/https://www.jointcommission.org/resources/patient-safety-topics/suicide--prevention/

The Joint Commission (2020). Suicide Prevention Resources to support Joint Commission Accredited organizations implementation of NPSG 15.01.01, revised July, 2020/https://www.jointcommission/org/-/media/tjc/documents/resources/patient-safety=topcs/suicideprevention/suicide_prevention_compendium_5_11_20_updated-july2020.pdf

The Joint Commission (2019). R3 Report: Requirement, Rationale, Reference. https://www.jointcommission/org/-/media/tjc/documents/standards/r3-reports/r3_18_suicde_prevention_hap_bhc_cah_11_4_19_final1.pdf

All revision dates:

Attachments

100-256 Patient Belongings-Draft.pdf

Approval Signatures

Step Description	Approver	Date
Medical Executive Committee	Tracy Chapman: VCMC - Med Staff	pending
Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	4/12/2023
Nursing Administration	Sherri Block: Associate Chief Nursing Executive, VCMC & SPH	4/12/2023
Policy Owner	Sherri Block: Associate Chief Nursing Executive, VCMC & SPH	4/12/2023

VENTURA COUNTY
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References:	

106.028 Isolation Precautions

POLICY:

Isolation precautions are used to care for the patient with a transmissible infectious agent. The purpose of isolation precautions is to interrupt the transmission of disease and prevent transmission of infection to staff and other patients.

The use of isolation precautions is a two-tiered process. Standard precautions are used for all patients and the category of isolation precautions is added according to the mode of transmission of the disease.

The following policy applies unless advised/directed otherwise by Infection Prevention and/or Infectious Diseases. All Ventura County Medical Center (VCMC), Santa Paula Hospital (SPH) and hospital-based Ambulatory Care clinic staff shall follow the guidelines below which are designed to prevent transmission of organisms to patients, care providers and multi-use equipment. Multiple drug-resistant organisms (MDRO), defined by the CDC as microorganisms, predominantly bacteria, that are resistant to one or more classes of antimicrobial agents, are a threat to patient and staff health and safety. It is essential to keep these organisms contained. Compliance with the following transmission-based precaution guidelines is required to prevent transmission of organisms and enhance patient and staff safety.

See References for an alphabetical list of infectious diseases and the correct category of isolation to be used.

PROCEDURE:

Initiation of Isolation Precautions:

1. The nurse may initiate isolation precautions based on information obtained in the nursing assessment. The nurse then informs the physician of the need for an Isolation Precautions order.
2. Physician orders the appropriate isolation/precautions.
3. Infection Prevention department representative, Infectious Diseases physician or Infection Control Committee (ICC) Chairman may initiate isolation precautions.
4. Post the appropriate Isolation/Precautions sign outside the patient room.

Discontinue Isolation Precautions:

A physician's order is required.

Patient Transport

1. Notify receiving department of isolation status by entering the information in the electronic health record (EHR). Verbal communication must also occur with the receiving department prior to the patient's arrival.
2. Limit movement of the patient throughout the hospital or clinic.
3. When transport or movement is necessary, cover or contain the infected or colonized areas of the patient's body. Airborne and droplet isolation precautions require a surgical mask be placed on the patient.
4. Remove and dispose of contaminated PPE and perform hand hygiene prior to transporting patients on Contact Precautions.
5. Don clean PPE to handle the patient at the transport location.
6. Family members and visitors are required to conform to this policy and wear appropriate Personal Protective Equipment (PPE) as directed.

Airborne Precautions

Diseases requiring airborne precautions are transmitted via airborne droplet nuclei or small particles in the respirable size range carrying infectious agents.

Patient Placement

1. Place the patient in a designated negative air pressure room.

   Santa Paula Hospital:
   Call the Maintenance Department at 652-3219 between 0800 and 1700h. After hours, page the Maintenance Department through Paging at 652-6075.
2. The doors of these rooms must remain closed at all times when the rooms are being used for airborne isolation.
3. In the event that additional negative air pressure rooms are required, contact the nursing supervisor or the Maintenance Department.

All staff entering airborne isolation rooms shall follow the proper procedure: enter the anteroom and allow the anteroom doors to completely close. Once the green light is illuminated, staff may enter the patient room. Once in the patient room, the green light will signal that the patient room doors have completely closed.

1. Place the patient in a private room, until airborne isolation room is available.
2. Patients in airborne isolation rooms must have doors closed.
3. RNs should respond to pressure alarms in a timely manner. If staff is unable to deactivate the alarm, call Facilities Maintenance at ext. 6683 for assistance.

Surgery Patients: Any patient who has been placed on Airborne Isolation for suspected or diagnosed illness and has surgery will be recovered in the OR suite and then be transported to the negative pressure room with the appropriate staff.

Ambulatory Care Clinics: Each clinic has a designated room for isolation precautions.

Behavioral Health Clinics: Clinic Administrator or designee will be made aware and client or participant will be instructed to wait outside until consultation is made with trained medical personnel, the Ventura County Behavioral Health Safety Officer or Infection Control. Client or participant may be referred for medical clearance.

Respiratory Protection

1. Healthcare workers shall wear a N95 mask or Portable Air-Powered Personal Respiratory (PAPR) when in patient room.
2. Susceptible persons should not enter the room of patients known or suspected to have rubeola (measles) or varicella (chickenpox) if other immune caregivers are available.
3. Visitors shall wear a surgical mask.

Droplet Precautions

Diseases requiring droplet precautions are transmitted a short distance, approximately three (3) feet, from the respiratory tract of infectious individuals to susceptible mucosal surfaces of the recipient.

Patient Placement

- Patients on droplet precautions should be placed in a private room.
- Cohorting only after discussion with Infection Prevention.

Respiratory Protection

- Wear a surgical mask.

Contact Precautions

Diseases requiring contact precautions are transmitted by infectious agents via direct and indirect contact with the patient or their environment.

Isolation supplies (PPE's, masks, etc.) are now kept in hallways closets adjacent to patient rooms.

Gloves and gown

1. Gloves and gown must be worn upon entering the room.
2. Gloves and gown must be removed immediately upon exiting the room.
3. Perform hand hygiene after removal of gloves and gown.

Hand Hygiene and the Patient with Clostridium Difficile Infection:

1. Wash hands with soap and water.
2. Do not use alcohol gel for hand hygiene.
3. Use the Contact Precautions sign with the brown color for patients with Clostridium difficile infection.

Patient Care Equipment

1. Do not share patient care equipment.
2. Return to the designated department for cleaning and disinfection.

Room Cleaning After Discharge

Proper cleaning and disinfection of the patient's room after discharge is important to prevent the spread of infection from a contaminated environment. Inspection of the mattress for intactness between patients is also recommended.

1. Isolation sign remains outside of the room after discharge.

2. The room is thoroughly cleaned, and then disinfected using the hospital-approved disinfectant (e.g. bleach-based disinfectant for Clostridium difficile).
3. The housekeeper reverses the isolation sign in its holder so that nursing staff know the room has been cleaned and disinfected and is ready for the next patient.

Multi-Drug Resistant Organism (MDRO) Isolation Quick Sheet

	Current Infection WITH Active Drainage/ Excretions	Current Infection WITHOUT Active Drainage/Excretions	Current Colonization	History of
Methicillin-Resistant Staphylococcus Aureus (MRSA)	✓			
Extended-Spectrum Beta-Lactamase (ESBL)				
Carbapenem-Resistant Enterobacteriaceae (CRE)	✓	✓	✓	✓ (within 1 year)
Vancomycin-Resistant Enterococcus (VRE)	✓			
Resistant pseudomonas, resistant acinetobacter spp, or resistant stenotrophomonas spp	✓			

Clostridioides difficile: Contact precautions are required until 48 hours after resolution of all symptoms (fever, abdominal pain, and diarrhea)

Diarrhea for *Clostridioides difficile* testing is defined as 3 or more watery stools in a 24 hour period). Only stool corresponding to 6 or 7 on the Bristol Stool Chart will be accepted by the laboratory for C. difficile testing.

Other MDRO's: As identified by Infection Control Committee.

Personal protective Equipment (PPE) utilization for care of all patients under Standard Precautions:

- Wear gloves when anticipating contact with blood or other potentially infectious materials, mucous membranes, or nonintact skin, or potentially contaminated intact skin.
- Change gloves and sanitize hands during patient care if the hands will move from a contaminated body-site (e.g., perineal area, wound) to a clean body-site (e.g., face).
- Wear a gown to protect skin and prevent soiling or contamination of clothing during procedures and patient-care activities when contact with blood, body fluids, secretions, or excretions is anticipated

- Use PPE to protect the mucous membranes of the eyes, nose and mouth during procedures and patient-care activities that are likely to generate splashes or sprays of blood, body fluids, secretions and excretions. Select masks, goggles, face shields, and combinations of each according to the need anticipated by the task performed. If a patient is coughing, use a mask.
- During aerosol-generating procedures (e.g., bronchoscopy, suctioning of the respiratory tract [if not using in-line suction catheters], endotracheal intubation) in patients who are not suspected of being infected with an agent for which respiratory protection is otherwise recommended (e.g., M. tuberculosis, SARS or hemorrhagic fever viruses), wear one of the following: a face shield that fully covers the front and sides of the face, a mask with attached shield, or a mask and goggles (in addition to gloves and gown)

Contact Precautions

MRSA – methicillin resistant staph aureus

VRE – Vancomycin Resistant Enterococcus faecium, Enterococcus faecalis

CRE – Carbapenamen Resistant Escherichia coli and/or Klebsiella pneumoniae

Acinetobacter baumanii - multidrug resistant

Stenotrophomonas maltophilia – multidrug resistant

Clostridium difficile – **Enteric Contact Precautions**

If there is any evidence of multidrug resistance with any other organisms, please contact the Infectious Disease physician for guidance. In addition, continue isolation practices for other communicable diseases according to policy.

References:

- Centers for Disease Control and Prevention - CDC Isolation Transmission-Based Precautions Guidelines
- *Siegel JD, Rhinehart E, Jackson M, Chiarello L, and the Healthcare Infection Control Practices Advisory Committee, 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings https://www.cdc.gov/infectioncontrol/guidelines/isolation/index.html.*
- *Siegel JD, Rhinehart E, Jackson M, Chiarello L, and the Healthcare Infection Control Practices Advisory Committee, Healthcare Infection Control Practices Advisory Committee (HICPAC) Management of Multidrug-Resistant Organisms in Healthcare Settings 2006;* https://www.cdc.gov/infectioncontrol/guidelines/mdro/Last update: February 15, 2017.

All revision dates: 7/31/2020, 9/17/2019, 6/13/2019, 5/1/2016, 11/1/2013, 2/1/2012, 7/1/2011, 9/1/2008, 5/1/2006, 12/1/1999

Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
Medical Executive Committee	Tracy Chapman: VCMC - Med Staff	pending
Infection Prevention Committee	Magdy Asaad: Infection Prevention Manager	6/6/2023
Policy Owner	Magdy Asaad: Infection Prevention Manager	6/6/2023

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References:	

108.035 Patient Throughput (Intrafacility Admissions and Transfers)

POLICY:

To transition the patient through the care continuum within Ventura County Medical Center/Santa Paula Hospital, with the goal of ensuring the patient is placed in the appropriate care area within one hour of bed availability.

PROCEDURE:

Prior to the start of each shift the Unit Charge Registered Nurse (RN) shall predetermine the admission flow and assign order of admission with nursing staff. Bed availability is defined as an unoccupied room with a clean bed and an RN to staff.

1. When an inpatient bed need is identified, the unit Charge RN communicates with the House Supervisor to convey the need for admission or change in level of care.
2. The House Supervisor communicates with the receiving unit's Charge RN to determine bed availability and status of the room.
3. The House Supervisor assigns only clean and ready bed assignments, noting assigned RN's name.
    - If no clean bed is ready and available, the House Supervisor will notify the Environmental Services (EVS) Supervisor.
    - The EVS Supervisor will notify the House Supervisor when a room has been cleaned and is ready to receive a patient.
4. The primary RN of the sending unit is responsible for calling report to the receiving unit within 15 minutes of notification of ready, clean bed. A paper situation, background, assessment, recommendation (SBAR) will be filled out and sent within 15 minutes of bed assignment for IPU ~~and with dialysis patients only~~.~~t~~
    - Patient transfer is expected to occur within 30 minutes of notification of a clean and ready bed.
    - ~~The gold standard~~Expectation from nursing is a telephonic handoff to notify the receiving unit that the patient is coming followed by a bedside handoff between sending and receiving RN. Both the sending RN and receiving RN are responsible for this communication.
        - Some exceptions may apply, for example primary RN is unable to leave unit due to staffing ratio, at which time a phone report will be acceptable.

5. If limited/unusual circumstances occur which may cause a delay, immediate communication shall occur between the House Supervisor and the receiving unit's Charge RN. Delay of transfer should not exceed a maximum of 30 minutes.

ATTACHMENTS:

- Attachment A - Patient Throughput Algorithm

All revision dates: 5/30/2023, 3/20/2023, 3/21/2019

Attachments

108.035 Attachment A - Transfer Flowchart.pdf

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Nursing Administration	Sherri Block: Associate Chief Nursing Executive, VCMC & SPH	5/30/2023
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References:	

108.047 Centralized Telemetry Monitoring

PURPOSE:

To identify the process for continuous monitoring of heart rate and rhythm of patients to ensure life-threatening rhythms can be detected and treated. Centralized telemetry monitoring ensures redundancy of monitoring both at the department level and in the centralized telemetry station. The centralized telemetry station is located in DOU and is responsible for the remote monitoring of patients within the adult critical care and medical surgical patient populations at VCMC only.

POLICY:

The nursing personnel covered in this policy include telemetry technicians, nurses and anyone covering these roles. Under the direction of nursing directors, these individuals are accountable for the quality of care of the patients and are accountable through nursing administration. The telemetry technicians assigned to the central telemetry station are responsible for maintaining accurate patient information on the system and notifying the nursing staff of any changes.

Qualified personnel to perform the telemetry monitoring function are those individuals who have received training for telemetry monitoring. Qualified staff must demonstrate competency in evaluating of life-threatening arrhythmias.

PROCEDURE:

I. Utilization

A. A provider's order must be obtained for all patients receiving continuous cardiac monitoring (CCM) when it is not the standard of care for all patients on the unit. A provider's order must be obtained for all patients receiving continuous pulse oximetry monitoring.

B. Orders for continuous cardiac monitoring must be re-evaluated every 24 hours or sooner ~~if the patient condition meets criteria per CPG~~. ~~50~~

C. IV access is required on all patients who are receiving CCM.

II. Management of the Patient

A. When the nurse receives an order for cardiac monitoring for a patient, the RN applying the telemetry box (or hard wires) will call the telemetry technician to validate two patient identifiers, as well as that the monitor is on. They will identify the telemetry box number and identify the patient's baseline rhythm.

B. The telemetry technician and nurse will set the gain to achieve a QRS amplitude large enough to be detected by the monitor and assure that a clear tracing is visible on the monitor for at least two leads.

C. The telemetry technician and nurse will select the appropriate lead based on the goals of monitoring and the patient's clinical situation.

   1. For Arrhythmia diagnosis or Wide ORS tachycardia, V1 is the best lead with V6 as second choice.
   2. If a true V1 or V6 is not a lead option, MCL 1 and MCL6 can substitute.
   3. Dual lead monitoring is superior to single lead monitoring, making V1 + Lead 3 a good option.
   4. Note: if other leads in use, justification required and documented.

D. The assigned nurse will notify the telemetry technician when the telemetry box is being taken off for bathing or discharge. They must also call at the beginning of a dialysis treatment and when it is completed, transporting to a procedure or having physical therapy.

E. Physicians shall be notified in the event of any changes in cardiac rhythm or vital signs.

F. The attending physician must re-evaluate the need for utilization of cardiac monitoring daily. Every effort should be made to discontinue telemetry once the patient becomes stable.

G. The nurse will educate the patient about the need for telemetry and not to remove the wires or box. Patients cannot shower with telemetry wires or the telemetry box.

III. Equipment/Parameter alarms

A. All telemetry equipment including SPO2 probes and cables will be kept in the telemetry monitoring room.

B. All requests for equipment will be through the monitor tech and returned to the telemetry monitoring room when the patient's monitoring is discontinued.

C. All nursing units are required to clean equipment with germicidal agent before returning equipment.

D. Cleaned equipment will be placed in a designated basket at the nursing station and delivered to and/ or picked up by staff to the telemetry monitoring room.

E. Initial set up for alarms is established by using patient's baseline settings. A specific physician order for parameters would supersede using baseline settings.

F. The parameters can be individualized for any patient by a RN or monitor tech. When the monitor tech adjusts parameters it will be in collaboration with the nursing and/ or medical staff.

G. Parameters should be based upon the patient baseline average if there are no specific orders from the provider. Default alarm parameters are standardized for a range between 50-130 bpm.

H. Volume alarms should never be set below 50%.

I. Certain dysrhythmia alarms (e.g.: irregular rhythms) may be changed by the registered nurse on the basis of the patient's clinical situation, current heart rate, rhythm, and treatment plan. Changing the heart rate standard alarm limits requires an order from the provider. The nurse shall document the clinical justification for altering the alarm limits and dysrhythmia alarms in the patient's medical record. The physician/care team is to be notified of changes from the default settings made by the Registered Nurse. Heart rate alarm limits, different from the default settings, may also be ordered by the physician. Alarm limits can only be adjusted with provider order.

J. Other parameters that are monitored via the central monitoring station are blood pressure, O2 saturation, and respirations.

- *Blood Pressure: Within 20% of patient initial BP unless otherwise directed by medical provider*
- *O2 Saturation: Between 90-100% unless otherwise directed by medical provider*
- Respiratory Rate: Within 10 of baseline unless otherwise directed by medical provider. Low rate should NEVER be less than 10.

IV. Frequency of Cardiac Rhythm Interpretation

A. The nurse is responsible for strip interpretation.

B. Strip documentation is to be done at the following times.

1. Upon admission or transfer into unit.
2. Every four hours for ICU patients and every shift or with changes for DOU and telemetry patients
3. For any changes in rhythm or rate, change in vital signs, or in mental status; the patient experiences chest pain; change in lead placement; and when evaluating effects of anti-dysrhythmic agents.
4. For Code Blue (continuous).
5. Document on each recorded rhythm strip the two patient identifiers, interval measurements and interpretation (Telemetry: monitor tech or primary RN).
6. Telemetry tech will send all saved telemetry rhythm strips to the patient's primary nurse at intervals mentioned above.
7. For specific procedures such as cardioversion or TEE.
8. During any rapid response event.

C. The registered nurse will document on each rhythm strip the rhythm, and measurements (PR, QRS, QT). Nurse will date, time and initial each strip.

V. Communication: Nurse and Telemetry Technician

A. The Nurse and Monitor Tech should communicate the following information to each other:

- Request for equipment to include two patient identifiers one of which cannot be room number
- Initiation of monitoring
- Discontinuation of monitoring

- Interruption of monitoring
- Chest physiotherapy
- Transfer to another room
- Pacemaker or AICD
- Transporting for diagnostic testing and/or procedure

B. The nurse should call the Monitor Tech to inform of any specific orders received.

C. Nursing assignment sheets will be sent to the Central Telemetry Room within 30 minutes of the start of the shift. Additional changes to assignments must be communicated to include change in mid-shift assignments, patient admissions, and/or transfers and discharges.

VI. Dysrhythmia Notification

A. Follow the Alarm Intervention Flowchart for any changes in patient condition, rhythm changes and/or lethal dysrhythmias

1. Lethal Dysrhythmias
    a. Asystole
    b. Ventricular tachycardia
    c. Ventricular fibrillation
2. Warning Alarms
    a. Bradycardia (patient's low HR parameter)
    b. Non-sustained ventricular tachycardia > 2 beats
    c. Accelerated ventricular rate
    d. Heart rate greater than patient's high parameter, such as SVT or PAT
    e. pause or any dysrhythmia not addressed as a lethal alarm
    f. new onset of atrial fibrillation
3. Message Alarms
    a. Bigeminy
    b. Couplets
    c. Trigeminy
    d. PVC
    e. ST alarms

B. Escalation pathway: all telemetry alarms are to be called to the unit immediately. If no response, the charge nurse will be notified via walkie talkie. If no response from the charge nurse, the central telemetry staff will active a telemetry alert to trigger an overhead page.

C. Telemetry alerts are also to be called immediately for any lethal dysrhythmia.

VII. Telemetry Tech Responsibilities

A. Communicates battery change alarm

B. Creates copies of the telemetry strips for each nurse to review. The Charge Nurse will pick up the strips from the Central Telemetry room when the strips are ready

C. Notifies Bio-Medical Engineering of faulty equipment and takes equipment our of service

D. Admits patient to the CIC in coordination with the RN, including patient data and initial rhythm strip

E. Sets parameters and re-checks parameter every 12 hours

F. Monitors patients continuously via central station

G. Reviews prior alarm history and clears out artifact related alarms

H. The monitor tech will follow the "Alarm Intervention Flowsheet" to escalate any lethal dysrhythmias, warning alarms and/or messages

I. The monitor tech will document all notifications to nurse (In cerner? Or on a paper log?)

J. The monitor tech will label each telemetry strip with the following information:

1. patient's name and MRN
2. Patient's room number
3. Time and Date
4. Measured parameters

VIII. Specific Nursing Responsibilities

A. Patients on telemetry monitoring who require transport for testing will be transported without a nurse to the department, unless otherwise ordered by the provider. The patient will be continuously monitored by telemetry by the monitor tech. In those areas where telemetry is not monitored or telemetry is not transmitted, the nurse will accompany the patient.

B. Electrodes are changes prn and at least every 72 hours. Do not use tape to affix to a patient's body

C. Telemetry ECG strips are to be placed in the chart and the RN signature confirms the monitor tech's interpretation.

D. Broken or faulty equipment should be returned to the CIC. The monitor tech's will be responsible for notifying bio-medical engineering and ensuring the equipment is repaired and returned.

E. The RN will promptly notify the monitor tech when the patient's telemetry is discontinued, the patient leaves the floor, and/or the unit is taken off for any reason.

F. The Charge nurse or designee will pick up the monitor strips from the CIC. The RN will validate the interpretation of the strip and place in the medical record.

G. In the event of an arrythmia, the nurse will:

a. verify the patient by name and MRN

b. Go immediately to check on the patient

c. Nursing assessment will include:

1. Airway, Breathing, Circulation
2. Heart rate and rhythm regularity to include a full set of VS
3. Assess for presence of chest pain
4. Skin color

H. Communicate patient status to monitor tech

I. Call rapid response and notify provider for all symptomatic rhythms.

IX. Handoff

A. Any changes to cardiac monitoring orders require handoff between providers using SBAR format.

B. Handoffs must also occur between telemetry technicians and must include alarm volumes, alarm limits (if not standard), basic rhythms and arrhythmias of any patients being monitored.

C. Telemetry box log book will be maintained and updated by telemetry technicians.

X. Downtime

A. If downtime occurs, the telemetry technician will immediately notify the house supervisor to contact BioMed and department charge nurses. House supervisor will call AOD if downtime extends > 10 minutes.

B. When department monitoring stations are down, the department charge nurse will notify the centralized telemetry room.

C. If any monitoring is down in the centralized telemetry room, the house supervisor will place patients on alternative monitoring, call BioMed and call the AOD.

D. Once downtime resolves, conduct a debrief to understood root causes and mitigate future risk.

REFERENCE(S):

AACN Procedure Manual for High Acuity, Progressive and Critical Care. (2017). 7th ed.

Alarm Management- American Association of Critical Care Nurses.

procedures.lww.com/lnp/view.do?pId=3378804&hits=telemetry&a=false&ad=false&q=telemetry

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Attachments

Alarm Intervention Flowchart (1).docx

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Medical Executive Committee	Tracy Chapman: VCMC - Med Staff	pending
Hospital Administration	Minako Watabe: Chief Medical Officer, VCMC & SPH	5/17/2023
Hospital Administration	Diana Zenner: Chief Operating Officer, VCMC & SPH	4/13/2023
Nursing Administration	Sherri Block: Associate Chief Nursing Executive, VCMC & SPH	4/13/2023
Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	4/13/2023
Policy Owner	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	4/13/2023

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Owner:	*Sharon Waechter: Clinical Nurse Manager, Nursing Education*
Policy Area:	*Administrative - Nursing*
References:	

108.049 Peripherally Inserted Central Catheter Insertion

Policy

To provide guidelines to facilitate standardization of practice for the insertion of peripherally inserted central catheter (PICC) catheters.

Purpose

To provide guidelines to standardize the practice of ~~peripherally inserted central~~PICC catheter ~~(PICC) catheter~~ insertion, in order to minimize the risk of device related complications and optimize patient outcomes.

Scope

This applies to Registered Nurses (RNs) who have successfully completed population- appropriate training and demonstrated competency in vascular access device insertion, care and maintenance, and patient/caregiver education across the care continuum.

Definitions

Peripherally Inserted Central Catheter (PICC): a central vascular access device (CVAD) inserted into a peripheral vein and threaded into the central venous circulation. The tip of the PICC should reside in lower 1/3 of the superior vena cava (cavoatrial junction) for upper-body insertions.

Provisions

A. Selection of the appropriate vascular access device (peripheral or central) shall accommodate:
    1. Patient's vascular needs.
    2. Diagnosis.
    3. Type and length of prescribed treatment regimen.
    4. Duration of dwell.
    5. Condition of the vasculature.
    6. Patient/caregiver's preference.
    7. Ability and resources to care for the device.

B. The vascular access device shall be the smallest gauge and length with the fewest number of lumens and shall be the least invasive device needed to accommodate and manage the prescribed therapy.
    1. Select the vein or site that best accommodates the outer diameter and length of the vascular access device (VAD) required for the prescribed therapy.
    2. Catheter-to-vein ratio of <45%.
    3. VADs shall be accessed with 10ml or larger syringes.
    4. Prior to PICC insertion, review patient's history and all pertinent lab results including but not limited to platelet count, international normalized ratio (INR), glomerular filtration rate (GFR), and serum creatinine.
    5. In adults, use an upper extremity site for catheter insertion.

C. Radiographic confirmation or other tip location confirmation system (TCS) will be utilized to assess location of catheter tip. Limiting but not contraindicated situations for ECG (electrocardiogram) TCS are in the patients where alterations of cardiac rhythm change the presentation of the P-wave as in atrial fibrillation, atrial flutter, severe tachycardia, and pacemaker driven rhythms. In such patients, who are easily identifiable prior to PICC insertion, the use of an additional method is required to confirm catheter tip location. See ~~VCMC~~ policy ~~108.044, "ECG Guided Tip Confirmation System During PICC Placement."~~ 108.044 ECG Guided Tip Confirmation System During PICC Placement.

1. When ECG TCS is used to determine optimal PICC tip placement in the superior vena cava (SVC), no radiographic confirmation is required. The Vascular Access ~~Specialist~~Nurse inserting the catheter may approve use of the line per policy when the appropriate change in the P wave is noted. At the time of placement, the external catheter measurement will be documented.

D. Patients admitted to the hospital with a PICC should have a chest x-ray to verify placement prior to utilization.

Considerations for Vascular Access Device Placement

1. Patient stability.
2. Areas of pain on palpation.
3. Veins previously used or compromised (e.g., bruised, infiltrated, phlebitis, scleroses, corded or with presence of venous thrombosis).
4. Areas near venous valves.
5. Areas where there are planned procedures/veins needed for other purposes
6. Neurological injury
7. Localized edema.
8. Following axillary node dissection.
9. After radiation therapy on the proposed insertion side.
10. Lymphedema at the proposed insertion site.
11. Previous history of CVAD and central occlusion such as SVC Syndrome or stenosis of major upper thoracic vessels.
12. Known or suspected allergy to materials contained in the device.
13. History of medical conditions including cerebrovascular accident (affecting extremity being considered), bleeding disorders, anticoagulation therapy, and any condition that requires crutch walking.
14. Presence of other intravascular devices within the target vessel (e.g., pacemaker, other central lines, A-V shunts for dialysis).
15. Uncontrolled bacteremia, fungemia, or other infections.
16. Thrombocytopenia or coagulopathies.

17. Fracture/orthopedic injury.
18. Decreased venous return.
19. Cardiac malformations
20. Nerve injury affecting insertion site.
21. Local infection, skin breakdown, and/or cellulitis.
22. Patient lab values.
23. Bleeding risk.
24. Areas of flexion.
25. Need for analgesia or sedation.
26. Patient with acute kidney injury and/or chronic kidney disease where upper extremity vein preservation may be indicated for future dialysis access needs such as Chronic Kidney Disease (CKD) stage 4 and above indicated by a Glomerular Filtration Rate (GFR) of 29 or lower).

A. Vascular Access Nurse should discuss case with primary physician (resident or attending) prior to insertion of PICC.

B. Primary ~~physician~~Licensed Practitioner (LP) will then determine based on clinical judgement and review of the history if further discussion is needed with the on-call nephrologist.

C. Any discussions with physicians should be documented by the PICC nurse.

Competency

A. **Completion of BARD PICC Certification Course.**

B. **Initial competency assessment:**

1. Adult: A minimum of 5 complete PICC insertions (from assessment to tip verification) while being coached by a qualified ~~VAD nurse~~Vascular Access Nurse, followed by a minimum of 3 successful independent ultrasound guided PICC insertions directly supervised by a qualified ~~VAD nurse~~Vascular Access Nurse, are required for independent practice.

C. **Annual Competency:** Minimum eight hours of Continuing Education Units (CEUs) related to Vascular Access or current certification such as Certified Registered Nurse Infusion (CRNI), ~~OCN,~~ Vascular Access Board Certification (VA-BC), maintained.

1. Adult: A minimum of 10 successful PICC insertions per year.
2. Re-validation for those who do not meet minimum annual requirements will be 1 PICC observed by a qualified ~~VAD nurse~~Vascular Access Nurse for a skills check-off. If this check-off is not passed, all initial competency requirements must be repeated.

Informed Consent Process

1. Informed consent must be completed by the ~~provider or vascular access nurse prior to PICC insertion~~LP. The clinician shall provide the patient/family with information on the risks, benefits and alternatives and document the informed consent in the ~~EMR~~Electronic Health Record (EHR).
2. A ~~provider~~LP's order is required for PICC insertion.
3. A signed written consent is required prior to PICC insertion.

Device Selection

1. **PICC**: Recommended for irritants or vessicants such as chemotherapeutic agents ~~that are irritants or vesicants~~, total parenteral nutrition (TPN) with a dextrose concentration of greater than 10%, sclerosing agents, and/or patients with poor peripheral access.
2. **Power injectable PICC**: Required for the power injection of intravenous contrast. May also be used for hemodynamic monitoring, high flow rate Intravenous (IV) fluids, and blood administration.

PICC Insertion Barrier Precautions

1. Hair that requires removal for facilitation of catheter placement should be clipped using surgical clippers prior to catheter insertion, not shaved. Shaving may cause micro abrasions of the skin, allowing access of microorganisms into the body.
2. For PICC placement (including guidewire exchange), the person who inserts the line shall use maximal sterile barrier precautions including:
    - Sterile gloves (2 pairs).
    - Long-sleeved sterile gown.
    - Full sterile body drape with fenestration.
    - Bouffant cap.
    - Fluid shield mask or mask with protective ~~eyewear~~eye wear.
3. Restrict non-essential persons from entering the patient/sterile area (within three feet) during insertion.
4. All persons entering the field and assisting with performing the procedure, shall wear sterile gown, mask, and cap.
5. Place mask on patient, as tolerated.
6. Following thorough hand hygiene, strict sterile technique shall be used throughout catheter insertion, care, maintenance, and removal.
7. The PICC must not be advanced once a post-insertion dressing has been applied.
8. Guidewire exchanges are discouraged and should not be performed unless absolutely necessary (patients having limited access sites, lack of alternative insertion sites, and/or patient is high risk such as having coagulopathy or morbid obesity). Do not use guidewire exchange if a catheter is suspected to be infected.
9. All PICCs shall have a needleless connector attached to the end of the lumen.
10. Suturing of the PICC is not recommended. Use appropriate securement device or application of sterile adhesive dressing to secure the catheter. Dressing should not wrap around the entire circumference of the patient's extremity.

Equipment

1. Procedure kits or carts containing all necessary supplies are to be available for use at the time of PICC insertion and care/maintenance procedures (including those required for dressing change, needleless connector change, and removal).

2. Closed catheter access systems are used preferably over open systems for infusions, medication administration, and blood withdrawal. When an integral in-line administration system is unavailable, specific add-on devices (e.g., extension sets, in-line filters, manifolds, blunt cannulas, or stopcocks) may be required to facilitate delivery of prescribed therapy. The use of these devices should be limited to reduce the risk of contamination from manipulation, ~~misconnection~~mis connection, or accidental disconnection.
3. Maximum barrier kit as described above.
4. Standard PICC insertion kit that includes all necessary components.
5. Sterile probe cover.

Pre-Procedure

A. **Assessment**

1. Determine indication for PICC and obtain/verify ~~physician~~LP order for PICC placement.
2. Verify that the informed consent has been completed, and that it is signed and dated.
3. Review patient's medical history, contraindications and indications for device placement, allergies, coagulation status, and other pertinent labs.
4. Assess patient's current vascular access.
5. Assess patient/caregiver readiness.

B. **Planning**

1. Add PICC pre-procedure order set under ordering ~~physician~~LP's name per protocol
2. The goal is to minimize patient's discomfort during insertion and assure that the patient/ caregiver will be informed of the need, purpose, and risks/benefits of PICC placement and signs/symptoms of possible complications.
3. Gather equipment/supplies.
4. Provide patient/caregiver education regarding indication for PICC, insertion procedure, and maintenance of the PICC and appropriate infection prevention measures to prevent Central Line Blood Stream Infection (CLABSI).
5. The patient's assigned nurse shall be available to assist the PICC nurse especially if the patient is unable to cooperate during procedure.
6. Close door to room/area and post sign indicating "Sterile Procedure in Progress- Do Not Enter."
7. Note: for pediatric and neonatal patients, additional nursing staff shall be available to assist during the insertion procedure to provide sedation (if indicated), to monitor for signs of patient distress and to assist the RN placing the catheter by holding the patient.

C. **Pre Procedure**

1. Perform patient identification with two appropriate identifiers (e.g., patient's full name, date of birth and/or medical identification number).
2. Explain procedure to patient/caregiver.

3. The person inserting the PICC must perform a time out with an observing ~~RN~~Nurse before beginning the procedure and record the timeout in the ~~electronic medical record (EMR)~~EHR.
4. Perform hand hygiene and don clean gloves.
5. Conduct visual inspection of potential insertion site(s) to assess for skin integrity, erythema, edema, pain, compromised veins, etc.
6. Place ultrasound machine where ergonomically comfortable for clinician.
7. Examine the vasculature in the chosen extremity using ultrasound.
    - Ensure ultrasound probe has been disinfected with PDI® Super Sani Cloth Germicidal Disposable Wipes® prior to use on patient.
    - Apply a liberal amount of sterile ultrasound gel (from single use packet) to patient's arm.
8. Apply probe to skin: visualize and note the location of veins, arteries, and nerves surrounding the proposed insertion site.
    - Assess veins for vessel size, path, round shape, and compressibility without a tourniquet.
    - Assess depth of intended vessel for venipuncture.
    - Assess for adequacy of vessel size compared to the proposed outer catheter diameter to promote hemodilution and preserve vessel health.
    - Avoid selecting smaller vessels to prevent phlebitis and thrombosis.
    - If marking the level of the proposed insertion site, utilize a single-use disposable skin marker on the outer aspect of the arm to avoid leaving ink under the dressing and to allow for appropriate skin cleansing.
    - Remove the ultrasound gel from the patient's skin.
9. To approximate the desired terminal tip location at the lower one-third of the ~~Superior Vena Cava (~~SVC~~)~~ at the level of the Cavoatrial Junction (CAJ), measure from the proposed insertion site to the clavicular head on the right side and then down to the bottom of the third intercostal space on the right.
10. Remove gloves and discard.
11. Prepare for insertion, collecting necessary insertion supplies and setting up a sterile field.

D. **Procedure**

1. Perform hand hygiene.
2. Don head covering and mask.
3. Perform hand hygiene.
4. Open the insertion tray and PICC kit to create a sterile field and include items in the field using sterile technique as needed.
5. Don a pair of sterile gloves.
6. Place sterile drape under the extremity of the intended insertion site.

7. Prep the skin in the entire area where the dressing will cover. Cleanse insertion site using the preferred skin antiseptic agent of alcohol-based chlorhexidine solution according to the manufacturers' directions for use; allow to dry completely.
    - Use an iodophor (e.g., povidone-iodine) or 70% alcohol if chlorhexidine solution is contraindicated.
    - Use aqueous chlorhexidine if there is a contraindication to alcohol-based chlorhexidine.
8. Apply tourniquet proximal to the insertion site.
9. Remove sterile gloves and perform hand hygiene.
10. Don sterile gown and a new pair of sterile gloves.
11. Inside PICC kit, prime any needed extension set(s) and catheter with 0.9% sodium chloride.
12. Use stylet wires according to manufacturers' directions for use.
    - Never cut a wire of any kind.
    - If the catheter has a manufacturer-installed stylet wire, withdraw just past the desired length, bending the stylet wire over the catheter hub or locking in place before trimming the catheter to the premeasured length.
    - Stylet wire should not extend beyond the catheter tip.
13. Place large, sterile sheet drape with insertion site fenestration over the entire patient; best practice is to cover the patient's face with the large sterile drape. If the patient cannot tolerate having their face covered, the drape can be tented, and the patient can wear a mask or turn the head away from the insertion site.
14. Cover the ultrasound with the sterile probe cover and secure.
15. Apply sterile ultrasound gel to the skin over the proposed insertion site.
16. Relocate the intended vein with the ultrasound probe, verifying it is non-pulsatile and compressible.
17. Inject local anesthetic subcutaneously at the insertion site, if needed. Before injection, aspirate for the absence of blood return.
18. Apply covered probe to skin, visualize the vessel, and insert the ~~microintroducer~~micro introducer needle through the skin and into the vein using a 45° angle. Place the tip of the access needle on the skin at a distance from the probe that will intersect the vein within the plane of the scan field as the catheter is advanced to the intended vein's depth. Move the ultrasound probe toward the catheter to identify the catheter tip. Move the ultrasound probe and needle in the same direction, keeping the needle tip in view on the screen as the catheter approaches and enters the lumen of the intended vessel. Make sure to keep the gel and probe away from the sterile catheter.
19. Align the path of the needle to enter the ~~centermost~~center most superficial area of the vein wall and observe the needle tip entering the lumen of the vein.
20. Confirm slow venous blood return is the color and consistency of whole blood.
    - If blood return is pulsatile, immediately abort the procedure by removing the needle and tourniquet and applying pressure to the area for 10 minutes or until hemostasis is achieved.

21. Observe for blood return in the ~~microintroducer~~micro introducer needle hub and visualize the needle tip in the center of the vein on ultrasound before proceeding.
22. Put the ultrasound probe down on the sterile field.
23. Reduce the angle of the ~~microintroducer~~micro introducer needle and stabilize.
24. Insert the floppy-tipped guidewire into the ~~microintroducer~~micro introducer needle, threading into the vein. The guidewire should never be inserted into a position beyond the level of the axilla without fluoroscopy guidance.
25. Carefully remove the ~~microintroducer~~micro introducer needle from the vein and skin by pulling it back over the guidewire.
    - Do not allow the guidewire to move outward through the ~~microintroducer~~micro introducer needle due to risk of severing the guidewire.
26. Secure the guidewire with your nondominant hand to prevent migration in or out of the vein.
27. Advance the peel-away dilator/introducer over the guidewire through the skin completely into the vein using a twisting motion.
28. Make a skin nick, if needed.
    - Using a scalpel, hold the blade with the blunt side against the wire.
29. Advance the peel-away dilator/introducer over the guidewire through the skin completely into the vein using a twisting motion.
30. Remove the guidewire.
31. Release the tourniquet, using caution not to break sterile technique.
32. Slowly remove the dilator, leaving the peel-away introducer sheath in the vein.
33. Slowly advance the PICC catheter through the introducer sheath.
34. Continue to advance the catheter slowly to the predetermined measurement.
    - If using a tip-locating device, follow ~~VCMC~~ policy ~~"Clinical Implementation Guide for: ECG Guided Tip Confirmation System During PICC Placement~~108.044 Clinical Implementation Guide for: ECG Guided Tip Confirmation System During PICC Placement.~~"~~
    - If tip-location technology is not being used, withdraw the stylet wire from the catheter lumen, using air emboli precautions.
35. Attach sterile 0.9% sodium chloride-filled syringe and aspirate for blood return (the color and consistency of whole blood) from catheter and flush to determine patency.
36. Break the wings and slowly peel away the introducer sheath as it is withdrawn, taking care to allow the catheter to remain in its terminal tip location.
37. Apply a needleless connector to each lumen.
38. Clean excess blood and ultrasound gel from the insertion site using chlorhexidine solution.
    - Ensure there is no oozing of blood from PICC entry site and hold pressure using sterile gauze to achieve hemostasis if necessary.
39. Apply sterile alcohol-free skin barrier product around the perimeter of the intended dressing site.

- Do not apply barrier film/product directly under chlorhexidine-impregnated sponge or gel patch as the solution will block its action at the puncture site.
- Allow product to completely dry before dressing is applied.

40. Apply chlorohexidine-impregnated sponge (e.g., Biopatch™) or gel and securement device/ product. Then apply Transparent semi-permeable membrane (TSM) dressing (e.g., Tegaderm™).
    a. If applying an antimicrobial patch, align the slit of the patch with the PICC line.
41. Flush each PICC lumen with a minimum of 10ml normal saline in a 10ml syringe.
42. Label dressing with date, time performed, and clinician's initials.
43. Place an alcohol impregnated cap on the needleless connector of each of the PICC lumens.
44. Place a sign above the patient's bed with: "NO VENIPUNCTURE OR BLOOD PRESSURE IN EXTREMITY where PICC has been placed (e.g., arm/leg, ~~R~~Right/~~L~~Left)."
45. Discard used supplies in appropriate receptacles.
46. Remove personal protective equipment (PPE) and perform hand hygiene.
47. Clean and disinfect ultrasound probe by removing sterile ultrasound cover, wiping away excess gel, and cleansing with PDI® Super Sani-Cloths~~® wipes~~ Wipes.
48. Obtain a chest radiograph to determine tip placement if not using a tip- locating confirmation system device and get verification from radiologist of PICC placement in ~~Superior Vena Cava~~SVC prior to use.

E. **Post Procedure:**

1. After successful PICC placement, educate patient/caregiver regarding care and maintenance of PICC, steps to avoid catheter dislodgement, and daily flushing schedule.
2. Provide education to patient/caregiver as to signs and symptoms of common complications and how and whom to report complications.
3. Measure arm circumference at the site.
4. Add PICC post-procedure order set and "okay to use" order under ordering physician's name per protocol.

Infusion Tubing Configuration

1. Any tubing and fluid/medication bags hooked up to the PICC should be new having not been hooked up to any other peripheral IV (~~having not been hooked up to any other PIVs~~PIV) or central lines~~)~~, including secondary tubing and bags.
2. The configuration of infusion tubing is integral to the efficient and safe use of the PICC. When assembling the infusion tubing, requirements for all infusates must be considered to ensure the appropriate number of injection ports are available for set-up and to prevent unnecessarily accessing the catheter later.
3. Infusion tubing connected to the PICC shall be luer-locked.

4. To minimize entry into the PICC and decrease the risk of contamination, secondary IV tubing (used for medication administration) shall remain attached to the primary administration set and not removed after each injection.
5. If the secondary (piggyback) IV tubing is not being used or becomes disconnected it shall not be reconnected but replaced with new secondary tubing. This includes situations when a patient is receiving medications that could cause precipitate if administered through the same line. A new secondary tubing set shall be used for each infusion.
6. Eliminate open stopcocks from tubing and instead use needleless connectors, which must be vigorously cleaned with alcohol before entry.

Complications and Nursing Interventions

A. **Immediate Complications:**

1. Excessive bleeding: verify venous placement. Apply direct pressure.
2. Chest pain: Assess and rule out causes. Notify physician.
3. Numbness and tingling of arm or hand for greater than 30 minutes: Catheter must be removed.
4. Catheter Embolism: DO NOT LEAVE THE PATIENT. Immediately place finger over portion of catheter in vein to prevent migration into heart and pulmonary vasculature. For pediatric and adult patients, place tourniquet on uppermost portion of effected extremity. Place patient on their left side in Trendelenburg position and notify provider or call a Rapid Response.
5. Air Embolism: DO NOT LEAVE THE PATIENT. Stop entry of air. If catheter is in place, attempt to aspirate air. Prepare for code blue. Place patient on their left side in Trendelenburg position and notify provider or call a Rapid Response.
6. Nerve irritation/damage: Stop insertion and remove all devices that have been inserted. Insert device in new location.

B. **Unsuccessful Insertion- Notify Provider:**

1. Malposition (if identified before sterile field broken): attempt to reposition catheter by partially withdrawing catheter, repositioning patient, and reinserting catheter.
2. Difficulty advancing the catheter/removing stylet: Stop procedure. If catheter and stylet can easily be removed, remove catheter and notify the provider.
3. Cardiac arrhythmias: Withdraw catheter 1 centimeter (cm) and observe for resolution: if dysrhythmias persist, continue to withdraw catheter.

Delayed Complications

1. Phlebitis: Transient phlebitis may occur in first 48 hours after insertion. Increased range of motion of extremity and applying heat may alleviate the symptoms. Consult with physician before removing catheter.
2. Infection: Swelling or tenderness on the affected side, fever. Notify ~~physician~~LP. recommendation for neutralizing coating.
3. Malposition: Remove catheter.

4. Bleeding/hematoma: Some oozing (a few drops of blood, not a steady ooze) is expected for first 24-48 hours. Apply pressure to site for at least 5 minutes until hemostasis is achieved following insertion: a pressure dressing may be required. Place a small piece of sterile gauze under dressing to wick blood from site. If available, place topical hemostatic agent at insertion site. Investigate potential causes of persistent bleeding.
5. Occluded Catheter: Check line for kinks, constrictive dressing or precipitate from medications. If clotted catheter suspected, notify physician.

Documentation:

1. Document all insertion related elements in Cerner. Additional documentation should include:

- "Time Out" form.
- "CLIP" form.
- PICC supply charge and order for PICC supply charge.
- Post procedure note
- Reason/indication for line (line necessity).
- Hand hygiene performed.
- Maximum sterile precautions used.
- Site prep and if dry prior to access.
- Date, time, and site/vein of PICC insertion.
- Condition of site.
- Use of ultrasound/needle guidance.
- Number of placement attempts.
- Arm circumference.
- Size of PICC, length of PICC, number of lumens, manufacturer's lot number, reference number and expiration date.
- Amount of 1% lidocaine administered (if used).
- Document lidocaine administration in Medication Administration Record (MAR)
- Internal length of catheter inserted and external length from patient to hub.
- Blood return.
- Line securement (dressing).
- Patient response to the procedure.
- Complications during the procedure, and intervention.
- Verify tip location to confirm placement in the lower 1/3 of the Superior Vena Cava (i.e., Cavoatrial Junction).
- Patient education.

Continuing Care

1. Routine sterile dressing changes are every 7 days and as needed (PRN) if soiled. Antimicrobial patch, PIV securement device, and transparent dressing must be changed.
2. All patients with central access shall receive a daily full-body chlorhexidine gluconate (CHG) bath.
3. Arm circumference (at the location of the site) should be checked, documented, and trended if deep vein thrombosis (DVT) is suspected.

References

1. Infusion Nurses Society. *Policies and Procedures for Infusion Therapy: Acute Care*. 6th ed. Infusion Nurses Society; 2021.
2. Kaiser Permanente. (2019). Peripherally Inserted Central Catheter (PICC) and Midline Catheter Insertion. Southern California (SCAL): Regional Guideline.

All revision dates:

Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
Medical Executive Committee	Tracy Chapman: VCMC - Med Staff	pending
Pharmacy & Therapeutics Committee	Sul Jung: Associate Director of Pharmacy Services	4/21/2023
Nursing Administration	Sherri Block: Associate Chief Nursing Executive, VCMC & SPH	4/20/2023
Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	4/20/2023
Policy Owner	Sharon Waechter: Clinical Nurse Manager, Nursing Education	4/20/2023

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VENTURA COUNTY
HEALTH CARE AGENCY

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Owner:	*Sherri Block: Associate Chief Nursing Executive, VCMC & SPH*
Policy Area:	*Administrative - Nursing*
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108.050 Patient Safety Attendant Care

PURPOSE:

To define Patient Safety Attendant Care and the guidelines for the use of Patient Safety Attendants within Ventura County Medical Center and Santa Paula Hospital (VCMC/SPH).

POLICY:

1. An individual assigned to the role of a Patient Safety Attendant is a member of the healthcare team of Ventura County Medical Center/Santa Paula Hospital who will remain with a patient throughout a designated period of time for the purpose of maintaining patient's safety (prevention of falls, disruption of patient care, suicidal/5150/5585, delirium, confusion, etc.).

2. A Patient Safety Attendant assures patient safety for individuals deemed to be either suicidal or on 5150 status. This requires 1:1 Observation in which an assigned staff member stays within close proximity of the patient and provides direct observation at all times.

3. A Patient Safety Attendant provides and maintains a safe environment (for pulling tubes, airway devices, etc.) for identified patients who have not been classified as either suicidal or on 5150/5585 status. A Patient Safety Attendant can observe 1-2 patients in close proximity for these purposes.

PROCEDURE(S):

1. Patient's families will be encouraged to partner with VCMC/SPH Hospital staff in order to provide a safe environment for the patient. As families provide a stabilizing emotional support for the patient, they will be asked to participate by staying with the patient to prevent pulling tubes, climbing out of bed, etc. Family members will not be permitted to provide sitter care for suicidal/homicidal or 5150/5585 patients.

2. Care provided by a Patient Safety Attendant will be delegated and overseen by the assigned bedside nurse. The nurse will retain the responsibility of the nursing process and administration of medications. A Patient Safety Attendant will provide physical care, within their scope of practice and training, for the patient for whom they are assigned including the documentation of vital signs and intake and output. Patients who are suicidal/homicidal require every 15 minute documentation on the patient observation log.

3. The Patient Safety Attendant as directed by the nurse will complete all aspects of Activities of Daily Living (ADL's) for the patient provided they have demonstrated competency. This includes, but is not limited to, the following: bathing, feeding, toileting, and range of motion (ROM). Exception: Security Personnel may provide observation only, not the ADLs/physical care. Patient Safety Attendants (unless Registered Nurses)

may not perform assessments.

4. The Patient Safety Attendant will accompany the patient for any clinical tests or procedures off the unit unless patient is already accompanied by the bedside nurse. The staff member accompanying the patient will remain within line of sight of the patient unless otherwise directed by the person performing the test or procedure.

5. The Patient Safety Attendant will remain within direct sight of the patient while patient is using the bathroom or shower. The Patient Safety Attendant will attempt to maintain the patient's dignity and privacy by having same gender assistant assume temporary responsibility of the patient as needed.

6. While on duty, the Patient Safety Attendant will not leave the patient's room without the bedside nurses' approval and/or relief. If a break is needed, a hand-off to the temporary staff member will occur prior to reporting off the unit.

7. The Patient Safety Attendant will refer the patient to the nurse or physician to answer any questions regarding the plan of care.

8. **Patient Safety Attendant/Suicidal/Homicidal or Patient on a 5150/5585**

a. If a Patient Safety Attendant is required for a suicidal or patient on a 5150/5585, the Charge Nurse will assign a staff member to provide 1:1 observation of the patient.

b. All Patient Safety Attendants used for violent or aggressive behavior must have Crisis Prevention Institute (CPI) training or comparable (e.g., AVADE).

c. If a patient is a danger to self or others, creating a safe environment is essential. The patient will not be permitted to use sharps or other items that could be used to harm self or others. For assistance in creating a safe environment see policy 100.268 Suicidal Environmental Risk Assessment.

d. The Patient Safety Attendant will immediately inform the nurse:

1. If the patient expresses an intention to hurt self/others.
2. If there is a sudden change in the patient's condition/behavior.
3. The Patient Safety Attendant may not leave the patient for any reason until coverage is obtained and present.

e. The Patient Safety Attendant may not be discontinued without Licensed Practitioner order.

9. **Patient Safety Attendant: Non-Suicidal/Homicidal/5150/5585 Patient**

a. Initiation of Patient Safety Attendant will require review and approval every shift. The justification for the need is documented on the 'Patient Safety Attendant Care Justification for the Non-Suicidal Patient' form (Attachment C). The patient's bedside nurse completes the form and submits to the Charge Nurse. If criterion is met, the Charge Nurse will speak to the Nursing Supervisor to arrange a Patient Safety Attendant. All completed forms are submitted to the Unit Nursing Clinical Director.

b. The Charge Nurse will assign a Patient Safety Attendant to provide observation of the patient. A Patient Safety Attendant may be assigned to monitor two patients in the same room or in adjoining rooms. The Patient Safety Attendant will position him/herself to maintain an unobstructed view of both patients. If one patient requires individual attention, the Patient Safety Attendant will notify the Primary RN or Charge Nurse to provide temporary monitoring for the other patient.

c. Primary RN or Charge Nurse approval required to allow family or other visitor to replace Patient Safety Attendant. The patient's visitor will be instructed to notify the nurse to resume Patient Safety Attendant care when they are leaving the room.

d. Once Patient Safety Attendant care is initiated, patient will not be left unattended until the nurse notifies the Patient Safety Attendant that the assignment is discontinued.

e. The Patient Safety Attendant will immediately inform the nurse if there is a sudden change in the patient's condition/behavior.

10. **Documentation**

a. All patient care will be documented in the Electronic Health Record.

b. Patient Safety Attendant will complete the Line of Sight Documentation Form (Attachment A).

c. Patient Safety Attendant will complete the C.A.S.E. Safety Check form (Attachment B).

11. Competency

a. All Patient Safety Attendants must complete training prior to assuming the role. Training includes a didactic course and results in a Competency Assessment.

b. All Patient Safety Attendants must participate in an annual refresher course to ensure maintenance of competency.

All revision dates: 4/28/2023, 4/13/2023, 4/11/2023, 4/11/2023

Attachments

C.A.S.E. Safety Checklist.pdf
Patient Observation Record.PDF
Patient Safety Attendant Care Justification for the Non-Suicidal Patient.docx

Approval Signatures

Step Description	Approver	Date
Medical Executive Committee	Tracy Chapman: VCMC - Med Staff	pending
Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	5/3/2023
Nursing Administration	Sherri Block: Associate Chief Nursing Executive, VCMC & SPH	5/3/2023
Policy Owner	Sherri Block: Associate Chief Nursing Executive, VCMC & SPH	5/3/2023

VENTURA COUNTY
HEALTH CARE AGENCY

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Owner:	*Lizeth Barretto: Chief Operating Officer, Ambulatory Care*
Policy Area:	*Ambulatory Care - Administrative*
References:	

AC.04 Ambulatory Care Specialty Care Referral Process

POLICY:

The Ambulatory Care Referral Center reviews and processes referrals received through Referral Management. A referral to a specialist is a request for their help in determining how to address a specific medical condition. It is not a transfer of care.

PROCEDURE:

Specialties

Below are specialties the Referral Center reviews and processes:

- Cardiology
- Dermatology
- ~~Ear Nose and Throat (ENT)~~PM&R
- Gastroenterology (GI)
- GI Screening/ Positive Fecal Immunochemical Test (FIT)
- Rheumatology
- Pulmonary
  ~~Pediatric Neurology~~
  ~~Pediatric ENT~~
- Pediatric Orthopedics
- Podiatry
- Orthopedics
- Infectious Disease
- Endocrinology
- Hypertension Clinic
- Hepatitis C
- Renal/Nephrology

Referral Process:

An order for the specialty referral must be requested by the Primary Care Physician (PCP)/Advanced Practice Provider (APP) in the electronic health record (EHR).

- Referrals for specialty care must be submitted into Referral Management by an order in the EHR by the practitioner or by manually adding the referral.
  ~~When submitting a referral for Specialty care, the referral must contain the patient's demographics and current insurance information.~~
  ~~If the data needed is in the EHR, it must be specified.~~
- When submitting a referral for Specialty care, the referral coordinator at practitioners office receives the referral in referral management system under originating work list at which point the referral goes into a not started status. The referral process follows:
  - Originating referral coordinator will Start Referral and Prep for Send by reviewing referral and obtaining authorization is needed. If authorization is denied, referral coordinator notifies the PCP within 24 hours via Cerner message.
  - Originating referral coordinator Generates referral, status changes to Pending Acceptance.
  - In a Receiving work list, receiving clinic reviews and accepts referrals, status changes to Accepted.
  - Patient has an appointment scheduled, status changes to Scheduled.
  - After patient is seeing by specialist and is checked out by clinic staff, status changes to Patient Seen.
  - Receiving clinic completes the referral, verifies all necessary documentation is attached to the referral, status is changed to completed.
  - Originating clinic reviews all the necessary documentation was received from the specialist, status changed to closed.
- It is essential that a summary of the patient's problem be included and the referring PCP/APP's questions answered, including:
  - The reason that the patient is being referred to a Specialist
  - The clinical questions that need to be addressed
  - The date of the visit, tests and/or documents.

Reviewed:

All referrals will be reviewed within four (4) business days to meet the specialty guidelines requirements established. The guidelines have been established by each specialist physician/department/representative and the Referral Center Medical Director. If a PCP/APP has any questions regarding the requirements, they are encouraged to contact the specialist/clinical specialist representative directly.

If the referral is incomplete, it shall be placed in a 'Pending Acceptance' status for 10 business days. The submitting clinic will be notified by the Referral Center personnel on items required. If the referral is not updated with the necessary documentation or items, the referral may be canceled.

Booked:

When all required work-up and documentation is complete, the Referral Center personnel will contact the patient to book and schedule an appointment. The submitting clinic representative and/or practitioner will be notified that an appointment has been booked. The Referral Center personnel shall make ~~one attempt~~three attempts to contact the patient via phone call or text message. If the phone call or text message is unsuccessful, a letter shall be mailed out to the patient's home address listed in our records. After the letter is sent, 30 business days will be given for the patient to respond to the request. If the patient does not respond to either the letter ~~or~~, phone call, or text, the Referral Center shall cancel the referral and will notify the submitting clinic representative and/or practitioner.

Urgent :

The Referral Center books urgent referrals on a case-by-case basis, depending on availability; though the policy of the Referral Center is that the PCP/APP shall contact the specialist on-call and ask for an urgent patient appointment to be booked. If the specialist in question cannot be reached, the PCP/APP can message the specialist/clinical specialist representative within Cerner.

The Referral Physician, upon review of a case and after attempting and failing to communicate with both the PCP/APP and the specialist, shall determine the appropriate timeliness and need for the patient to be seen and shall communicate with the referral staff to schedule the patient within the specialist's schedule.

Technical Questions:

- If an Internet issue occurs, please contact the Ventura County Health Care Agency IT/Help Desk Department at (805) 677-5119 for assistance.
- During our system downtime procedures, it is recommended that all electronic referrals should not be updated or worked on.
- Advanced notice of scheduled system downtime shall be communicated via email. Once the system is up and available, an email notification will be sent stating that it is safe to log on to the system and proceed with the normal operations.

ATTACHMENTS:

- Attachment A - Referral Management Training Handbook

All revision dates: 3/8/2023, 5/19/2020, 7/10/2019, 8/1/2016

Attachments

Attachment A - Referral Management Training Handbook.pdf
Attachment B - Referral Specialties by Location

Approval Signatures

Step Description	Approver	Date
Medical Executive Committee	Tracy Chapman: VCMC - Med Staff	pending
Ambulatory Care	Theresa Cho: Chief Executive Officer, Ambulatory Care	3/13/2023

VENTURA COUNTY
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References:	

CC.29 Vasopressor Intravenous Administration through Peripheral Line

Policy

The administration of vasopressors may be infused intravenously through peripheral intravenous lines when a central intravenous line is not available.

Background

Vasopressors are used in the setting of hypotension to maintain physiologic hemodynamic parameters. A large international database study found that every one hour delay in vasopressor initiation was associated with a 7% increase in mortality.[1] Hence, the updated sepsis guideline by the Surviving Sepsis Guideline of 2016 recommends the use of vasopressor earlier if needed – within 1 hour of recognition of septic shock.[2] Central line placement is recommended with the use of vasopressor due to the risk of extravasation. However, central line placement is associated with adverse events such as failure to obtain line, vascular injury, pneumothorax, hemothorax, air embolism, cardiac arrhythmias, hematoma formation, brachial plexus/ neural injury, and higher rate of central-line associated blood stream infection compared to peripheral intravenous line (PIV).[3] Use of a PIV for the administration of vasopressors may benefit the patient by shortening the time to administration of important hemodynamic stabilizing medication and leading to faster clinical benefits.

Procedure

A. Only one vasopressor may be used for PIV administration. Administration of more than one vasopressor requires placement of a central line.

B. The following conditions must be met prior to administering any vasopressor through a PIV:

1. Patient must have two (2) working PIV in place.
2. PIV for vasopressor use ~~must~~ideally will be placed in upper extremity contralateral to the blood pressure cuff ~~or greater saphenous vein only~~. Do not use lower extremity PIVs to infuse vasopressors.
3. ~~No hand, wrist, or antecubital fossa PIV access position.~~The antecubital fossa and veins next to joints, tendons, nerves, or arteries should be avoided as well as any IV sites requiring more than 1 venipuncture.
4. Intravenous line size ~~18~~ 20 gauge or larger.

5. Confirm blood return from the PIV access prior to starting vasopressor.

   ~~Position of PIV access documented to be in the vein (diameter > 4 mm) with ultrasonography.~~

6. Clearly label the PIV at the site of connection indicating use of line dedicated to peripheral vasopressor.
7. Do not use a deep peripheral line (ultrasound guided) catheter > ~~2~~1.75 inches long.
8. PIVs that are proximal to the antecubital fossa may not be used for vasopressors.

~~Baseline photograph shall be taken of the PIV site and place in the patient's health record.~~

C. The following vasopressors, concentrations and maximum doses are permitted for PIV administration. Doses higher than listed maximum infusion rates may temporarily be administered ~~only~~ while actively obtaining central line.

1. Licensed ~~independent~~ practitioner (~~LIP~~LP) must use hospital approved order set ~~which specify~~(Adult IV Titratable Medication Vasoactive) and specifies the route of administration as via PIV.

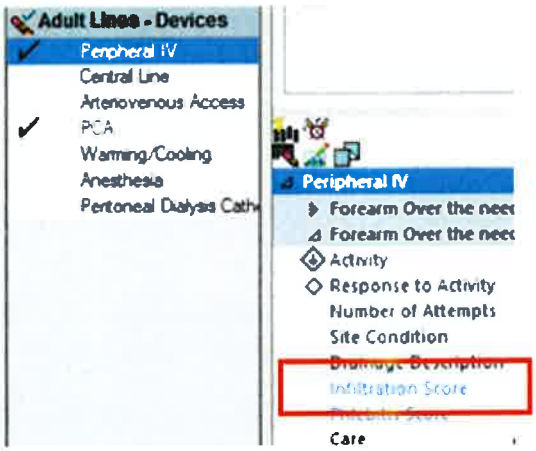
Medication	Concentration	Recommended maximum dose
Norepinephrine	4 mg/250 mL	15 mcg/min
Dopamine	400 mg/250 mL	10 mcg/kg/min
Phenylephrine	25 mg/250 mL	240 mcg/min
Epinephrine	2 mg/250 mL	10 mcg/min

D. ~~Assessment of PIV access function shall be performed and documented every four hours by aspiration.~~Assess PIV every shift and as needed for patency by blood return and/or ease of flushing without resistance.

E. The PIV site used to administer vasopressors must be monitored for signs and symptoms of extravasation every ~~one~~two (~~1~~2) ~~hour and complete~~ hours and documented under "Infiltration Score" on the nursing ~~flowsheet~~flow sheet.

1. Signs and symptoms to monitor:[1]
   a. Signs: Swelling, redness or blanching, blister formation, unexplained reduced IV flow rate, ~~Necrosis~~necrosis (2-4 days later), ~~lack of blood return,~~ ulceration
   b. Symptoms: Tightness, burning, pain or aching tingling sensation, itchiness

2. Infiltration Score on electronic health record (EHR):



Infiltration Score	
Grade	**Clinical Criteria**
0	No symptoms of infiltration
1	Skin blanched, edema is less than1 inch in any direction, cool to touch, with or without pain
2	Skin blanched, edema less than 1-6 inches in any direction, cool to touch, with or without pain
3	Skin blanched or translucent, gross edema greater than 6 inches in any direction, cool to touch, mild to moderate pain, possible numbness
4	Skin blanched or translucent, skin tight, leaking, skin discolored, bruised, swollen, gross edema greater than 6 inches in any direction, deep pitting tissue edema, circulatory impairment, moderate to severe pain, infiltration with any amount of blood, irritant, vesicant

F. Duration of administration of vasopressor through a PIV should be re-assessed every 24 hours. The reason for duration greater than 24- hours must be documented in the EHR by the ~~LIP~~licensed practitioner (LP) (progress note).

G. Nursing staff shall immediately alert the medical team if extravasation of vasopressor is suspected or occurs. Tissue injury is defined as erythema, blistering, skin breakdown, or necrosis in the site of extravasation. Treatment of extravasation shall be initiated immediately. See Extravasation policy (100.250 Management of Extravasation/Infiltration Due to Non-Chemotherapy Medication Administration)

H. An Adverse Drug Reaction form must be completed and reviewed by the ICU committee and P&T Committee.

Reference:

1. Lewis T, Merchan C, Altshuler D, Papadopoulos J. Safety of the peripheral administration of vasopressor agents. Journal of intensive care medicine. 2019 Jan;34(1):26-33.

2. Rhodes A, Evans LE, Alhazzani W, Levy MM, Antonelli M, Ferrer R, Kumar A, Sevransky JE, Sprung CL, Nunnally ME, Rochwerg B. Surviving sepsis campaign: international guidelines for management of sepsis and septic shock: 2016. Intensive care medicine. 2017 Mar 1;43(3):304-77.

3. Ballieu P, Besharatian Y, Ansari S. Safety and Feasibility of Phenylephrine Administration Through a Peripheral Intravenous Catheter in a Neurocritical Care Unit. Journal of intensive care medicine. 2019 Nov 22:0885066619887111.

4. Loubani, Osama, Green, Robert. A Systemic review of extravasation and local tissue injury from administration of vasopressors through peripheral intravenous catheter and central venous catheters. Journal of Critical Care 2015; 30:653.e9-e17.

5. Cardenas-Garcia, Jose et al. Safety of peripheral intravenous administration of vasoactive medications. *Journal of hospital medicine* 2015; 10:581-585.

6. Nguyen TT, Surrey A, Barmaan B, Miller S, Oswalt A, Evans D, Dhindsa H. Utilization and extravasation of peripheral norepinephrine in the emergency department. The American Journal of Emergency Medicine. 2020 Jan 8.

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Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
Medicine Committee	Tracy Chapman: VCMC - Med Staff	pending
Pharmacy & Therapeutics Committee	Sul Jung: Associate Director of Pharmacy Services	4/4/2023
Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	3/27/2023
Critical Care Unit	Joy Reed: SPH Interim Director ICU/DOU/MS/Tele	3/27/2023
Critical Care Unit	Sul Jung: Associate Director of Pharmacy Services	3/27/2023

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Owner:	*Hugo Ortiz: Diabetes Nurse Educator*
Policy Area:	*Diabetes Management*
References:	

DM.008 Hypoglycemia Management in Adults

POLICY:

~~To define, identify and treat~~It is the policy of Ventura County Medical Center and Santa Paula Hospital that hypoglycemia will be identified and immediately treated according to evidence-based standards. ~~It is the policy of Ventura County Medical Center and Santa Paula Hospital that hypoglycemia will be identified and immediately treated according to evidence-based standards.~~

~~DEFINITION OF HYPOGLYCEMIA:~~

BACKGROUND:

~~Adults with~~Hypoglycemia is not defined by a blood glucose (BG) value alone. For the purpose of identifying those whom treatment should be rendered, hypoglycemia is defined as a blood glucose less than 70 mg/dL or less than 80 mg/dL with symptoms of hypoglycemia~~.~~ in the following types of adult patients:

- All patients with any type of diabetes mellitus
- Patients with critical illness
- Patients with sepsis
- Patients with clinically significant malnourishment and/or cachexia
- Patients thought to have alcohol induced hypoglycemia
- Patients with End Stage Renal Disease (ESRD) and/or advanced cirrhosis
- Patients with a confirmed or suspected hypoglycemic disorder diagnosed by Whipple's triad:
  - Patient has symptoms of hypoglycemia
  - The plasma glucose concentration is confirmed and documented to be low when patient has the symptoms
  - The symptoms are relieved by elevating the plasma glucose with administering glucose or glucagon
- A patient on a medication known to have significant risk of causing hypoglycemia (see Table 1)

Table 1. Formulary drugs that can cause hypoglycemia other than anti-hyperglycemic agents and alcohol	
Moderate Quality of Evidence	Pentamidine isethionate Quinine sulfate Indomethacin Glucagon (during endoscopy)
Low Quality of Evidence	Hydroxychloroquine sulfate Lithium
Very Low Quality of Evidence	Angiotensin-converting enzyme inhibitors Angiotensin-receptor antagonists Beta-blockers Levofloxacin Mifepristone Disopyramide Trimethoprim-sulfamethoxazole Heparin 6-mercaptopurine
Adapted from M. Hassan Murad, et al. Drug Induced Hypoglycemia: A Systematic Review. J Clin Endocrinol Metab, March 2009, 94(3): 741-745	

PROCEDURE:

A. ~~Assessment:~~

~~1. Assess for signs and symptoms of hypoglycemia including shakiness, dizziness, headache, confusion, irritability, weakness, decreasing level of consciousness, hunger, tachycardia, pallor and/ or diaphoresis.~~

~~2. If symptoms present:~~

~~a. Have patient stop all activity~~

~~b. Perform a STAT bedside blood glucose~~

~~c. Begin treatment per protocol~~

~~d. Inform the Licensed Independent Practitioner (LIP) of hypoglycemia~~

Assessment:

1. Licensed Practitioner (LP) should assess patient's risk for clinically defined hypoglycemia as above and order appropriate glucose monitoring and the PHA Adult Hypoglycemia Treatment PowerPlan.
2. In any patient with symptoms of hypoglycemia (e.g., shakiness, dizziness, headache, confusion, irritability, weakness, decreasing level of consciousness, hunger, tachycardia, pallor and/ or diaphoresis) then get a STAT bedside capillary Point of Care (POC) glucose level to screen for hypoglycemia.
3. In patients meeting above clinical definition of hypoglycemia, treat per protocol below.
4. In patients without any of the known clinical conditions above and
   a. an incidental BG <70 mg/dL but >40 mg/dL with no symptoms of hypoglycemia no further assessment or monitoring is needed.
   b. an incidental BG <70 mg/dL but >40 mg/dL with symptoms of hypoglycemia, then further workup to confirm clinical hypoglycemia is recommended

c. an incidental BG <40 mg/dL with or without symptoms of hypoglycemia, then repeat confirmatory BG is recommended and if still <40 mg/dL then further workup to confirm clinical hypoglycemia is recommended.

B. Treatment protocol for those that meet criteria:

1. Have patient stop all activity
2. If patient responsive and able to take orals, give 15 grams of carbohydrates:
   a. 120 mL (4 oz) apple/cranberry/orange juice, do not give orange juice to patients with renal insufficiency. **OR**
   b. 120 mL (4 oz) non-diet soda **OR**
   c. Glucose gel equal to 15 grams carbohydrates
3. If patient unresponsive, nothing by mouth (NPO), or unable to swallow:
   a. Patent intravenous (IV) line present:
      i. Blood glucose ≤ 40 mg/dL give 50 mL of D50.
      ii. Blood glucose > 40 mg/dL give 25 mL of D50.
   b. Patent IV line not present:
      i. Give 1 mg glucagon intramuscular (IM) or subcutaneous (~~SQ~~SubQ). ~~Attempt IV access. (Turn patient on side as nausea and vomiting frequently occur with glucagon.)~~
      ii. Attempt IV access.
      iii. Turn patient on side as nausea and vomiting frequently occur with glucagon.
4. Document all events in the electronic health record (EHR) and notify the LP.
5. Recheck blood glucose 15 minutes after treatment. If blood glucose is still <70 mg/dL, repeat treatment, and recheck blood glucose in 15 minutes.
6. Consider measures to prevent recurrence:
   1. For patients taking orals: Once blood glucose has come up >70 mg/dL, provide snack containing carbohydrates and protein.
   2. For patients unable to take orals: call the LP for orders to prevent recurrence.
7. Initiate a notification form for all blood glucose <40 mg/dL.

~~Reassess:~~

~~Recheck blood glucose 15 minutes after treatment. If blood glucose is still <80 mg/dL, repeat treatment, and recheck blood glucose in 15 minutes.~~

~~Prevent Recurrence:~~

~~1. For patients taking orals: Once blood glucose has come up >80 mg/dL, provide snack containing carbohydrates and protein.~~

~~2. For patients unable to take orals: call the LIP for orders to prevent recurrence.~~

~~Document all events in electronic health record. Notify LIP.~~

~~Initiate notification form for all blood glucose <50 mg/dL.~~

REFERENCES:

~~A. American Diabetes Association. Diabetes Care 2021 Jan; 44 (Supplement 1): S211-S220.~~

~~B. Cryer, Philip E. M.D. "Management of hypoglycemia during treatment of diabetes mellitus" **Uptodate**, April 2018.~~

1. American Diabetes Association. Diabetes Care 2021 Jan; 44 (Supplement 1): S211-S220.
2. Cryer, Philip E. M.D. "Management of hypoglycemia during treatment of diabetes mellitus" UpToDate, April 2018. Last Accessed 11/6/2022.
3. M. Hassan Murad, et al. Drug Induced Hypoglycemia: A Systematic Review. J Clin Endocrinol Metab, March 2009, 94(3): 741-745
4. Phillip E. Cryer, et al. Evaluation and Management of Adult Hypoglycemic Disorders: An Endocrine Society Clinical Practice Guideline. J Clin Endocrinol Metab, March 2009, 94(3): 709-728
5. Vella, Adrian M.D. "Hypoglycemia in adults without diabetes mellitus: Clinical manifestations, diagnosis, and causes" UpToDate, Oct 2022. Last Accessed 11/6/2022.

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Attachments

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Pharmacy & Therapeutics Committee	Sul Jung: Associate Director of Pharmacy Services	3/23/2023
Nursing Administration	Sherri Block: Associate Chief Nursing Executive, VCMC & SPH	2/15/2023
Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	2/15/2023
Diabetes Management	Hugo Ortiz: Diabetes Nurse Educator	2/15/2023
Diabetes Management	Anthony Walls: MD	2/14/2023

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Owner:	*Julia Feig: Clinical Nurse Manager, Emergency Services*
Policy Area:	*Emergency Services*
References:	

ER.42 Standardized Nursing Procedures in the Emergency Department

POLICY:

Individuals that present to the Emergency Department (ED) at Ventura County Medical Center/Santa Paula Hospital (VCMC/SPH) will be assessed by a triage-competent Registered Nurse (RN) to determine the patient's presenting complaint and acuity. Once this assessment is complete, the triage nurse may initiate care according to the following standardized procedures or assign responsibility to the patient's primary RN.

The standardized procedures outlined in this policy are established via the established governance process to initiate and expedite care in the ED.

All standardized procedures and patient follow-up are to be documented in the Electronic Health Record (EHR). Consultation with the ED Licensed ~~Independent~~ Practitioner (~~LIP~~LP) will occur when concern arises in assessing or implementing these standardized treatment and diagnostic procedures. Triage-competent registered nurse/ED registered nurse may choose to initiate none, part or all of the standardized procedure based on the age and presentation of the patient and consultation with the ED ~~LIP~~LP. The attending ED ~~LIP~~LP will be notified and assume responsibility for reviewing test results and contacting the patient in the event that a patient leaves the ED prior to completion and/or review of test results.

Standardized nursing procedures will be reviewed and revised annually. Nursing staff will complete a competency evaluation annually.

PROCEDURE:

I. **STANDARDIZED TREATMENT AND DIAGNOSTIC PROCEDURES**
The standardized procedure order sheet will include the following:

A. **Blunt Trauma (Non-Tier Activation)**

1. Ice to injury
2. Elevate if extremity injury
3. Immobilize injured extremity
4. X-ray of injured body part and/or areas of palpable pain or consult LIP if fracture suspected
5. NPO
6. Saline Lock

7. C-Spine Precautions if indicated

B. **Isolated Extremity Injury**

1. Immobilize joints above and below injury
2. Apply ice
3. Elevate injured extremity
4. Remove rings on injured extremity
5. X-ray of injured body part
6. NPO
7. Saline Lock

C. **Possible Hip Fracture**

1. Saline lock
2. Lab ER panel
3. Alcohol Level
4. Extra tube for blood bank
5. PT, PTT
6. Urine Drug Screen
7. Urinalysis with micro reflex to culture
8. EKG (NOTE: perform if over 50 years old)
9. CXR 1 view
10. Hip x-ray 3 view and Pelvis

D. **2+ Systemic Inflammatory Response Syndrome (SIRS)**

- Temperature less than 96.8ºF or greater than 100.9ºF
- HR greater than 90
- RR greater than 20
- WBC less than 4,000 or greater than 12,000 or
- Bands greater than 10% with suspected or confirmed infection (Adult)

1. Adults: Initiate ED Triage Sepsis Adult power plan
2. Acetaminophen 650 mg form: Tab, oral, Once. Now.
   To be given if patient has a fever greater than or equal to 101ºF, has not received acetaminophen in the last 4 hours, does not have liver disease
3. Lab ER panel
4. Venous Blood Gas with lactate
5. Venous Blood Gas plus electrolytes plus lactate (If patient is Short of breath)
6. Urinalysis with micro reflex to culture
7. Blood culture x 2 (draw and hold; collected from 2 different sites)
8. O2 via nasal cannula to keep O2 sat greater than 94%

9. Saline Lock
10. Chest x-ray 2 views (Ambulatory or monitor not required)
11. Chest x-ray 1 view (nonambulatory or monitored required)
12. Discuss presence of existing urinary catheter with provider for further instructions.

E. **Fever greater than 101°F Adults**

1. Acetaminophen 650 mg form: Tab, oral, once. Now.
   To be given if patient has a fever greater than or equal to 101°F, has not received acetaminophen in the last 4 hours, does not have liver disease

F. **Fever greater than 101°F Pediatrics (patients older than 6 months)**

1. Ibuprofen 10 mg/kg PO x 1 (Maximum dose: 400 mg)
   ~~To~~ to be given if patient has a fever greater than or equal to 101°F, ~~has not received ibuprofen or other NSAIDS in the last 6 hours and not pregnant, and not on hemodialysis and does not have known kidney disease~~and
   a. has not received ibuprofen or other NSAIDS in the last 6 hours
   b. not pregnant, and not on hemodialysis
   c. not on hemodialysis or known kidney disease
   d. does not have bleeding disorder or cancer
2. Acetaminophen 15 mg/kg PO x 1 (Maximum dose: 650 mg)
   To be given if patient has a fever greater than or equal to 101°F, has not received acetaminophen in the last 4 hours, does not have liver disease.

G. **Fever (≥100.4) and Cancer (Adult)**:

1. Saline Lock
2. Access Central Line if present, and obtain 1st blood culture and label as central line
3. Draw second blood culture from peripheral vein and label as peripheral
4. Lab ER Panel
5. C-Reactive Protein (CRP)
6. Extra tube for blood bank
7. Notify LIP for HR greater than 140, less than 50 or O2 sat less than 90%
8. Urinalysis with micro reflex to culture
9. O2 via nasal cannula to keep O2 sat greater than 94%
10. Chest x ray 1 view (Non-ambulatory or monitor required)
11. Chest x ray 2 views (Ambulatory or monitor not required)

H. **Fever (≥100.4 using temporal artery thermometer) and Cancer (Pediatrics)**

1. Blood Culture x 1 (from central line if patient has PICC or port labeled as central line)
2. CBCD
3. CRP
4. Basic Metabolic Panel

5. Notify LIP if O2 sat less than 94%
6. O2 via nasal cannula to keep O2 sat greater than 94%
7. Urinalysis with micro reflex to culture
8. Port access or Saline Lock if no port
9. Chest x ray 1 view (Non-ambulatory or monitor required)
10. Chest x ray 2 views (Ambulatory or monitor not required)
11. Nothing per rectum
12. Apply lidocaine 4% Cream
13. Acetaminophen 15 mg/kg PO x 1 (maximum dose: 650 mg) for temperature greater than 100.4ºF
    To be given if patient has a fever greater than or equal to 100.4ºF, has not received acetaminophen in the last 4 hours, does not have liver disease.

I. **Diabetic Ketoacidosis (DKA) Suspected**

1. NPO
2. Blood gas venous plus electrolytes plus lactate
3. Glucose point of care stat
4. Lab ER panel
5. Urinalysis with micro reflex to culture
6. Saline lock

J. **Eye Injury**

1. Proparacaine and Fluorescein at request of ED LIP
2. Visual acuity
3. Consult LIP for pain medication as needed

K. **Altered Mental Status (Adult)**

1. Saline Lock
2. Cardiac monitor
3. Lab ER panel
4. Glucose point of care
5. TSH
6. Alcohol level
7. Urine drug screen
8. Urinalysis with micro reflex to culture
9. EKG (NOTE: perform if HR greater than 100 or less than 60)
10. Chest x-ray 1 view (Non-ambulatory or monitor required)
11. Blood gas venous plus electrolytes plus lactate
12. Lithium Level (If patient is prescribed Lithium)

L. **Abdominal Pain or Flank Pain**

1. Urine point of care
2. Saline Lock
3. NPO
4. ER Panel
5. C Reactive Protein (CRP)
6. Ondansetron (Zofran) 4 mg IV Push/Orally Disintegrating Tablet (ODT)

M. **Dysuria**

1. Urinalysis with micro reflex to culture
2. Urine point of care

N. **Pregnancy Less Than 20 Weeks with Vaginal Bleeding and/or Abdominal Pain ~~in Pregnancy~~**

1. ~~To~~If greater than 20 weeks pregnant, transfer directly to Labor and Delivery Department ~~if greater than 20 weeks pregnant~~
2. Saline lock (NOTE: insert if HR>100 or SBP<100)
3. Lab ER panel (NOTE: if HR>100 or SBP<100)
4. Type and Rh and antibody screen
5. Serum HCG
6. Urinalysis with micro reflex to culture

O. **Chest Pain**

Appears cardiac:

1. EKG and give to physician within 10 minutes
2. Asprin 81 mg tablet, 4 tablets PO x 1 chewed
3. Cardiac monitoring
4. Oxygen saturation monitoring
5. Oxygen at two (2) liters via nasal cannula if less than 95% O2 sat
6. Saline Lock
7. Lab ER panel
8. PT, PTT (for patient on anticoagulant medication)
9. Chest x ray 1 view (Non-ambulatory or monitor required)

   ~~Chest x-ray 2 views (Ambulatory or monitor not required)~~
10. NPO

P. **Shortness of Breath/Cough**

1. Airborne and droplet isolation if contagious pathogen is suspected (NOTE: for patients with known or suspected contagious pathogen, immunosuppression or other risk factors for contagious pathogens)
2. If wheezing or history of asthma confer with LIP for nebulized treatment.

3. Isolation if contagious pathogen suspected, place mask on patient
4. EKG if history or suspect cardiac disease
5. Oxygen at two (2) liters via nasal cannula if less than 92% 02 sat
6. Oxygen saturation monitoring
7. NPO
8. Chest x ray 1 view (Non-ambulatory or monitor required)
9. Chest x ray 2 view (Ambulatory or monitor not required)
10. Saline Lock
11. Lab ER panel
12. Venous Blood Gas plus electrolytes plus lactate
13. Blood culture x 2 (NOTE: If pneumonia suspected)

Q. **Syncope**

1. EKG
2. Cardiac Monitor
3. Saline Lock
4. Lab ER Panel
5. Point of care blood glucose

R. **Diabetic Wound**

1. Point of care blood glucose
2. Lab ER Panel
3. C-reactive Protein
4. Erythrocyte Sedimentation Rate (ESR)
5. Venous blood gas plus electrolytes plus lactate
6. Blood Cultures x2
7. X-ray affected body part

S. **Psychiatric Patients**

1. Urinalysis with micro reflex to culture if elderly (65 and above)
2. Mental health panel (NOTE: perform if needs clearance for mental health evaluation)
3. Drug levels if on medication (NOTE: perform for valproic acid, depakote, lithium)
4. Aspirin and Acetaminophen levels (NOTE: perform if patient presents with suicidal ideation)
5. Nicotine patch when applicable
6. Consult physician for appropriate diet order

T. **Suspected Stimulant Intoxication**
If patients HR is >120:

1. Saline Lock

2. 1 liter bolus Lactated Ringers
3. Lab ER Panel
4. Creatinine Phosphate Kinase
5. Cardiac Monitor
6. EKG

U. **GI Bleed**

1. Lab ER Panel
2. Saline Lock
3. PT, PTT
4. Extra tube for blood bank
5. Cardiac Monitoring
6. NPO

V. **Epistaxis**
If HR>100 or SBP<100 or on anticoagulants

1. CBC
2. PT, PTT

All revision dates: 4/20/2023, 1/13/2021, 7/23/2019, 3/21/2019, 12/1/2013

Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
Medical Executive Committee	Tracy Chapman: VCMC - Med Staff	pending
Medical Staff Committees: Emergency Department & IPC	Tracy Chapman: VCMC - Med Staff	5/1/2023
Pharmacy & Therapeutics Committee	Sul Jung: Associate Director of Pharmacy Services	3/23/2023
Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	2/1/2023
Nursing Administration	Sherri Block: Associate Chief Nursing Executive, VCMC & SPH	2/1/2023
Emergency Services	Kathie Jones: Interim Clinical Nurse Manager, Emergency Services	2/1/2023

VENTURA COUNTY
HEALTH CARE AGENCY

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Owner:	*Joy Reed: SPH Interim Director ICU/DOU/MS/Tele*
Policy Area:	*Intensive Care Unit*
References:	

ICU.10 Intensive Care Unit Discharge and Transfer Criteria

POLICY:

To aid in the triage of ~~Critical~~Intensive Care Unit (~~CCU~~ICU) patients and delineate the criteria for patients to be discharged or transferred from the unit when appropriate.

PROCEDURE:

Patients shall not be arbitrarily transferred or discharged from the ~~CCU~~ICU. The following will be considered when contemplating patient discharge or transfer from the ~~CCU~~ICU:

1. Vital signs improved and stable, to the extent that the patient can be cared for at the level of DOU/ Telemetry or Medical/Surgical.
2. Terminal or moribund patients for whom the ~~CCU~~ICU cannot reasonably be expected to alter the outcome.
3. Stabilized post-operative patients after central monitoring equipment has been removed.
4. Respiratory patients that are dependent on volume ventilator and are awaiting transfer to a rehabilitation center.
5. Stable, critically ill patients that need special diagnostic procedure not available in our facility.
6. Patients deemed improved and stable for transfer by the physician.

SPECIFIC CONSIDERATIONS

1. Patients are transferred from the ~~CCU~~ICU at the discretion of the attending physician with the following criteria:
    a. Vital signs stable over the past 24 hours, with no life-threatening medical conditions in the past 24 hours, no special lines (e.g. cordis or thermodilution catheter) present, and patient acuity requirement below critical care levels. Cordis allowed in Telemetry at VCMC only.
    b. Clinical findings are such that no resolution is expected, the patient and/or family request or agree to a No Code/No Resuscitation status, and a special area in the hospital is accessible for proper care in this situation.

c. ~~CCU~~ICU attending or designee will ultimately be responsible for triaging patients when unit capacity is at the limit. Decisions will be based upon patient acuity, admission/discharge criteria and available alternative care areas.

2. Physician orders must be completely rewritten.
   a. Exceptions
      1. Critically ill patients in the Emergency Department, Operating Room or Med/Surg and condition necessitates immediate move to the unit (rewrite orders within 30 minutes).
      2. Need to admit when the unit is at capacity and the transferring resident physician is unavailable to rewrite orders. The Registered Nurse (RN) will write phone transfer order and transfer with present orders. (Rewrite on receiving unit within 30 minutes.)
3. If in use, ~~CCU~~ICU specialty beds are not to be transferred with patients. (Specialty beds have electrical grounds/fluoroscopic capabilities/built-in scales.)
   a. Patients in balanced traction shall be transferred in their beds.
   b. Patients with prohibitive special conditions shall be transferred in their beds (i.e., spinal cord injuries).
4. Patients transferring to the ~~CCU~~ICU will be accompanied by an RN (unless special circumstance and extremely uncomplicated patient status, as determined by RN responsible for patient in unit and receiving unit). *See ~~CCU~~ICU policy ~~CC~~ICU.~~6~~06, Transportation of ~~Critical~~Intensive Care Unit Patients.*
5. Unless ordered differently, patients on oxygen therapy will be transferred on oxygen.
6. Patients and their families will be prepared for transfer/discharge by the assigned RN.
7. Ventilator-dependent patients whose care is well organized and whose weaning parameters have failed may be transferred to this unit after consult with the attending physician and the Clinical Nurse Manager.

All revision dates: 2/1/2023, 1/1/2017, 12/1/2009, 5/1/2006, 5/1/2004, 9/1/2001, 9/1/1998, 1/1/1996, 10/1/1995, 8/1/1995, 1/1/1992, 3/1/1991, 11/1/1990, 6/1/1989, 11/1/1988, 12/1/1987

Attachments

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Medicine Committee	Tracy Chapman: VCMC - Med Staff	pending
Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	3/27/2023
Policy Owner	Joy Reed: SPH Interim Director ICU/DOU/MS/Tele	3/27/2023

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Policy Area:	*Intensive Care Unit*
References:	

ICU.11 Intensive Care Unit Physician Consultations

POLICY:

To define the circumstances under which the ~~Critical~~Intensive Care Unit (~~CCU~~ICU) Medical Staff determines that a physician consultation should be provided.

PROCEDURE:

A. Consultation should be obtained by a qualified specialist when it is determined by the attending physician, resident or the multidisciplinary rounds team, that meeting the patient's needs can be enhanced through collaboration with a physician who has further training/experience and competence in a particular field.

   Other circumstances which may require a consultation include:

   1. Request by patient or family.
   2. Patient's condition unexpectedly worsens, is not improving and/or the diagnosis is uncertain.
   3. When declaration of brain death is required.
   4. When withdrawal of life support is being considered in non-brain dead patients.
   5. All patients with proven myocardial infarction or when myocardial infarction is strongly suspected.
   6. Difficult ventilator weaning.
   7. Overdose or suicidal patients.
   8. Use of thrombolytic agents.

B. When a Registered Nurse (RN) has any reason to doubt or question the care provided to the patient or believes that a consultation is needed and has not been obtained or requested, and after consultation with the attending physician, the RN shall notify his/her supervisor, who may refer the matter to Nursing Administration. If Nursing Administration believes a consultation is warranted, after notifying the Administrator, Nursing Administration may contact the ~~CCU~~ICU Medical Director. Based on their judgment, the ~~CCU~~ICU Medical Director or the Chief of Staff may request a consultation. (~~CCU~~ICU RN's may contact the ~~CCU~~ICU Medical Director at any time.)

C. All ~~CCU~~ICU patients will be reviewed by the ~~CCU~~ICU Medical Director or his designee on a daily basis.

All revision dates:	2/1/2023, 1/1/2017, 12/1/2013, 6/1/2013, 12/1/2009, 5/1/2006, 5/1/2004, 5/1/2001, 5/1/1998, 8/1/1995, 1/1/1992, 3/1/1991, 11/1/1990, 11/1/1988

Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
Medicine Committee	Tracy Chapman: VCMC - Med Staff	pending
Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	3/27/2023
Policy Owner	Joy Reed: SPH Interim Director ICU/DOU/MS/Tele	3/27/2023

VENTURA COUNTY
HEALTH CARE AGENCY

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Owner:	*Joy Reed: SPH Interim Director ICU/DOU/MS/Tele*
Policy Area:	*Intensive Care Unit*
References:	

ICU.23 Intravenous Medication Titration in Intensive Care Areas

POLICY:

To standardize the method of administering intravenous titratable medications by nurses in intensive care areas.

PROCEDURE:

Intravenous (IV) titrated medication orders shall include the medication name and concentration, route, the loading dose (if applicable), starting medication dose (rate of infusion), the incremental dose, a maximum dose, titration frequency, titration goal or end point, and bolus doses (if applicable). All IV titratable medications are considered high-alert medications and shall only be administered in critical care areas. Exception: Diltiazem and amiodarone infusions may be administered in the Definitive Observation Unit and Telemetry unit. All IV titratable medications will be administered utilizing standardized approved concentrations on an infusion pump with drug Guardrails.

A. The following applies to IV titratable medications:
   1. The medication dose may be progressively increased or decreased in response to the patient's status.
   2. The components of the IV titrated order include:
      a. Medication name and concentration;
      b. Route;
      c. Loading dose (if applicable);
      d. Starting medication dose (rate of infusion);
      e. The incremental dose;
      f. A maximum dose;
      g. Titration frequency;
      h. Titration goal or end point; and
      i. Bolus doses (if applicable).
   3. IV Titration doses and parameters for specific medications should follow the Ventura County Medical Center IV Medication Titration ~~Table~~Tables (see Attachment A and B).

B. Documentation for IV titratable medications shall be performed hourly, with any rate changes, or when the titratable medication is turned off. Initial assessment and reassessment documentation shall include:

1. Dose/rate; and
2. The titration parameter such as Richmond Agitation Sedation Scale (RASS), Critical Care Pain Observation Tool (CPOT), vital sign(s), train-of-four, Minnesota Detoxification Scale (MINDS)/Clinical Institute Withdrawal Assessment of Alcohol Scale (CIWA), and intracranial pressure (ICP).

C. ~~The nurse may initiate emergency measures such as altering the titration schedule or stopping a medication in the event that the patient becomes hemodynamically unstable. Notify the physician as soon as possible.~~The nurse may initiate block charting when rapid titration of medication is necessary in life threatening urgent/emergent situations.

1. This may be addressed by titrating current medications outside of parameters.
2. In order to use block charting, documentation in the IV drips section must reflect that a previous dose adjustment was not adequate.
3. Provider must be notified as soon as it is safe and reasonable to do so.

D. ~~Workflow~~Work flow for emergency verbal order at bedside by a physician.

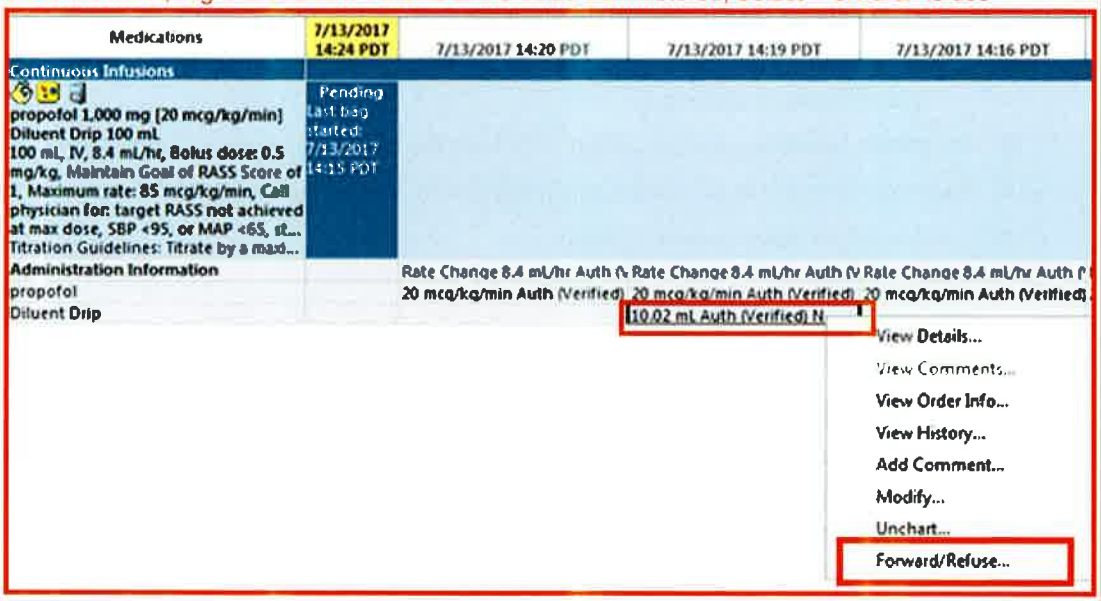
1. Qualifying orders
   a. Patient must be on a continuous drip with complete order requirements as above.
   b. Bolus medication must be the same medication as the continuous drip already being administered.
      i. If a patient is currently not on a continuous drip for that medication, a separate bolus one time order must be placed by the physician.
   c. Drip rate changes greater than ordered per Medication Titration Table (Attached) and that do not qualify for block charting.
2. At bedside, physician may give verbal order for bolus or increase in drip rate at patient bedside.
3. Nurse administer dose via infusion pump using drug Guardrail under "BOLUS" option.
4. Nurse will chart bolus dose from iAware.
5. Nurse will forwards the bolus or increase in drip rate administration documentation from the medication administration record (MAR) section of the electronic health record (EHR) to be signed by the provider.
6. Physician will review and sign order as pertinent within 48 hours of event.

E. Documentation process

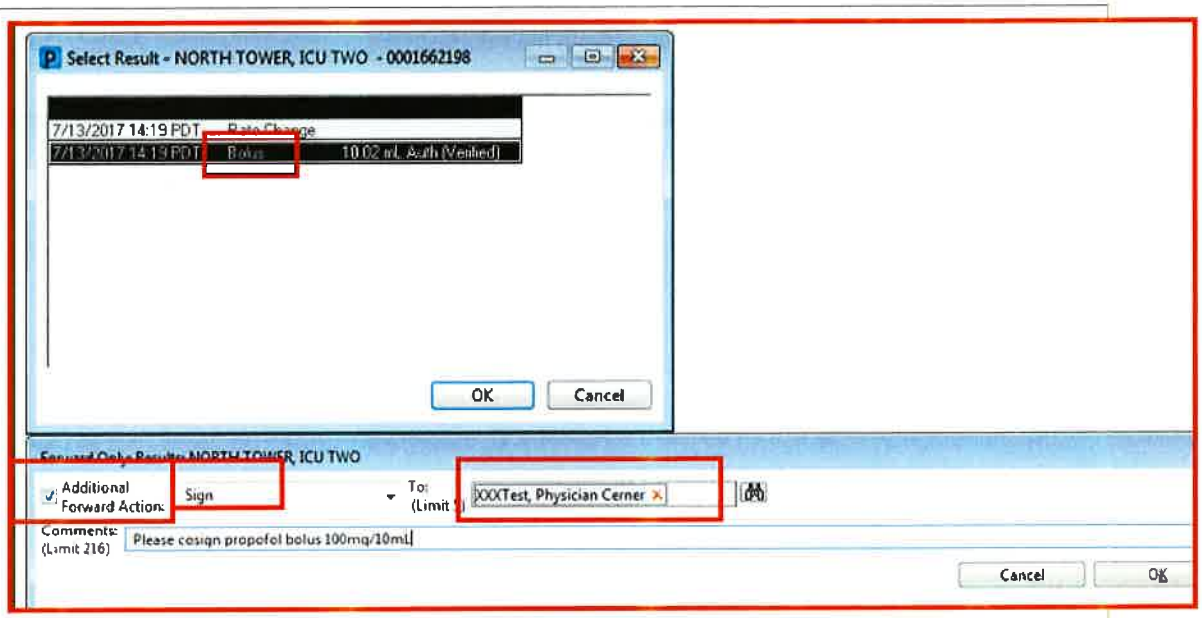
1. ~~**Nurse**: Follow these steps to properly document the emergency verbal order.~~Emergency Verbal Orders

~~Document bolus or rate change via iAware program~~

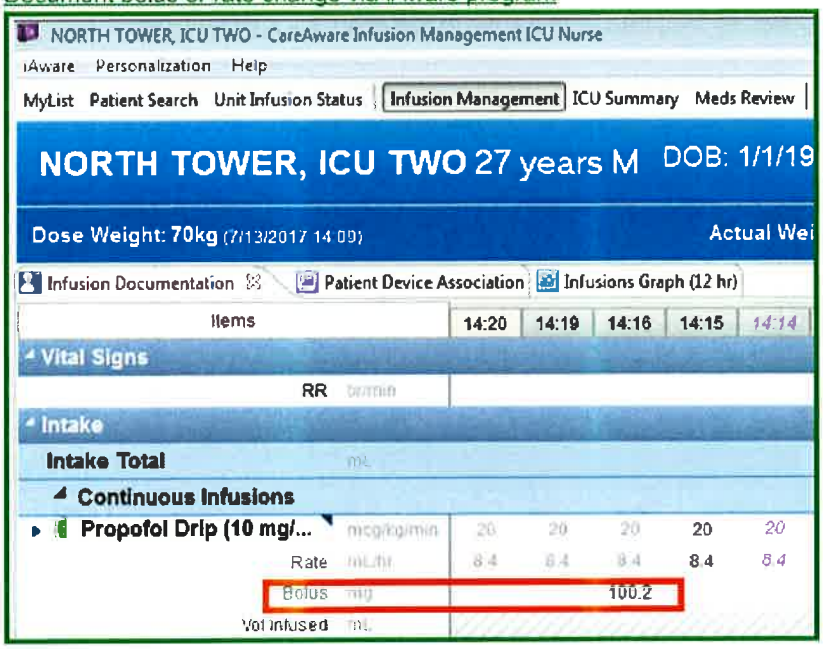
~~Go to the MAR; Right click on the volume of the bolus administered; Select "Forward/Refuse"~~



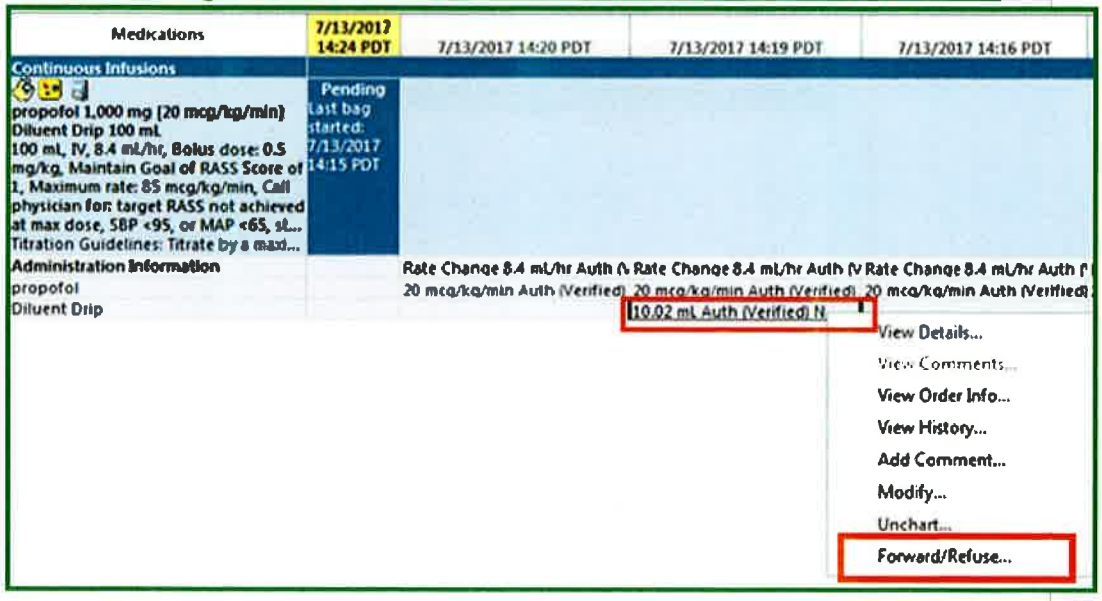
a. ~~Select "Bolus" or "Rate Change" entry; Check off "Additional Forward Action"; Select "Sign", Select the provider who gave the~~**Nurse**: Follow these steps to properly document the emergency verbal order~~; Fill out comments~~.



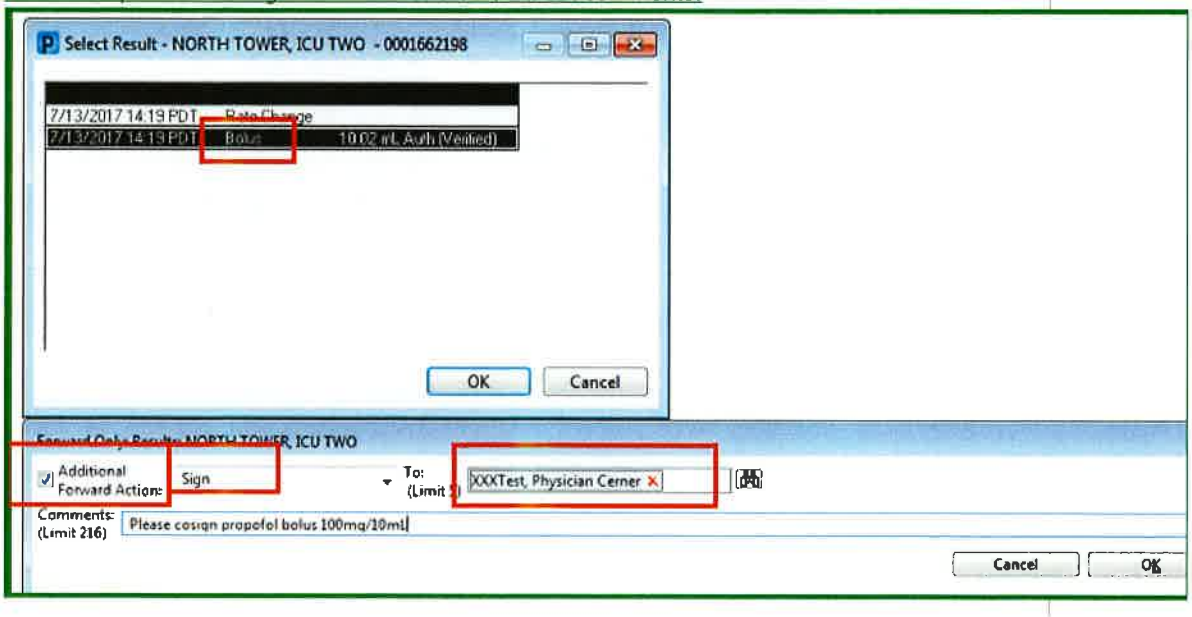
i. Document bolus or rate change via iAware program



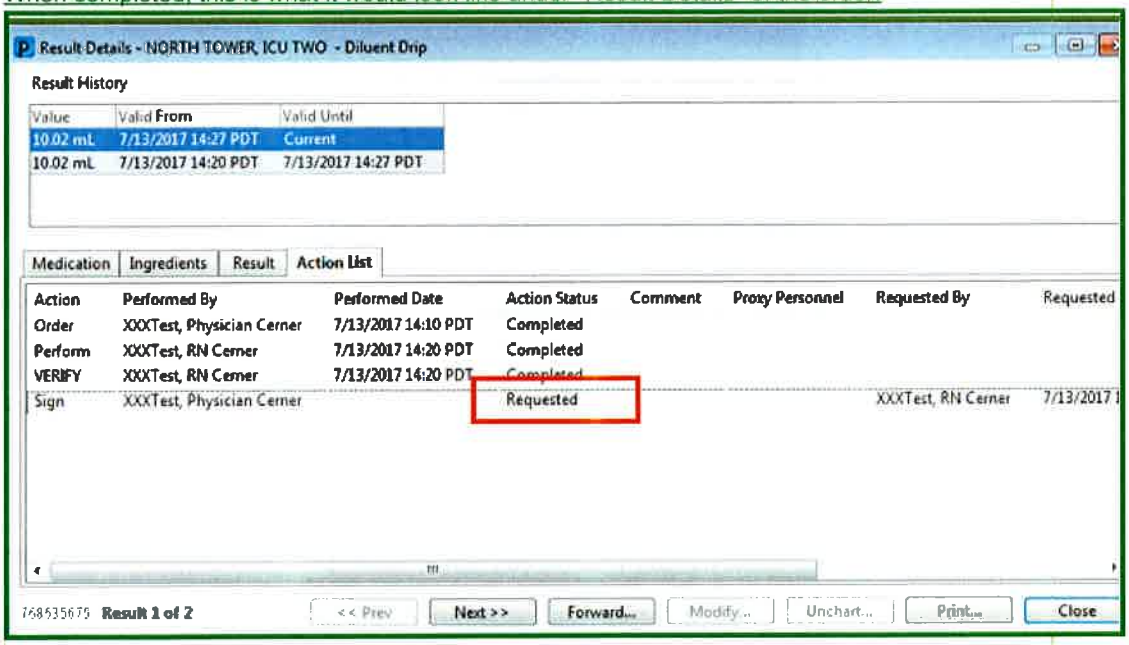
ii. Go to the MAR; Right click on the volume of the bolus administered; Select "Forward/Refuse"



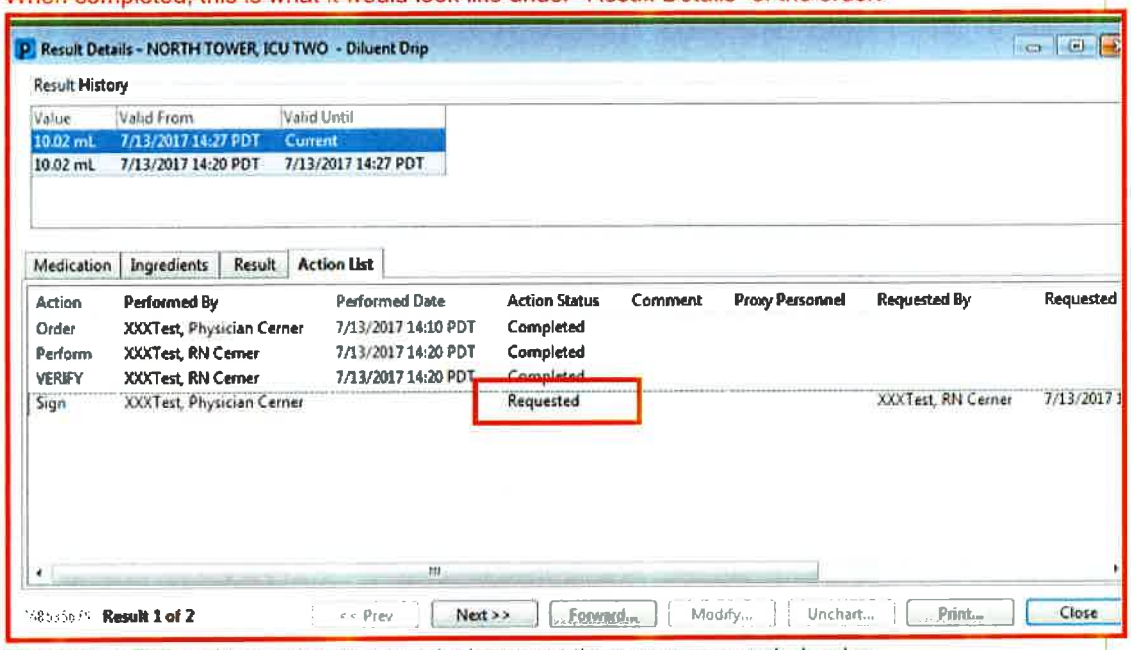
iii. Select "Bolus" or "Rate Change" entry; Check off "Additional Forward Action"; Select "Sign", Select the provider who gave the verbal order; Fill out comments.



iv. When completed, this is what it would look like under "Result Details" of the order.

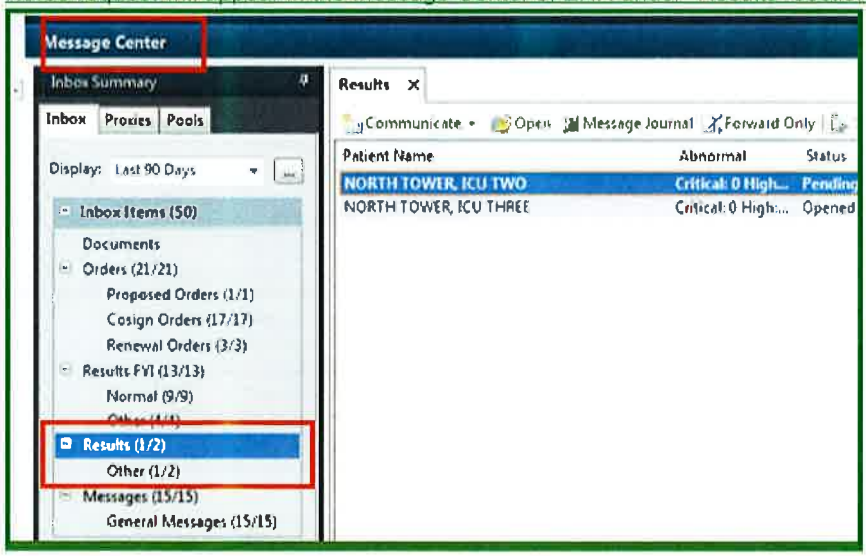


b. ~~When completed, this is what it would look like under "Result Details" of the order.~~

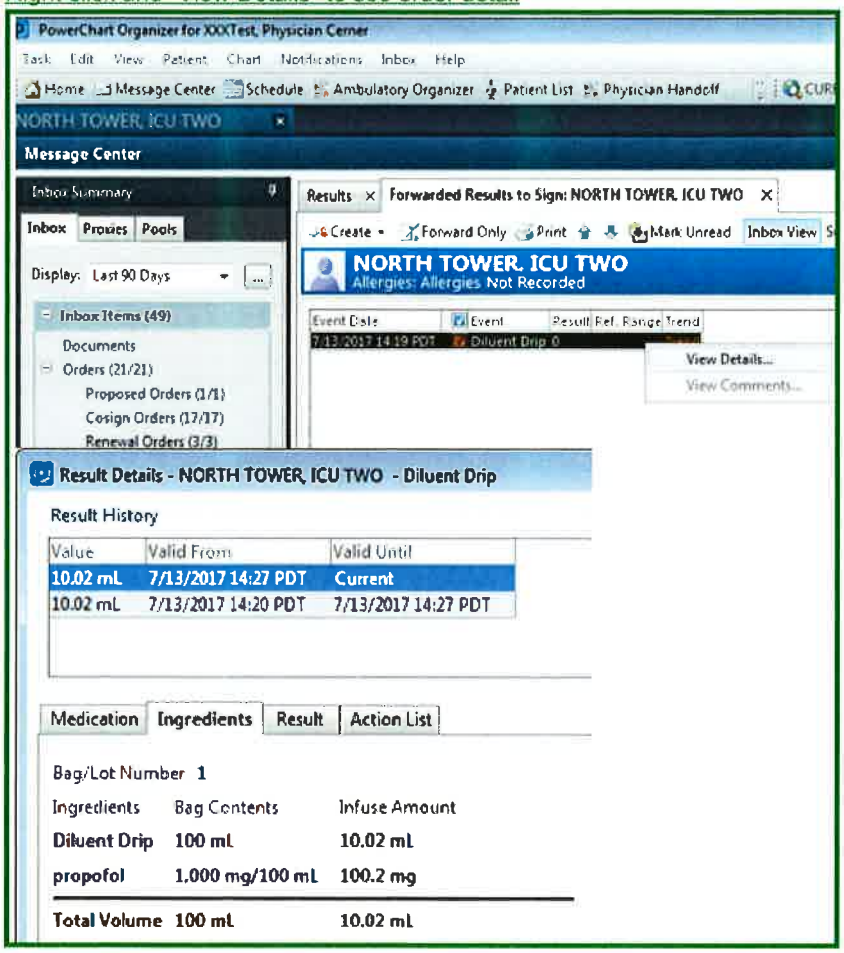


Physician: Follow these steps to properly document the emergency verbal order.

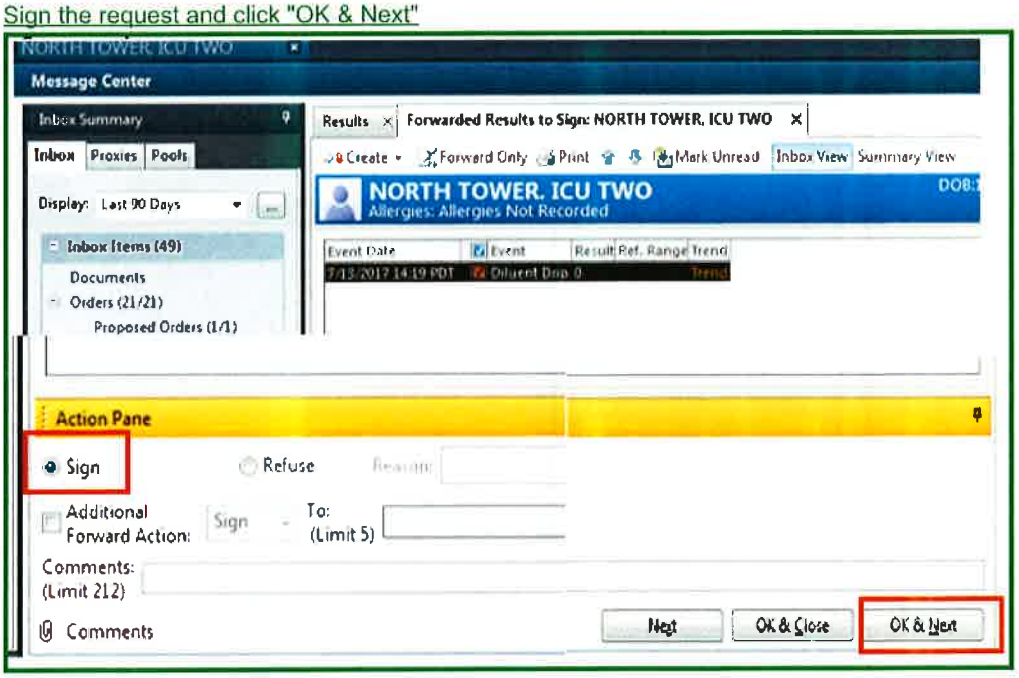
i. Nurse request will appear in the Message Center of EHR under "Results" section.



ii. Right click and "View Details" to see order detail

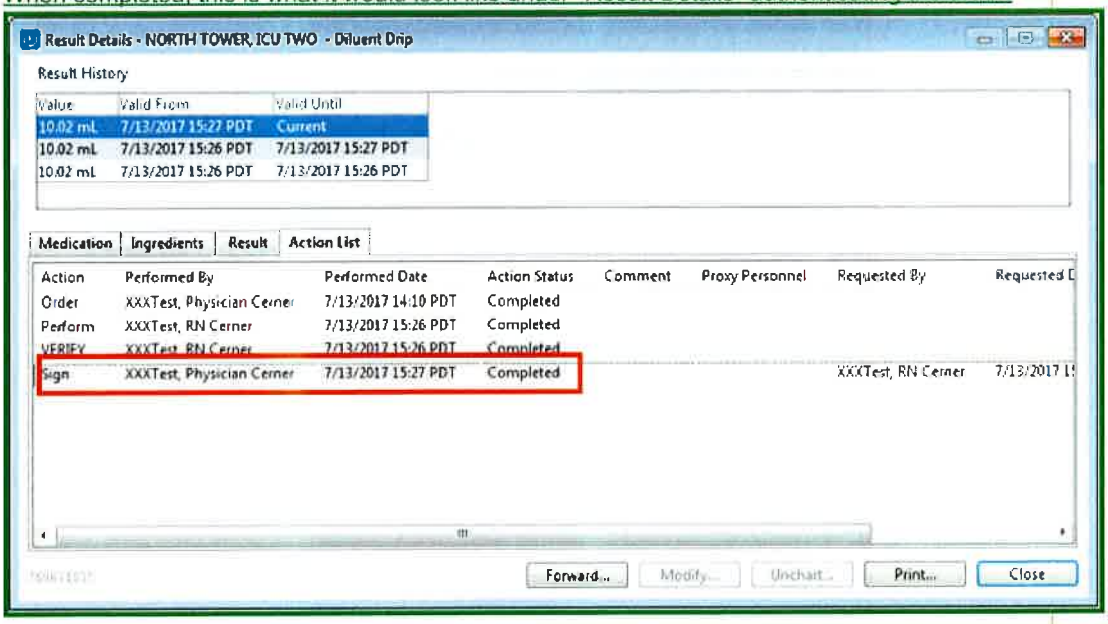


iii. Sign the request and click "OK & Next"



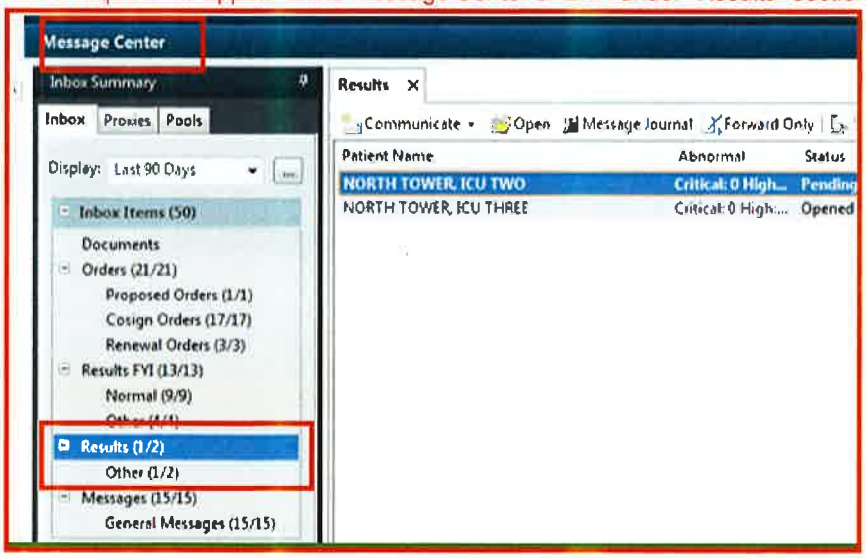
iv. May refuse order and have RN send to the correct MD if necessary.

v. When completed, this is what it would look like under "Result Details" authenticating the order.

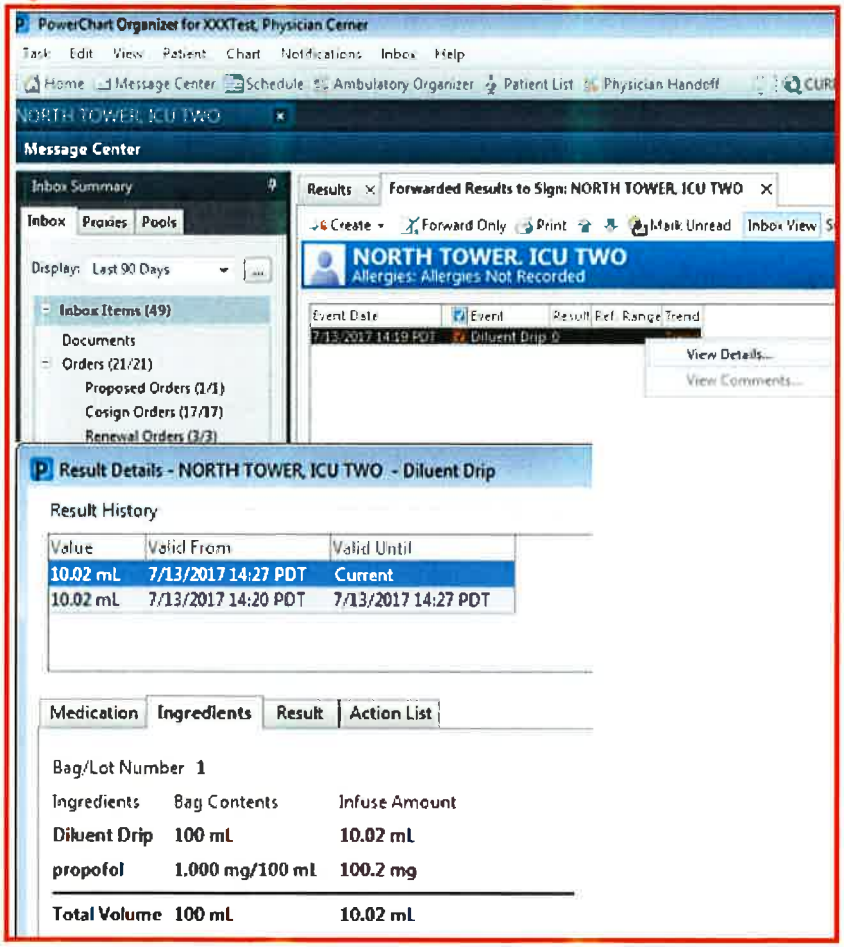


2. ~~**Physician: Follow these steps to properly document the emergency verbal order.**~~

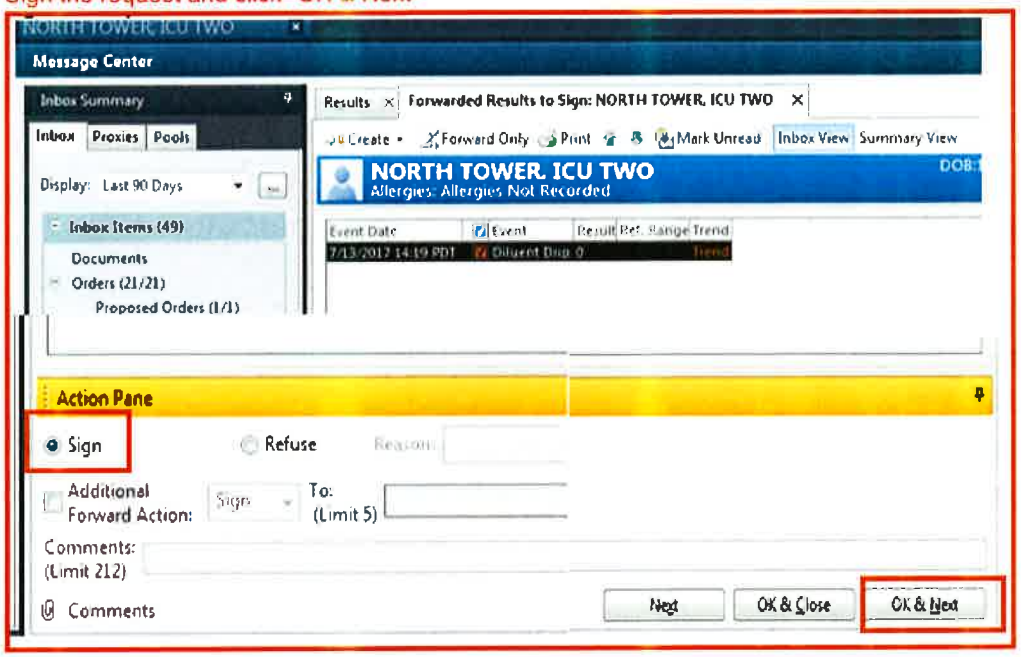
a. ~~Nurse request will appear in the Message Center of EHR under "Results" section.~~



b. ~~Right click and "View Details" to see order detail~~

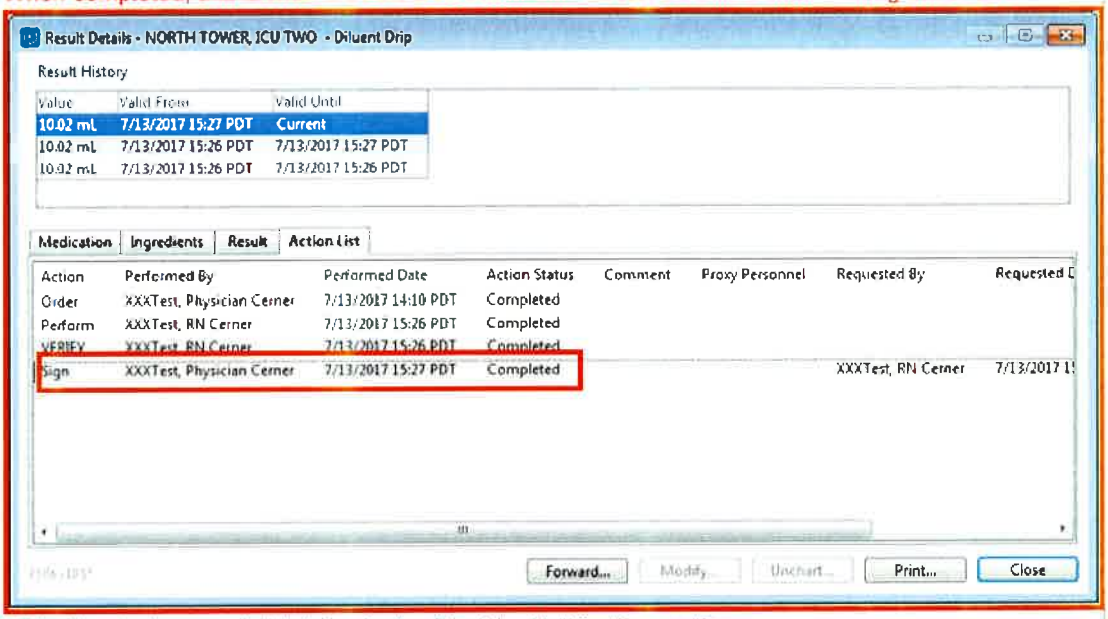


c. ~~Sign the request and click "OK & Next"~~



d. ~~May refuse order and have RN send to the correct MD if necessary.~~

e. ~~When completed, this is what it would look like under "Result Details" authenticating the order.~~



Block Charting is documented in Iview in the Provider Notification section

a. Event Type - Emergent Titration

b. Time Initiated

c. Time Completed

d. Notification of the provider (should occur as soon as it is safe/reasonable to do so).

All revision dates: 6/1/2023, 3/8/2022, 5/12/2020, 11/13/2019, 3/29/2018, 10/1/2016, 9/1/2015, 12/1/2013, 6/1/2013, 4/1/2012

Attachments

Attachment A: Adult IV Medication Titration Table
Attachment B: Pediatric IV Medication Titration Table.pdf

Approval Signatures

Step Description	Approver	Date
Medicine Committee	Tracy Chapman: VCMC - Med Staff	pending
Pharmacy & Therapeutics Committee	Sul Jung: Associate Director of Pharmacy Services	4/21/2023
Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	3/27/2023
Critical Care Unit	Joy Reed: SPH Interim Director ICU/DOU/MS/Tele	3/27/2023

VENTURA COUNTY
HEALTH CARE AGENCY

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References:	

ICU.24 The Intensive Care Unit

POLICY:

The purpose of the ~~Critical~~Intensive Care Unit (ICU) is to provide the critically ill patient with a consistently high level of quality care which is aimed at the treatment of life-threatening illnesses and the maintenance of all physical and mental functions of the individual during the illness phase. It is the intent of the unit to return each patient to an optimum state of well-being where, given the limitations of his/her disease process, he/she can lead an independent, satisfying and productive life.

PROCEDURE:

Equipment:

A. The equipment in the ~~CCU~~ICU is suitable for the sizes of patients being treated.

B. All rooms in the ~~CCU~~ICU are equipped with outlets for oxygen, compressed air and suction, oral airway, sphygmomanometer, holding device for intravenous solutions, ECG monitors, Code Blue/emergency switch, interval/cardiac arrest clock, varied intensity lighting, wall clock with sweep second hand and patient call button.

C. Equipment on standby within the unit includes: positive pressure mechanical ventilator, intubation and tracheostomy supplies, emergency drugs, defibrillator, fluoroscopy bed, IV infusion pumps, thoracentesis and closed thoracotomy sets, vascular cutdown sets, necessary apparatus to establish central intravenous lines, Hemodynamic and central venous pressure monitoring, temporary transvenous or transthoracic pacing, ICP monitor, cooling/warming device, and blood warmer. In addition, ICP monitoring equipment is available at VCMC.

D. All life support equipment brought from other departments of the hospital as replacement items is checked for operational readiness and safety prior to use.

E. An emergency cart within the unit contains appropriate drugs and equipment, as determined by Medical Staff. The emergency cart in the ~~CCU~~ICU is checked on **every shift** and after each use by an RN. According to hospital policy, "Crash Carts," to ensure that all items required for immediate patient care are in place in the cart and in usable condition. The lock number is documented once every 24 hours and after each use.

OBJECTIVES:

The objectives of the unit are to provide a consistently high level of critical patient care by:

A. Performance of treatments and procedures that are aimed at the assessment of the illness state and the delivery of interventions necessary to arrest the disease process and sustain life.

B. Performance of educational instruction designed to inform the patient and his/her family regarding the disease process, the purpose of treatments and procedures, and the alternatives available relating to provision of health care.

C. Delivery of care that is continuous, comprehensive and individualized, and encompasses all aspects of human need, with emphasis on the support of comfort, privacy and human dignity.

ORGANIZATION:

A. The activities of the ~~CCU~~ICU are guided by the CC Committee, which is a multidisciplinary committee including the Medical Staff and the ~~CCU~~ICU Medical Director. The chairperson or a designated member of the Committee will serve as director of the unit. The ~~CCU~~ICU is directed and staffed according to the nature of the critical patient care needs anticipated and the scope of services offered.

   The ~~CCU~~ICU Committee shall meet at least quarterly or more often if necessary.

B. The ~~CCU~~ICU Committee chairperson is appointed by and responsible to the Chief of Staff. The Committee chairperson has received special training, acquired experience and demonstrated competence in critical care medicine.

   1. The ~~CCU~~ICU Committee shall be responsible for the efficient development, operation and improvement of the unit. In consultation with Hospital Administration, the committee shall supervise the established conduct and operation of the unit, all services provided and activities undertaken. These functions shall include:

      a. The implementation of established policies and procedures.

      b. Criteria for admission, transfer and discharge of patients in the unit with priority ratings stated (see attached.)

         The Medical Director of the unit is responsible for making decisions, in consultation with the physician responsible for the patient, for the disposition of a patient when patient load exceeds optimal operational capacity.

      c. Development and implementation of standing orders, protocols and specifications of standards for the unit.

      d. Ensure there is appropriate continuing education for the medical staff and nursing staff.

      e. Ensure that the quality, safety and appropriateness of patient care provided within the unit are reviewed and evaluated on a regular basis and that appropriate action is taken based on the findings of the review and evaluation activities.

      f. Ensure that adequate utilization review of all critical care patients is maintained and follow-up is made with appropriate physicians.

      g. Appointment of a qualified designee to be available to the ~~CCU~~ICU when he/she is not available.

C. The ~~CCU~~ICU Committee assists in writing, reviewing and approving policies and procedures. These are to be in accordance with the regulating and accrediting agencies and shall be approved by Administration and Medical Staff, where such is appropriate. Policies and procedures shall be reviewed at least every three years or more often as necessary.

D. Periodically, an appropriate committee of the Medical Staff shall evaluate the services provided within the ~~CCU~~ICU and make appropriate recommendations to the Medical Executive Committee of the Medical Staff and to Hospital Administration.

E. The ~~CCU~~ICU Clinical Nurse Manager is a registered nurse who has relevant education, training and experience and who has demonstrated current competence.

F. The ~~Critical~~Intensive Care Medical Director shall be a member of the ~~CCU~~ICU Committee.

STAFFING

A. Nursing staff are knowledgeable about the emotional and rehabilitative aspects of the ~~CCU~~ICU patient and are capable of applying appropriate therapeutic interventions.

   Age appropriate care shall be provided and documented according to age specific competency care standards.

B. To provide the care required, a sufficient number of permanently assigned, qualified registered nurses are on duty within the unit at all times when patients are in the unit.

   1. Other nursing staff who are trained and experienced in providing the type and amount of care needed by the critical care patient are available and assigned as needed.
   2. Staffing needs for each shift are predicted and planned for by consideration of census and individual patient acuity.
   3. Any patient who requires it will be provided with 1:1 nursing (i.e., Onelegacy candidates.)

ADMISSION POLICY

Criteria for admission:

A. Admission to the ~~CCU~~ICU shall be on the order of the attending physician or his/her designee. It is the responsibility of the physician to advise the patient and his/her relatives of the need for critical care.

B. Critically and seriously ill patients who require specialized medical and nursing care shall be admitted.

   1. Criteria for admission are developed by the Medical Staff with the participation of the Nursing Department/Services.
   2. Patients admitted to the ~~CCU~~ICU should meet one or more the criteria listed on the admission and continued stay criteria list below.

The ~~CCU~~ICU Committee attending will review, with input from Nursing, the status of all ~~critical~~intensive care patients and designate, after consulting with the attending physician, at least two patients who may be transferred.

There may be an occasional situation in which a patient may be transferred out of the ~~CCU~~ICU over the objection of his/her attending physician if a bed is urgently needed by another more acutely ill patient.

In the event that no patients can be designated to be transferred and a critical care bed is needed, the patient will receive critical medical and nursing care in the Emergency Department or Recovery Room until a critical care bed becomes available.

NURSING RESPONSIBILITIES

A. The ~~critical~~intensive care nurse has had academic and clinical preparation with supervised clinical practice in an established program approved by the hospital. Upon completion of this program, when competence of this role has been demonstrated, the following responsibilities may be assigned:

1. Recognition, interpretation and recording of signs and symptoms, particularly those requiring notification and/or intervention of a physician.
2. Parenteral administration of fluids, electrolytes, blood and blood components.
3. Initiation of cardiopulmonary resuscitation and advanced cardiac life support. *(ACLS and PALS required within one year of hire.)*
4. Effective and safe use of equipment in the unit.
5. Prevention and transfer of infection will be understood.
6. Recognition of and attention to the psycho-social needs of patients and families will be stressed and documented.
7. Hemodynamic monitoring.
8. Withdrawal of arterial blood samples from arterial lines.
9. Care of patients requiring continuous mechanical ventilation.
10. Attempt at CCRN examination encouraged within two years of hire

B. Nursing practice functions and responsibilities will be performed by qualified staff who have demonstrated competence in the specific function and one of the following is applicable:

1. The function or responsibility is accepted as independent standards of nursing practice.
2. The function or responsibility is ordered by a physician and is accepted nursing practice.
3. The function is outlined and approved by the medical staff as a standing protocol to be initiated in the absence of a physician and is accepted nursing practice.
4. The function is a standardized nursing procedure.

C. Special requirements:

1. ~~Critical~~Intensive care staff members are subject to hospital policy as it relates to safety, infection control, compliance and CPR.
2. ~~Critical~~Intensive care staff members should attend and/or sign 100% of staff meeting/communication. Annual evaluation will reflect participation, or lack of participation, in staff meetings.

SPECIAL INSTRUCTIONS

A. Direct or indirect visual observation by the unit staff of all patients shall be possible from one or more vantage points.

B. The floor space allocated to each bed is sufficient to accommodate the equipment and staff necessary to meet anticipated contingencies.

C. There is a direct intercommunication/alarm system between the nurses' station and the patient's bedside.

ADMISSION CRITERIA

A. Method I: Physical Assessment/Medical Condition

Abnormal Vital Signs

- Recurrent or sustained heart rate < 40
- Recurrent or sustained heart rate > 180
- Sustained systolic < 80
- Sustained diastolic BP >120

EKG (Newly Discovered)

- Myocardial Infarction (at the discretion of the attending MD)
- ~~VentrCCUlar~~Ventricular Tachycardia
- ~~VentrCCUlar~~Ventricular Fibrillation
- ~~VentrCCUlar~~Ventricular Aneurysm
- 2nd or 3rd degree heart block

Laboratory (Newly Discovered)

- CPK, LDH, SGOT, two times above normal
- CPK Isoenzyme MB fraction increased
- Triponin level with EKG changes
- PO_2 < 40
- CO_2 > 70
- HCO_3 < 10
- Blood PH < 7.3 or > 7.5
- Blood Sugar >800
- Serum Calcium > 16 mg/100 ml
- Toxic level of drug or chemical substance

Radiologic Findings (Newly Discovered)

- Fractured Cervical or Thoracic Vertebrae
- Cerebral Vascular Occlusion, Thrombosis, Hemorrhage or Contusion
- Ruptured viscera, bladder, liver, esophageal varices, or uterus
- Pulmonary embolism, infarction or edema
- Dissecting aortic aneurysm
- Subarachnoid hemorrhage

Physical Findings (Acute Onset)

- Severe chest pain
- Cardiac Tamponade
- Cardiogenic Shock
- Coma
- Burn covering > 10% body surface area
- Hemorrhage with estimated blood loss > 750 ml
- Anuria
- Obstructive edema of airway
- Impending respiratory failure (Resp. Rate > 40)
- Malignant hyperthermia
- Stroke in evolution
- Acute ataxia
- Status epileptCCUs
- Increased intracranial pressure - sustained >20
- Neurogenic shock
- Acute state of altered mental status

B. Method II: Nursing Care Required

Monitoring (Continuous Every Hour)

- Heart rate and BP
- Hemodynamic Monitoring
- Neuro vital signs
- Intracranial pressure
- Continuous S_aO_2

Medications

- Intravenous vaso-active infusion
- Initial intravenous loading dose of antiarrhythmic drug (except Lidocaine/or Cardiazem)
- Concentrated potassium drip > 60 MEQ/liter
- Intravenous barbiturate anesthesia
- Fluid replacement > 6 liters/day
- Thrombolysis
- Pentobarbital coma
- Paralytic agents

Treatments

- Mechanical ventilatory assistance (acute phase)
- Balloon tamponade of varices
- Pericardial catheter
- VentrCCUlostomy

Procedures

- Intubation
- Temporary pacing

DISCHARGE CRITERIA (MUST BE PRESENT)

- BP without variation greater than 30 mm hg for twelve (12) hours without intravenous agents
- Absence of or controlled ventricular arrhythmias for four (4) hours without intravenous antiarrhythmic drugs
- BUN or creatinine improved or unchanged for twenty-four (24) hours
- Absence of Hemodynamic Monitoring device
- Absence of chest pain for twelve (12) hours
- Stable patient on mechanical ventilation, not being weaned, ABGs within normal limits (for patient) for 24 hours.
- Absence of cordis

All revision dates: 6/7/2023, 1/1/2017, 12/1/2013, 6/1/2013, 12/1/2009, 5/1/2006, 5/1/2004, 5/1/2001, 5/1/1998

Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
Medicine Committee	Tracy Chapman: VCMC - Med Staff	pending
Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	3/27/2023
Policy Owner	Joy Reed: SPH Interim Director ICU/DOU/MS/Tele	3/27/2023

VENTURA COUNTY
HEALTH CARE AGENCY

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Owner:	*Sara Pendleton: Medication Safety Officer*
Policy Area:	*Imaging Services*
References:	

IS.44 Diuretic Renal Scintigraphy

Policy:

To provide a guideline for the diagnostic use of radiopharmaceuticals and diuretics in evaluating overall renal function and/or obstruction.

Background:

Diuretic renal scintigraphy using radiopharmaceuticals and diuretic agents is indicated for patients who have reduced renal function due to known or suspected urinary tract obstruction.

TTc-99m-MAG3 (mercaptoacetyltriglycine) is one of the technetium radiopharmaceuticals used in renal imaging. It is indicated to assess renal perfusion, size, position, function, and upper urinary tract obstruction. It has a high extraction ratio into the kidney (40-50%) and is predominantly cleared via active tubular secretion (97%). The rate of appearance, excretion, and concentration of MAG3 in the kidney and bladder can be monitored to assess renal function. To minimize bladder exposure to radiation, adequate hydration before and after administration and frequent voiding for 4-6 hours post administration is recommended.[1-2]

Furosemide is a loop diuretic that inhibits reabsorption of sodium and chloride in the ascending loop of Henle and proximal and distal renal tubules, interfering with the chloride binding cotransport system, thus causing its natriuretic effect. By increasing urine flow rate, loop diuretics help distinguish between an obstructed or unobstructed ureter. This is based on the concept that an unobstructed system will clear radiopharmaceutical rapidly because of high urine flow following diuretic administration. Conversely, if an obstruction is present a high flow rate will not occur and a decrease in clearance of ureteral activity will be seen.[1,5]

Contraindications for the use of pharmacologic diuretics in renal scintigraphy:

- Anaphylaxis to furosemide
- Anuria

Roles and Responsibilities:

See policy IS.32 Department of Nuclear Medicine Overview

Procedures:

A. Order Placement

B. Patient Preparation

1. Patient should not fast before the procedure
2. Chronic diuretic medications shall be held the morning of the study
3. Intravenous (IV) access shall be established using a 22-24 gauge cannula
    a. For pediatric patients, consider applying an anesthetic cream on the potential venous access site
4. Patients should arrive well hydrated and receive an additional 5-10 mL/kg of oral fluids 30-60 minutes before the procedure
    a. Pediatric patients who are unable to adequately hydrate with oral fluids should receive 15-20 mL/kg of IV fluids.
5. Patients should void bladder before radiotracer administration.
6. A bladder catheter should be inserted if it is anticipated the patient will have difficulty voiding.

C. Radio-tracer agent and protocols shall be determined per Society of Nuclear Medicine and Molecular Imaging (SNNMI), European Association of Nuclear Medicine (EANM), and the American Society of Nuclear Medicine (ASNM) guidelines.

D. IV administration guidelines for diuretic agents in renal scintigraphy

1. Monitor for signs and symptoms of anaphylaxis
2. Administer furosemide IV bolus on frame 20 of 40 after radiotracer injection. 1 frame = 1 minute.
3. Adult furosemide dose: 0.5 mg/kg or 40 mg
    a. Higher doses to a maximum (Max) of 80 mg may be administered in those patients with impaired renal function or on chronic diuretic use at home.
    b. Administer the IV push over 1-2 minutes.
4. Pediatric furosemide dose: 1 mg/kg (Max 40 mg)
    a. Pharmacy to dispense furosemide 2 mg/mL in Dextrose 5% in water (D5W)
    b. Administer the IV push over 5 minutes.

Medications:

All medications shall be supplied and maintained by Pharmacy.

Table 1 Medications and IV fluids (IVF) available in Nuclear Medicine for Diuretic Renal Scintigraphy

Medication and IVF	Dose	Comments
D5W or 0.9% Normal Saline (NS)	Adults: 5-10 mL/kg Pediatrics 15-20 mL/kg	Administer 30-60 minutes before the procedure.
Furosemide	Adults: 0.5 mg/kg or 40 mg (MAX 80 mg) over 1-2 minutes Pediatric: 1 mg/kg (MAX 40 mg) over 5 minutes.	Adults: furosemide is located in Pyxis. Pediatrics: contact pharmacy for compounded sterile product. Flush immediately after with 10 mL of NS.

Equipment:

Gamma Camera

Low energy high resolution collimator

References:

1. Taylor, AT, Brandon, DC, Palma, DD, Blaufox, MD, Durand, E., Erbas, B.....Morsing, A. (2018). SNMMI Procedure Standard/EANM Practice Guideline for Diuretic Renal Scintagraphy in Adults with Suspected Upper Urinary Tract Obstruction 1.0 Seminars in Nuclear Medicine, 48(4), 377-390.
2. Blaufox, MD, Palma, DD, Taylor, AT, Szabo, Z, Pregient, A, Samal, M,...Tulchinsky, M. (2018). The SNMMI and EANM practice guideline for renal scintigraphy in adults. European Journal of Nuclear Medicine and Molecular Imaging; 45(12), 2218-2228.
3. Housestaff Manual (12th ed.), (2015-2017). Palo Alto, CA: Lucille Packard Children's Hospital Stanford.
4. Majd, M, Bar-Sever, Z, Santos, AI, and Palma DD. (2018). The SNMMI and EANM Procedural Guidelines for Diuresis Renography in Infants and Children. Journal of Nuclear Medicine, 59(10), 1636-1640.
5. Lasix Oral (furosemide) - Sanofi (n.d.) Retrieved December 3, 2018 from http://products.sanofi.ca/en/lasix.pdf.

All revision dates:

Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
Medicine Committee	Tracy Chapman: VCMC - Med Staff	pending
Pharmacy & Therapeutics Committee	Sul Jung: Associate Director of Pharmacy Services	3/23/2023
Imaging Services	Sara Pendleton: VCMC - Pharmacy	7/7/2020
Imaging Services	Ronald Sandoval: Manager, Imaging Services	7/1/2020
Imaging Services	Michael Hepfer: Medical Director, Imaging Services	6/30/2020

VENTURA COUNTY
HEALTH CARE AGENCY

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Owner:	*Tracy Chapman: VCMC - Med Staff*
Policy Area:	*Administration - Medical Staff*
References:	

MS.102.024 Non-affiliated Physicians as Assistant or Proctor

POLICY:

The intent of this document is to establish the process for issuing limited temporary privileges under special circumstances for a non-affiliated physician to serve as the assistant or proctor. The services of non-affiliated physicians may be enlisted when there is no other qualified member of the medical staff to provide the service for cases involving new technology.

PROCEDURE:

A. Requirements

1. A formal request for temporary privileges must be submitted by a member of the Medical Staff, at least 2 weeks prior to the scheduled procedure. Requests must include documentation to support the expertise of the non-affiliated physician.
2. The non-affiliated physician must meet the basic qualifications to perform the requested duties/ privileges.
    a. Refer to the Robotic Assisted Surgery Credentialing & Privileging Requirements policy for requests related to robotic cases.
3. Requests for a non-affiliated assistant or proctor must be approved by the Department Chief and the Chief of Staff or the Chief Medical Officer, prior to final approval by the Chief Executive Officer.

B. Required Documentation

- Non-affiliated Assistant or Proctor Application - Attachment A
- Evidence of equivalent privileges at another hospital
- Current Curriculum Vitae
- Current malpractice coverage (Limits: $1 Million per claim/ $3 Million aggregate)
- Signed release of information form - Attachment B
- Confidentiality Agreement - Attachment C
- Copy of current government issued identification

C. Verifications

1. The Medical Staff Office will primary source verify the necessary information to ensure evidence of current clinical competence is available prior to the decision to approve temporary privileges to assist or proctor. The following will be verified.
    - State medical license (includes sanctions)
    - Board certification
    - National Practitioner Data Bank
    - Office of the Inspector General
    - Systems Award Management (SAMS)
    - Current, unrestricted hospital privileges equivalent to those being requested (primary hospital)
    - Current competence to perform the privilege(s) being requested or proctored (this may be obtained verbally or by vendor confirmation for robotics cases)
2. The appropriate hospital staff will be notified of the approval and date(s) of service.

D. Limitations

1. The non-affiliated physician assistant or proctor is not allowed to take over patient care or act as the primary physician for any patient.
2. Temporary privileges are limited to the specified procedure(s) and/or patient(s) and are not to exceed 30 procedures within 120 days of approval or the non-affiliated physician will be required to apply for full membership and/or privileges.

E. Responsibilities

1. The Medical Staff member being assisted or proctored by a non-affiliated physician, in collaboration with Hospital Administration, is responsible for any monetary reimbursement for services rendered and ensures there is no direct or indirect compensation from any patient for this service to the non-affiliated physician.

Definitions

Non-affiliated assistant or proctor: a licensed physician who is not currently privileged by the Hospital and has been deemed qualified as an expert in his/her area of practice.

All revision dates: 6/9/2020, 7/26/2017

Attachments

Attachment A - Non-Affiliated Physician Assistant or Proctor Request Form
Attachment B - Information Release/Acknowledgments
Attachment C - Confidentiality Agreement

Approval Signatures

Step Description	Approver	Date
Medical Executive Committee	Tracy Chapman: VCMC - Med Staff	pending
Medical Staff Office	Minako Watabe: Chief Medical Officer, VCMC & SPH	5/17/2023
Medical Staff Office	Tracy Chapman: VCMC - Med Staff	4/25/2023
Policy Owner	Tracy Chapman: VCMC - Med Staff	4/25/2023

VENTURA COUNTY
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Owner:	*Maura Krell: Clinical Nurse Manager, Pediatrics/PICU*
Policy Area:	*NICU*
References:	

N.17 Peripheral Arterial Line Management in the NICU

POLICY:

To guide the Registered Nurse in assisting with the insertion, maintenance, and withdrawal of blood from a peripheral arterial line (PAL).

PROCEDURE:

- ~~A~~The RN is available to assist with the placement and securing of the PAL.
- The RN monitors the integrity of the catheter, the perfusion of the extremity, the calibration of the transducer and the infused fluids.
- The RN collects blood samples from the PAL using aseptic technique and universal precautions.
  ~~The RN does not flush the PAL with a syringe.~~
  ~~The transducer and infusion tubing are changed every 96 hours using aseptic technique.~~
- The RN discontinues the PAL when appropriate and upon physician/NNP order.

EQUIPMENT

A. 22-26 gauge intravenous (IV) Catheter

~~T-connector~~

~~Heparin flush normal saline in 3 ml syringe~~

B. T-connector extension set with rotating collar and INTERLINK injection site

C. 100 ml bag, 0.45% saline with heparin, 1 unit/ml

D. Skin preparation solution (~~providone-iodine/sterile water or saline~~alcohol swabs)

E. Trans-illuminator

F. Dressing materials (sterile gauze, transparent dressing, ~~microscope,~~ tape, cotton ball, armboard)

G. ~~Arterial~~Pressure transducer, infusion buretrol set and 0.2 micron filter flushed with prescribed infusion fluids ~~with Neonatal pump.~~

CONSIDERATIONS:

1. No medications, blood products, or hypotonic or hypertonic solutions should be infused through a PAL. A heparinized solution, as ordered, should be infused at 0.5-1 ml/hr to maintain patency.
2. PALs must be attached to a pressure transducer and maintained at the heart level.
3. The PAL site must be assessed and documented every hour.
4. Cuff blood pressure should be checked and documented at least once during every shift. Cuff pressure should not be measured on limb with with PAL.
5. PAL should be removed at the first indication of clot formation or circulatory compromise, which may include but are not limited to:
   - dampened waveform which cannot be corrected with repositioning
   - pale or blue color in the extremity distal to the catheter
   - inability to withdraw a blood sample from the catheter

GUIDELINES:

To assist with insertion of PAL:

1. Gather equipment and assist with positioning of the neonate ensuring a neutral thermal environment. ~~Move Oxygen Saturation probe as required. Perform modified Allen's test if requested.~~
2. Relocate Oxygen Saturation probe as required.
3. Provide pain management.
4. Purge T-connector with ~~Heparin~~0.45% saline with heparin solution. After catheter is placed, assist with flushing and/or taping as requested. Tape securely without occluding the arterial flow of the extremity.
5. Clamp T-connector prior to attaching pressure transducer and infusion fluid. Confirm absence of air bubbles in the line. Unclamp tubing and confirm waveform on monitor, if absent notify physician/NNP. Set pump at prescribed rate. Observe for blood return or air in line.
6. Calibrate the transducer according to monitor specifications.

~~Withdrawal of blood specimens:~~

~~a. Observe – blood.~~

~~b. Scrub hub of T-connector with Providone-iodine swab and allow to dry. Scrub hub with alcohol.~~

~~c. Turn stopcock off to IV and open syringe. Draw back on 1 or 3 ml syringe until blood is backed-up half-way in T-connector – approx. 0.5ml. Clamp T-connector. Insert needle access device deep into the hub. After 1-2 drops of blood fall onto gauze, connect blood gas syringe and collect sample. Other samples may be collected by withdrawing (dropping) blood into 5 ml syringe.~~

~~d. Remove and discard needless device. Unclamp T-connector. Flush very gently through stopcock until blood clears from T-connector. Open stopcock. Infusion fluids will clear any blood remaining on hub.~~

~~e. Monitor transducer waveform and recalibrate as needed.~~

~~f. Label specimens appropriately with collecting nurse initials, date and time.~~

~~Notify the physician/NNP immediately if any of the following are noted:~~

a. ~~Blanching of the extremity, or color changing in digits.~~

b. ~~Loss of waveform on monitor.~~

c. ~~Presence of blood remaining in hub of T-connector.~~

d. ~~Leakage of blood or fluid from the site, or around the T-connector.~~

To maintain the PAL:

1. Observe the T-connector for backflow of blood or presence of air bubbles.
2. Set the alarm limits on the monitor 5-10 mm Hg higher and 5-10mm Hg lower than the infant's ordered mean blood pressure range.
3. Calibrate the transducer during every shift and as needed.
4. Observe the waveform and monitor the PAL site every hour
5. PAL fluid is changed every 24 hours using aseptic technique.
6. The transducer and infusion tubing are changed every 96 hours using aseptic technique.
7. Notify the physician/NNP immediately if any of the following are noted:
    - Blanching of the extremity, or color changing in digits.
    - Loss of waveform on monitor.
    - Presence of blood remaining in hub of T-connector.
    - Leakage of blood or fluid from the site, or around the T-connector.

To withdraw of blood specimens:

1. Disinfect the diaphragm of the T-connector with alcohol for 10-15 seconds and allow to dry.
2. Turn stopcock off to IV fluid and open syringe. Draw back slowly on 3 ml syringe until blood is backed-up half-way in T-connector – approx. 0.5ml. Clamp T-connector.
3. Place gauze underneath the T-connector's hub. Insert a 25-gauge needle through the diaphragm deep into the hub. Allow 2-3 drops of solution or blood to drip onto gauze.
4. Connect blood gas syringe and collect sample. Other samples may be collected by withdrawing (dropping) blood into the specimen container.
5. Remove needle from the diaphragm, activate the safety mechanism, and discard in sharps disposal container.
6. Unclamp T-connector. Flush very gently through stopcock until blood clears from T-connector. Open stopcock. Infusion fluids will clear any blood remaining on hub.
7. Monitor transducer waveform and recalibrate as needed.
8. Label specimens appropriately with collecting nurse initials, date and time.

To remove the PAL

A. Obtain an order from physician/NNP

B. Remove any dressing over the site

C. Pull the catheter completely out.

D. Apply pressure with sterile gauze for 5-10 minutes

E. Observe for bleeding or oozing

F. If bleeding or oozing occurs, continue to apply pressure and notify the physician/NNP.

DOCUMENTATION

A. Nursing Progress Notes: Document date, time, staff performing procedure and how patient tolerated procedure.

~~Document patient.~~

~~Nursing Flowsheet: Calibration time of transducer, type of infused fluids, lab draw.~~

~~Electronic Health Record: Order for labs.~~

B. EHR: PAL site condition, type and volume of fluid infused, blood pressure from PAL and cuff, labs drawn

REFERENCES

~~A. N.O.E.P., 2007.~~

~~B. National Association of Neonatal Nursing "Manual of Policies, Procedures and Competencies," 1999.~~

~~C. California Perinatal Quality Care Collaborative Nosocomial Infection Prevention Toolkit, 2002.~~

~~D. Center for Disease Control (CDC) Guidelines, 2012.~~

A. National Association of Neonatal Nursing "Policies, Procedures and Competencies for Neonatal Nursing Care," Sixth Edition, 2019.

B. Gomella, T.L. "Neonatology: Management, Procedures, On-Call Problems, Diseases, and Drugs," Seventh Edition, 2013

C. Center for Disease Control (CDC) "Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings Guidelines," 2022

All revision dates: 5/11/2023, 10/1/2012, 9/1/2010, 2/1/2010, 4/1/2008, 2/1/2005, 12/1/2001

Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
Pediatrics Committee	Tracy Chapman: VCMC - Med Staff	pending
Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	5/11/2023
Nursing Administration	Sherri Block: Associate Chief Nursing Executive, VCMC & SPH	5/11/2023
NICU	Maura Krell: Clinical Nurse Manager, Pediatrics/PICU	5/11/2023

VENTURA COUNTY
HEALTH CARE AGENCY

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Owner:	*Maura Krell: Clinical Nurse Manager, Pediatrics/PICU*
Policy Area:	*NICU*
References:	

N.23 Chest Tube Use in the NICU

POLICY:

When a pneumothorax in the NICU occurs, immediate treatment may be required. Immediate treatment in the severely compromised infant consists of needle aspiration. Definitive treatment consists of thoracotomy and placement of a drainage tube connected to a chest drainage device. These guidelines are intended to provide safe, consistent and effective care for an infant/child who requires a chest tube (CT) to drain fluids or air (pneumothorax) from the chest cavity, re-expand a collapsed lung, or re-establish correct pressures in the thoracic cavity.

PROCEDURE:

A. Needle aspiration is accomplished for removal of air/fluid in the pleural cavity by the physician/NNP.

B. Chest tubes are placed in the pleural or mediastinal space by a physician/NNP.

C. The chest tube collection system consists of the following three chambers:

1. **Drainage collection chamber**: fluid drained from the thoracic cavity is collected and measured here.
2. **Water seal chamber**: prevents back flow of fluid or air into the thoracic cavity. The level of water in this chamber normally fluctuates with respiration. Bubbling in this chamber indicates an air leak which needs correction (unless CT was placed for pneumothorax).
3. **Suction control chamber**: determines the amount of suction to be applied to the system in centimeters of water pressure.
    a. Water level, not the setting on the suction regulator, determines the amount of suction to the chest.
    b. With **dry suction** device, the amount of suction is determined by a dial on the collection system, not the wall regulator.

EQUIPMENT

Equipment for Chest Tube Insertion

- ~~Argyle chest tube #8 ,10, 12~~Argyle Trocar Catheter #8 ,10, 12 or Pigtail Chest tube #6, 8, 10
- Chest tube tray
- Sterile towels
- Betadine
- Kelly clamp
- Sterile Gloves
- Thoracic or regular suction gauge
- Underwater drainage system kit (PLEUR-EVAC®)
- Sterile H_20
- ~~Tape~~Tapes / Pink tape
- Suture
- Toomey syringe
- Polysporin ointment or vaseline gauze, sterile 2x2 gauze
- Tegaderm/transparent dressing
- ~~½~~1 % Xylocaine
- ~~Morphine/Fentanyl on hand~~Analgesic and/or sedative as ordered

Equipment for Needle Aspiration

- 23 or 25 gauge butterfly, or
- ~~14-16~~18-20 gauge angio catheter
- Sterile Gloves
- Three-way stopcock
- 10-20 ml syringe
- Betadine~~/~~ and alcohol swabs or sticks
- Sterile H_20
- T-Connector
- Tape

PROCEDURE

A. The transilluminator is often used for diagnosis. Anterior-posterior (AP) and lateral CXR is done prior to insertion of chest tube whenever possible.

B. Insertion of a chest tube and/or needle aspiration is an invasive procedure that requires sterile technique. Insertion of chest tubes is performed by the physician/ NNP.

C. RN should position infant so that side with pneumothorax is at an upright angle or flat with head of bed (HOB) elevated, and with restrained extremities. ~~For older children, the seated position~~Infants should have a cardiorespiratory monitor in use with ~~arms folded~~an audible QRS and pulse oximeter. It should be on ~~a bedside table and the head resting on the arms may be preferred. Infants should have an HR/apnea monitor in use with an audible QRS and pulse oximeter should be on~~ and functioning while procedure is performed. Also a BP cuff should be in place in order to check BP readings.

D. Prepare parents for procedure, as appropriate.

E. ~~Assure~~Ensure informed consent is documented by physician and placed in chart.

F. Obtain signed consent for the procedure.

G. Utilize Time Out Procedure (see Administrative policy 100.062).

H. The drainage system (PLEUR-EVAC®) should be set up according to package insert instructions:

1. Fill Water Seal Chamber through short suction tube to the "FILL TO HERE" line on the water seal pressure scale (approximately 70 ml). This is the 2 cm water level.
    a. A funnel is provided to facilitate filling. To fill, attach the funnel to the connector of the suction tubing, hold the funnel so that it is below the level of the top of the PLEUR-EVAC and the suction tubing is crimped.
    b. Fill with sterile water or saline to fill line.
    c. Then raise the funnel above the PLEUR-EVAC and release the crimp in the tubing; water will enter the water seal chamber to the level of the dotted line.
    d. Once filled, the water seal will turn blue.
2. The end of tubing from the collection chamber should be connected to a universal adapter and remain sterile. It will be connected to the chest tube as soon as inserted.
3. Connect the short suction tubing to suction source.
4. Fill Suction Control Chamber—remove atmospheric vent cover (muffler) and fill through atmospheric vent to 5cm- 20cm level or as prescribed by MD/NNP. Once filled, water in the suction control chamber will turn blue. Replace atmospheric vent cover (muffler) after filling. The muffler, when in place, allows air to enter suction control chamber. It reduces evaporation in the suction control chamber and dampens the noise of bubbling.
5. Turn on Suction and increase until the gentle bubbling appears in the suction control chamber. The height of the water in the suction control chamber determines the approximate amount of suction imposed *regardless* of the degree of bubbling. Gentle bubbling is all that is needed.
6. For Water Seal Drainage Only—Disconnect system from suction source and leave open. Do not clamp off.
7. When dry suction is being utilized, check the dial to ensure that appropriate suction is set and the orange ball is visible in the clear window.

I. **Maintaining patency of the system**:

1. The tubing should be positioned so there are not dependent loops where drainage would have to flow up against gravity. The tubing should also be stabilized and secured to promote function, comfort and prevent accidental removal. Connections should be taped.
2. Check tubing for twisting or kinking every two (2) hours.
3. Any drainage should be marked in the white area of the collection chamber and amount should be documented under the 'output" section ~~on the Nursing Flow Sheet~~in I and O q 12 hours in EHR.
    a. If drainage is present in chest tube and tubing, gently pinch or tap—DO NOT "strip" or "milk" chest tubes (negative pressure generated by stripping the tube may damage the lung).
    b. Tenacious clots may be broken up by pinching tubing at clot site.
4. The dressing (use a clear transparent type) should be airtight: therefore routine dressing changes are not recommended. The site should be evaluated for signs of infection. Dressing should be changed using sterile, no-touch technique if infection is suspected, or if the dressing becomes wet

and drainage occurs. Remove old dressing carefully to prevent dislodgement of chest tube. Label dressing with the date and time it was placed on the infant.

5. Keep Kelly clamp or Toomey syringe at beside at all times while chest tube is in place.
6. Clamping has been proven to be of minimal clinical value; therefore, if it is necessary to transport an infant with a chest tube, the chest tube may be placed to water seal. The one justification for clamping a chest tube is to simulate tube removal to determine patient tolerance.
7. Following the insertion of a chest tube, a CXR, blood gas and vital signs should be obtained (per physician/NNP). Breath sounds should be evaluation prior to and following the procedure. After insertion, the infant should have HOB increased to 30-45° to assist in draining of air.

J. **Assessment of the Chest Tube set-up:**

1. Check H_2O level at beginning of shift and with each documentation of output.
2. Keep the suction control chamber at level ordered by physician/NNP.
3. If water seal level is above 2cm the negative pressure is too high and may cause tissue damage. The tube should be vented.
    a. To vent the tube, thus lowering the amount of negative pressure, scrub a small area of the rubber drainage tubing with alcohol swab for 30 seconds and insert small bore needle (25g or 23 g). When the H_2O level in the water seal chamber returns to the proper level (this takes a few seconds), remove the needle (the tubing is self-sealing). Ensure the patient is on suction during the procedure.
    b. Use negative pressure release button to relieve negative pressure.
4. Check for air leaks in the system. If an air leak is suspected, the following steps should be initiated:
    a. Interrupt suction and look for bubbling in the water seal chamber—may indicate patient air leak.
    b. If bubbling is present and not treating a pneumothorax, the following steps should be initiated:
    *Check all connections to make sure they are tight.
    *Clamp the tubing using the toothless clamp. Begin clamping closest to the patient and work towards the drainage system, moving the clamp away from the patient until the leak is found. It is important to clamp proximally and distally to the drainage system connection to determine site of air leak.
    c. If the chest tube or tubing is ~~not~~ leaking, ask for assistance and then change the drainage system.

K. **Changing the Drainage Collection System**:

1. Prepare a replacement drainage system (see instructions on packaging).
2. Clamp the chest tube close to the patient. When on positive pressure ventilation it is not necessary to clamp, just disconnect and reconnect quickly.
    a. Aseptic technique is used. Clean end of chest tube with betadine prior to attaching new chest tube connection.
    b. Maintain sterility of chest tube connection.

    ~~*If child—instruct to exhale and hold his/her breath. Allows for maximum positive pressure in pleural space.~~
3. Remove the old drainage system and attach the new one. Remove chest tube clamp.

4. Attach to suction as ordered.

L. **Specimen Collection:**

1. Possible sites are rubber ports in collection chamber of drainage system or drainage tubing.
2. To obtain specimen from rubber port--clean port with alcohol swab, insert needle attached to syringe, and withdraw specimen.
3. To obtain specimen from drainage tubing—form dependent loop to collect fluid, clean tubing with alcohol swab, insert needle attached to syringe, and withdrawn.

M. **Removal of Chest Tube**:

1. Chest tube may be clamped for a period of time prior to planned removal
2. Verify the order for chest tube removal
3. Chest X-Ray should be done before chest tube removal.
4. Obtain order for pre-medication to prevent pain associated with procedure.

   ~~Follow Pain Policy P.1.0 for monitoring guidelines.~~

   ~~After chest tube removal, place occlusive (petroleum) dressing (as ordered by physician/NNP) over site and tape securely.~~
5. Continue to monitor vital signs and oxygen saturation during and after chest tube removal.
6. When chest tube is removed, an occlusive pressure dressing is placed on the site. Dressing is checked for signs of drainage/infection.

N. **Documentation (upon insertion and every shift):**

1. Location/size of the chest tube and amount of suction in cm of water.
2. Amount and characteristics of drainage.
3. Appearance of insertion site and dressing changes
4. Assessment findings.
5. Pain Management (tool, score, adequate management)
6. Interventions and patient response.

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~~Walsh-Sukys, M., & Krug, S. Procedures in Infants and Children, WB Saunders, Philadelphia, 1997.~~

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All revision dates: 5/15/2023, 2/1/2010, 4/1/2008, 11/1/2004, 1/1/2002, 4/1/1992

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Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	5/15/2023
NICU	Maura Krell: Clinical Nurse Manager, Pediatrics/PICU	5/15/2023

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N.26 Infant Developmental Management in the NICU

POLICY:

To guide NICU staff in providing individualized, behaviorally-based care that modifies the NICU environment (including noise and light management) to minimize stressors and optimize support for infant growth and ability to self regulate and enhance parent-infant bonding.

PROCEDURE:

A. Caregivers provide nursing care to NICU infants that reflects current knowledge of infant states and signs of stress thresholds.

B. Developmental consult by OT or PT will be requested per medical order as needed and as per CCS guidelines.

C. Caregivers provide parent education and encourage parent participation.

D. Maintain sound levels between the EPA recommended levels: 45 decibels during the daytime and 35 decibels during evenings and nights.

EQUIPMENT

A. **Positioning aids:** blankets/sheets, gel pads, sheep skin, 'bendy bumpers' snuggle-up positioning devices.

B. **Environmental aids:** attend to alarms as soon as possible, isolette drape, therapeutic music <80 dB, lighting, heat lamps.

PROCEDURE

Interventions must be consistent with **each** infant's gestational age and degree of illness, taking into account the preterm infant's disorganized states and low tolerance for stimulation.

A. **Light**:

1. Decrease ambient light in NICU, use natural light when available.
2. Shield infant from excess light by draping isolette or crib.
3. Alter lighting to provide diurnal rhythmicity.

4. Monitor all visual stimuli to prevent over stimulation.

B. **Handling**:

1. Slow gentle movements.
2. Reduce routine procedures by timing care around wake/sleep cycles as much as possible.
3. Cluster care while allowing for rest/recovery.
4. Provide 2-3 hours of uninterrupted sleep.
5. Evaluate vital signs on monitors when infant is sleeping.
6. For stressful or uncomfortable procedures (i.e. suctioning, IV starts) a second person can provide for calming measures including pacifiers, maintaining infant boundaries, use 'Sweet-Ease' for calming.
7. Provide "hand swaddling" until infant settles after care.
8. Avoid supine position during care – instead use modified side-lying with support of hands.
9. Consider a swaddled tub bath or sponge bath when infant stable.

C. **Positioning**:

1. Provide close, high nested boundaries around infant's body and feet for infant to effectively stay tucked and braced against.
2. Boundaries should maintain flexion while still allowing room for extension.
3. Provide covering and light swaddling as needed.
4. Encourage side-lying or modified side-lying as tolerated.
5. Provide infant with midline orientation to facilitate hand-to-mouth activities.
6. Use gel products under head and reposition as tolerated to prevent head flattening, rotate position every 2-3 hours.
7. When prone, position with knees flexed and under hips with buttocks up to prevent hip abduction. To achieve this position, place a small blanket roll under infant's head, trunk and hips.
8. Avoid supine position in preterms or if medically necessary use rolls/aids to keep in flexion midline position
9. Use diaper with smallest amount of material between legs.

D. **Initiate kangaroo care when infant is stable**:

1. Explain procedure to parent(s).
2. Confirm understanding and desire to participate.
3. Prepare an area conducive to privacy and relaxation by using privacy screens.
4. Provide hospital gown for parent(s).
5. Remove infants clothing except for diaper.
6. Obtain assistance from other staff for intubated or difficult to move infants.
7. Place infant vertically on mother or father's chest between the breasts, nearest to left side for heart beat.
8. Close parent's gown around baby and place a blanket over the infant.

9. Monitor infant's skin temperature from radiant warmer/isolette probe or axillary temp every 15-30 minutes. Remove blanket if infant's temperature is greater than 99.2°F or skin temperature is greater than 37°C. Use heat lamps at least 36 inches away if infant's temperature is less than 97.8°F.
10. Monitor signs of stress, infant color, etc., and vital signs: 0_2 Sat, HR, respiration rate.

E. **Feeding**:

1. Provide uninterrupted and calm feedings.
2. Swaddle the infant maintaining flexion and midline neck position.
3. Provide pacifier for non-nutritive sucking during gavage feedings to promote stability and enhance digestion.
4. Consider dipping nipple of pacifier in infant's breastmilk/formula to enhance taste, smell and digestion.
5. Encourage skin to skin contact with mother during gavage feedings to promote breastfeeding.
6. Nipple feed in an upright position to promote tongue extension and swallowing.
7. Burp by slowly sitting the infant up to burp on lap, providing head and neck support, follow with gentle rocking and/or massage to infant's back.
8. **Avoid over-stimulating by clapping on infant's back, juggling or bouncing infant.**
9. Observe the amount of talking and eye contact that infant can tolerate to successfully co-ordinate suck, swallow and breath.
10. Encourage and promote parent participation.
11. If feeding problems persist, consult Developmental Therapist for feeding consult.

DOCUMENTATION

A. Nurses flow sheet – feedings, parent interaction.

B. Nurses notes – patient response, nursing interventions, parent teaching.

C. Nursing documentation should reflect:

1. Apnea and bradys during feeding.
2. Time needed to complete feeding.
3. Any color changes.
4. Endurance limitations
5. Variation of nipple used.

REFERENCES:

AWHONN: NOEP 3rd edition, 2015.

All revision dates: 6/7/2023, 7/1/2015, 4/1/2008, 1/1/2005, 12/1/2004, 7/1/1999

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Nursing Administration	Sherri Block: Associate Chief Nursing Executive, VCMC & SPH	3/31/2023
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NICU	Maura Krell: Clinical Nurse Manager, Pediatrics/PICU	3/31/2023

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N.35 Gastric Lavage in the NICU

POLICY:

To identify the NICU nurse's role in caring for a newborn/infant undergoing gastric lavage.

PROCEDURE:

Gastric lavage is performed by a skilled nurse using standard precautions.

EQUIPMENT

Orogastric tube appropriate for infant size:

Fr. 5-6 for <1000 gm
Fr. 6-8 for > 1000 gm
Water soluable lubricant or sterile water

Syringe 30 or 60 ml
Lavage fluid: as prescribed (typically Normal Saline, Water)
Container for aspirate
Stethoscope
Tape

GUIDELINES

A. See Policy N.36 Gavage Feeding in the NICU for placement of gastric tube.

B. Aspirate gastric contents before instilling water. Measure aspirate. Note character, consistency and color.

C. Instill prescribed lavage fluid by gravity.
Guideline for amount of fluid to be placed in stomach:
5-10 ml/kg in infant < 1 month
10-15 ml/kg in infant > 1 month

D. Aspirate gently and discard fluid.

E. Repeat lavage procedure until return is clear and no particulate matter is seen.

F. **Contraindications to Gastric Lavage**:

1. Caustic or corrosive ingestion because of danger of perforation.

2. Uncontrolled convulsions because of danger of aspiration or injury during procedure.
3. Patients with absent protective airway reflexes require insertion of ET tube to protect against aspiration.
4. Cardiac dysrhythmia must be controlled first because of vagal response.

DOCUMENTATION

A. Nursing Flowsheet – gastric aspirate output, lavage input, vital signs, apnea or bradycardia.
B. Nurses Notes – type of lavage fluid; character, consistency and color of gastric aspirate; patient's tolerance for procedure.
C. MAR – date, time, type and amount of lavage fluid, signature.

REFERENCES:

AWHONN: NOEP, 3rd edition, 2015

Sundquist Beauman, S. & Bowles, S. (Eds.) 2019. Policies, Procedures and Competencies for Neonatal Nursing Care, 6th ed. National Association of Neonatal Nurses.

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N.36 Gavage/Enteral Gastric Tube Feeding in the NICU

POLICY:

To describe the recommended technique of feeding infants in the NICU who are unable to ~~adequately suck or swallow oral feedings~~nipple feed or breastfeed, or who have anomalies of the gastrointestinal tract, impaired swallowing capabilities, severe debilitation, or respiratory distress.

PROCEDURE:

A. Gavage feedings will be ordered by the NNP/physician with regard to type of feeding, volume and frequency.

B. The ~~RN or LVN~~nurse will be responsible for inserting the tube, administering the feeding and monitoring the ability of the infant to advance to oral feedings. ~~PVC~~Polyurethane tubes ~~are to be changed daily. Silicone tubes~~ may remain ~~longer according to~~a maximum of 30 days per manufacturer's recommendations, or replaced with visibly soiled.

C. The nurse will use the nasal route in all neonates unless the following conditions are identified:

1. Lack of bilateral patency of the nares
2. Presence of Nasal CPAP

   ~~Nasal infections or otitis media~~
3. Respiratory distress ~~which worsens~~exacerbated with presence of a nasal tube~~.~~

D. The nurse will ~~remain at the bedside of~~monitor the neonate during a gavage feeding to observe for ~~reflux or~~distress and offer the pacifier, as tolerated.

E. Abdominal girth measurements will be obtained ~~each~~obtained at a minimum of once a shift on all infants receiving gavage feeding, unless otherwise specified.

EQUIPMENT

A. ~~Gavage tube – 5-6 Fr. for infants < 1000 gm~~
~~6-8 Fr. for infants > 1000 gm~~
~~(Silicone tubes when needed for more than 5 days, PVC tubes when needed less than 5 days).~~Polyurethane enteral gastric feeding tubes with ENFit-compatible connecting system

1. 5-6 Fr. for infants < 1000 gm
2. 6-8 Fr. for infants > 1000 gm

B. 5 ml ENFit-compatible syringe

C. 30 ~~to~~ 60 ml ENFit-compatible syringe

~~Prescribed formula~~

~~Prescribed medication~~

D. Water-soluable lubricant or sterile water (for insertion)

E. Prescribed feeding in ENFit-compatible syringe

F. Prescribed medication in ENFit-compatible syringe

G. Stethoscope

H. Tape

I. Pacifier

GUIDELINES:

INSERTION:

A. Prior to a feeding, measure the estimated length of tube to be inserted. Use either:

1. ~~Bridge~~Tip of nose to earlobe to xyphoid plus 1 cm~~. or~~ or
2. ~~Nose to ear~~Tip of nose to earlobe to halfway between the xyphoid and umbilicus.

B. Provide comfort measure to neonate during procedure. Consider swaddling, as appropriate, use of sucrose oral solution/ Expressed Breast Milk (EBM) with pacifier.

C. ~~Suction~~Ensure nasal patency prior to insertion, suction nare~~, then insert~~ when indicated. Insert enteral feeding tube gently and swiftly to pre-measured distance. Aspirate gently, if ~~nothing~~no aspirate is ~~aspirated~~obtained, advance 1 cm more ~~and~~, re-aspirate. Do not push against resistance.

D. Double check placement by pushing ~~then aspirating~~ 1 ml of air while auscultating over the infant's stomach. Note the tube's cm marking. Confirm tube placement prior to every use. Once auscultation confirmation completed, remove injected air.

E. Incorrect placement of the tube may be indicated by cyanosis, respiratory distress, low oxygen saturation, coughing or by failure to ~~hear bubbling while inserting~~auscultate air. The tube should be withdrawn. Vagal stimulation may cause bradycardia or distress during insertion. Use tactile stimulation, if ~~tactile stimulation does not improve heart rate~~distress unresolved, the tube should be withdrawn.

F. Secure tubing with ~~cover roll stretch~~soft tape and/ or transparent dressing. If further skin protection is indicated, a hydrocolloid base with a tape overlay may be used.

G. Label the tubing with the date and time of insertion. Replace every 30 days if a ~~silicone~~polyurethane tube is used. ~~Replace daily for a PVC~~Alternate nares when tube is replaced.

~~If the neonate is solely gavage fed, aspirate stomach contents, and then re-feed.~~

~~Notify physician/NNP of the following, or other problems, immediately:~~

~~1. Residual greater than 20% of the previous feeding.~~

~~2. Bile stained, coffee ground or bright red blood in residual.~~

3. ~~Emesis.~~

4. ~~Changes in abdominal girth.~~

~~If the neonate was breast or bottle fed first, confirm tube placement but complete aspiration is not necessary.~~

~~Infant may be held, positioned on right side or prone during feeding. The feeding is done over 20 to 30 minutes. Use gravity flow unless a slow push or a pump is ordered for:~~

1. ~~Thickened feeding~~

2. ~~5 Fr. tube~~

3. ~~Prolonged feeding time (i.e. over 1 hour).~~
   ~~**A pacifier may be offered if neonate is able to suck.**~~

~~The gavage tube must be cleared with 0.5 ml of air after each feeding. Tubing used for feedings should be capped except by order of the physician/NNP. Burp infant as needed.~~

~~A silicone tube may be reused if accidentally removed prior to the 30 day limit. Rinse with water before reinserting.~~

H.

I.

FEEDING VIA GASTRIC TUBE:

A. Prepare feeding as ordered, fill appropriate sized syringe, label syringe with 2 patient identifiers, type of feeding, expiration date and time of feeding.

B. Prior to gavage feedings, aspirate stomach contents, and re-feed.

C. Notify physician/NNP of the following, or complications, immediately:

   1. Residual greater than 20% of the previous feeding

   2. Bile stained, coffee ground or bright red blood in residual

   3. Emesis

   4. Changes in abdominal girth

   5. Presence of bowel loops and/ or abdominal distension

D. If the neonate was breast or bottle fed first, confirm tube placement but complete aspiration is not necessary.

E. Intermittent feedings may be given by gravity, with the nurse holding the syringe, adjusting the height of the barrel to control flow speed. Infant will be held and provided pacifier, as tolerated.

F. Intermittent feedings be be given via a feeding pump, as ordered. Infant will be held and provided pacifier, as tolerated.

G. Continuous feedings are administered as ordered. Feeding solution, syringe and extension tubing will be changed every 4 hours. Provide developmental support for the infant and periodically offer opportunities for non-nutritive sucking. Infant will be held and provided pacifier, as tolerated.

H. Whenever possible, have mother offer non-nutritive breast feeding, as ordered

I. Pacifier may be offered to neonate, as tolerated. **Use EBM 1-2 drops orally with gavage feeding, as tolerated.

J. The gavage tube must be cleared with approximately 2 ml of air after each feeding. Tubing used for feedings should be disconnected and capped, except by order of the physician/NNP.

K. A polyurethane feeding tube may be reused per manufacturer's guidelines if accidentally removed. Rinse with sterile water before reinserting.

DOCUMENTATION

~~A. Nursing flowsheet – NICU feedings – time, type, amount, route of feeding, amount and description.~~

~~B. Nursing notes – description of tube placement.~~

~~C. Abdominal girth, measured in centimeters.~~

A. Feeding: type, volume, route, tube, size, verification of tube placement with method used to confirm placement

B. Abdominal girth, measured in centimeters.

C. Document gastric residual; volume and appearance

D. Non-nutritive breastfeeding, and/ or EBM oral drops

E. Comfort measure(s) provided during enteral tube insertion

REFERENCES:

~~AWHONN: NOEP, 3rd edition, 2015~~

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Sunquist Beauman, S. & Bowles, S. (Eds.) 2019. Policies, Procedures, and Competencies for Neonatal Nursing Care, 6th ed. National Association of Neonatal Nurses

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Nursing Administration	Sherri Block: Associate Chief Nursing Executive, VCMC & SPH	5/11/2023
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N.37 Monitoring Neonates in the NICU

POLICY:

To guide the NICU nurse in assessing indicators of neonatal growth and vital signs.

PROCEDURE:

A. All infants admitted to the NICU are continually monitored for cardiac/respiratory function with alarm systems activated.

B. Infants with cyanosis, respiratory distress, apnea ~~or,~~ altered consciousness/sedation or requiring any mode of respiratory support are monitored with a pulse oximeter.

C. A transcutaneous oxygen/carbon dioxide monitor may additionally be used, usually to monitor CO_2 levels in parallel comparison with blood gas measurement.

D. The Nurse is responsible for admission measurements including weight, length and head circumference.

E. ~~A Health Care Team Member~~The Nurse will weigh each medically stable infant daily.

~~Medically unstable neonates will be placed on a bed scale, if possible, to obtain daily weights. Unless order written to refrain from obtaining daily weight on a stable infant.~~

~~Neonates hospitalized for longer than one (1) week will have head circumferences (OFC) and lengths measured weekly.~~

F. Daily weight may be deferred for medically unstable infants per MD/NNP order.

G. The Nurse will measure head circumferences (OFC) and length on Sunday night.

GUIDELINES FOR MONITORING NEONATAL VITAL SIGNS AND MEASUREMENTS

The nurse evaluates and records vital signs as part of the patient assessment. Heart rate and respiration may be alternately recorded from the monitor on critically ill infants to avoid disturbing them more often than every two hours. The nurse will ~~do all~~obtain temperatures axillary unless a medical order specifies ~~rectal~~otherwise. The nurse will notify the physician/NNP if the vital signs are out of ordered limits. Four -limb ~~Blood Pressures~~blood pressures may be ordered for infants suspected of a cardiac defect.

A. **Placement of Cardiac Respiratory Monitor**:

1. Cleanse chest as needed.

2. Apply chest leads above the nipple on the lateral aspect of the chest and ground lead on exterior thigh or abdomen.
3. Connect the lead wires to the cable and turn on the monitor.
4. Set alarm parameters:
    a. Heart rate:
        i. Premature: 100 – 200
        ii. Term: 85 – 200
    b. Respiratory rate: 15 – 100
    c. Apnea: 15 second delay
5. Change electrode sites as needed. If electrode dislodges, moisten with water and reapply.

B. Temperature – normal 97.9° - 99°F. (36.6°-37.2°C.)
1. Infant~~ should have personal~~'s temperature will be obtained with electronic thermometer at bedside.
2. Place the tip securely in axilla, ensuring that skin surfaces ~~come together~~touch each other.
3. Hold stable until audible beeping. Remove gently and return to case. Clean tip with alcohol when soiled.

C. Heart Rate (Pulse) – normal 120-180 for preterm, 80-160 for term.
1. Place stethoscope on left mid sternal border on the anterior chest.
2. With infant quiet, count heart rate for 30 seconds.
3. Note rhythm and presence of murmurs.
4. Listen for the Point of Maximal Impulse (PMI) over the anterior chest. Listen ~~to the back~~posterior for murmurs.

D. ~~Respiration~~Respirations – normal 40-60.
1. Watch or palpate the rise and fall of abdomen and chest, count for 60 seconds.
2. Note periodic breathing, tachypnea, nasal flaring, grunting or retractions~~.~~ (~~Normal, Moderate, Severe.~~location and severity)
3. Auscultate breath sounds bilaterally: anterior, posterior, in axillas, upper and lower.

E. Blood Pressure – normal dependent on birth weight and post-natal age.
1. Select the widest cuff that can be placed around 2/3 length of the limb without touching the joints. The width of the cuff is approximately two thirds the length of the upper arm, the thigh or the calf. Never select an extremity that has an arterial line, compromised circulation or injury. Limbs with peripheral IV's to be used if no other limb is suitable.
2. Secure cuff around limb and connect to monitor. Calm infant as much as possible. ~~Push ON button, then START button to automatically inflate cuff. The machine senses oscillations~~Oscillations in the pulse are measured to determine systolic, diastolic and mean blood pressures.~~ The reading will automatically display the numbers.~~
3. If the monitor displays error or the reading is significantly different than expected, the Nurse will recheck cuff size and placement, stabilize the limb, wait 60 seconds and repeat the BP.

4. Remove the cuff after each reading. Cuff may be left on up to four hours if Blood Pressure is checked every one or two hours. Monitor distal limb for signs of constriction.

F. Oxygen saturation monitoring:

1. Wipe site of secretions
2. Apply neonatal oxisensor probe to opposite sides of an artery in tissue that can be transilluminated
   a. Select area of good perfusion: foot, ~~toe,~~ hand, ~~finger, and~~or wrist.
   b. Follow manufacturer's instructions regarding probe placement.
   c. Connect oxisensor to the cable and turn on the monitor.
3. The accuracy of the reading is determined with a pulsatile beat and when the oximeter pulse rate matches the apical pulse.
4. Alarm limits are set according to the ordered range for desired oxygen saturation.
5. Monitor perfusion of extremity distal to the probe.
6. In presence of bright light, cover oxisensor with opaque material.
7. Change probe site ~~daily or~~every 12 hours and as necessary.

G. Transcutaneous monitoring:

1. Set-up, maintenance, and site change is conducted according to Respiratory Therapy policies and procedures.

   ~~The nurse monitors oxygen and carbon dioxide levels, notifying physician/NNP of changes.~~

2. Assist the Respiratory Therapist in changing probe at least every 4 hours. Temperature range of the probe ranges between 42° and 44° C. Heat of the probe causes skin redness.
3. Notify the physician/NNP of skin breakdown or excoriation.

H. NICU Admission – Vital Sign Frequency

1. Temperature, ~~Pulse and Respirations~~heart rate and respirations upon admission.
2. Repeat in 15 minutes.
3. Repeat every 30 minutes if unstable or
4. Every hour if stable x2.
5. Blood pressure within 30 minutes of admission,
6. Blood pressure every 30 minutes, twice if unstable.

I. Continuing Care ~~/ General Newborn –~~ Vital Sign Frequency

1. Intermediate Status ~~– Temperature, Pulse and Respirations every 3 hours with feedings. Blood Pressure every 6-12 hours as ordered.~~ (Acuity 1:3) – Temperature, Heart rate and Respirations every 3 hours with feedings. Blood Pressure every 6-12 hours as ordered.

   ~~Critical Stable Infant – Temperature, Pulse, Respirations, and Blood Pressure every 2 hours.Acuity 1:2~~

   ~~Critical Unstable Infant – Temperature, Pulse, Respirations, and Blood Pressure at least hourly. Acuity 1:1.~~

2. Critical Stable Infant (Acuity 1:2) – Temperature every 3-4 hours, Heart rate and Respirations every 2 hours, and Blood Pressure every 6-12 hours and as needed.
3. Critical Unstable Infant (Acuity 1:1) – Temperature every 2-4 hours, Heart rate, Respirations, and invasive Blood Pressure hourly, blood pressure via cuff once per shift

J. Measurements:

1. The nurse is responsible for admission measurements including weight, length and head circumference.
2. A Health Care Team Member will weigh each baby daily.
3. Medically unstable neonates will be placed on a bed scale, if possible, to obtain daily weights.
4. Neonates hospitalized for longer than ~~one (1) week~~7 days will have head circumferences (OFC) and lengths measured weekly on Sunday evenings.
5. Warm scale with a blanket or heat lamp as needed. ~~Plug in and zero scale.~~
6. Place nude infant on scale with as much equipment above surface as possible. Note weight when reading is stable and return neonate to bed.
7. Bed scale is zeroed with equipment on and neonate lifted off the mattress. The neonate is then placed on mattress and the weight noted.
8. Length is measured with the neonate supine and leg fully extended to achieve crown-heel measurement.
9. Head circumference is measured from just above the eyebrows and around the prominence of the occiput.
10. Abdominal girth is measured with a tape measure around the neonates abdomen at the level of the umbilicus.

EQUIPMENT

A. Digital thermometer
B. Neonatal stethoscope
C. Clock with second hand
D. BP Monitor with appropriate size cuff
E. ~~Baby scale~~Portable Infant scale or Bed scale
F. Stadiometer/infant length board
G. Blanket
H. Tape measure: single use, non-stretch
I. Cardiac-respiratory monitor
J. Transcutaneous oxygen-carbon dioxide monitor~~.~~

DOCUMENTATION

A. All assessments and patient care notes are documented in patient's EHR.

REFERENCES:

~~1. NANN: Policies and Procedures~~

1. Sundquist Beauman, S. & Bowles, S. (Eds). 2019. Policies, Procedures, and Competencies for Neonatal Nursing Care, 6th ed. National Association of Neonatal Nurses
2. R.NP.05 Monitoring in NICU – Transcutaneous Monitors

All revision dates: 5/11/2023, 12/14/2022, 6/1/2013, 3/1/2010, 12/1/2004, 4/1/2002, 4/1/1992

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Pediatrics Committee	Tracy Chapman: VCMC - Med Staff	pending
Nursing Administration	Sherri Block: Associate Chief Nursing Executive, VCMC & SPH	5/11/2023
Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	5/11/2023
NICU	Maura Krell: Clinical Nurse Manager, Pediatrics/PICU	5/11/2023

VENTURA COUNTY
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Owner:	*Maura Krell: Clinical Nurse Manager, Pediatrics/PICU*
Policy Area:	*NICU*
References:	

N.40 Ophthalmology Exams in the NICU

POLICY:

To ensure proper administration of eye medications and to assist in facilitating a smooth, efficient eye exam, either via binocular indirect ophthalmoscopy by ophthalmologist or via ~~RetCam (pediatric~~telemedicine systems using digital retinal ~~imaging system) by~~photography by the NNP or MD. ~~RetCam assisted by nurses in the NICU and the RetCam Shuttle "Quick Start Guide" and RetCam Shuttle "User Manual and Service Instructions" should be utilized for screening method and practical guidelines. In general, for Retinopathy of Prematurity, the AAP recommends all infants <30 weeks gestational age or birth weights <1500 grams have eye examinations.~~

PROCEDURE:

~~Selected infants with a birth weight between 1500g and 2000g or gestational age more than 30 weeks with an unstable medical course as recommended per attending Neonatologist. Infants with congenital abnormalities and /or ophthalmologic concerns as per attending Neonatologist.~~

Identify infant at risk for retinopathy of prematurity (ROP):

- all infants 30 weeks or less gestational age or birth weights less than or equal to1500 grams
- selected infants with birth weight between 1500 and 2000 g or a gestational age greater than 30 weeks at risk for ROP (such as infants with hypotension requiring inotropic support, received oxygen supplementation for more than a few days, or received oxygen supplementation without saturation monitoring).
- . Infants with congenital abnormalities and /or ophthalmologic concerns as per attending Neonatologist.

The first examination should generally occur as outlined by the American Academy of Pediatrics Policy Statement, "Screening Examination of Premature Infants for Retinopathy of Prematurity." Pediatrics Volume ~~131~~142, Number ~~1~~6, ~~January 2013~~December 2018.

TABLE I: Timing of First Eye Examination Based on Gestational Age at Birth~~:~~

Age at Initial Examination, wk		
Gestational Age at Birth, wk	**Postmenstrual**	**Chronologic**
22[a]	31	9
23[a]	31	8
24	31	7
25	31	6
26	31	5
27	31	4
28	32	4
29	33	4
30	34	4
~~31[b]~~	~~35~~	4
~~32[b]~~	~~36~~	4
Older gestational age, high risk factors b	--	4

Shown is a schedule for detecting ~~prethreshold~~pre-threshold ROP with 99% confidence, usually well before any required treatment.

[a]This guideline should be considered tentative rather than evidence-based for infants with a gestational age of 22 to 23 weeks because of the small number of survivors in these gestational-age categories.

~~[b]If necessary based on high risk factor.~~

[b]Consider timing on basis of the severity of comorbidities.

A. Older infants and children with the following conditions, but not limited to, should be referred to an ophthalmologist (as an inpatient or outpatient at the discretion of the attending physician or NNP):
    1. Infants with retinoblastoma or other tumors of the eye and orbital area.
    2. Infants with known or suspected cataracts, glaucoma, or blindness.
    3. Infants with congenital or genetic ocular anomalies or infections (e.g. aniridia, toxoplasmosis).
    4. Systemic syndromes, metabolic disorders, or chromosomal abnormalities with possible ocular involvement (e.g. galactosemia, Marfan Syndrome, Down Syndrome).
    5. Infants suspected of being abused and in whom there is a possibility of eye injury.
    6. Infants with congenital nystagmus and early with early onset nystagmus.
    7. Infant with a family history of congenital or genetic ocular anomalies, infections, tumors, or a family history of systemic or metabolic syndromes (e.g. juvenile rheumatoid arthritis, galactosemia, diabetes mellitus), chromosomal abnormalities (e.g. Down's Syndrome), or other disorders with possible ocular involvement.
    8. Infants with exposure during gestation to drugs or other substances (including alcohol) that may cause genetic congenital anomalies of the eye.
    9. Infants with poor vision or delayed attainment of vision-related developmental milestones and infants with severe refractive errors or a strong family history of severe refractive errors.

10. Infants with ocular or periocular inflammation not responding to initial topical and/or systemic antibiotic therapy or not clearing within 3 weeks of treatment with suspected herpes simplex or Zoster infections involving the eye or a history of these infections involving the eye.

Dilation of the infant's eye for retinal exam or eye surgery will be performed by the RN.

GUIDELINES:

A. Preparation

1. Explain procedure to parent in a manner appropriate to his/her level of understanding.
2. Restrain appropriately.
3. Assess infant for pain before, during and after exam.
4. Offer oral sucrose solution to infants. See NICU/OB policy, *Pain Assessment and Management for Neonates*.

B. Method

~~Place hand holding dropper or tube on infant's forehead or cheek so that hand moves with infant's head.~~

~~If instilling drops, pull down lower lid and instill prescribed number of drops in lower conjunctival sac. Do not touch the conjunctiva with the tip of the dispenser.~~

1. Instill mydriatic or cycloplegic agents for pupillary dilation as ordered at least 10 minutes before the exam.
   a. Place hand holding dropper or tube on infant's forehead or cheek so that hand moves with infant's head.
   b. Pull down lower lid and instill prescribed number of drops in lower conjunctival sac. Do not touch the conjunctiva with the tip of the dispenser.
   c. Provide gentle pressure over the nasolacrimal duct during and for at least 2 minutes after instillation of drops to minimize systemic absorption
   d. Protect eyes from bright light 4 - 6 hours after mydriasis
2. Label bottle with date/time after opening. Bottle expires after 1 month.

   ~~Gently wipe excess medication from face.~~
3. When physician is ready to begin exam, restrain the patient. Instill ~~anesthetic~~anesthetic eye drops.
4. Monitor patient for adverse reactions by observing the following:
   a. Vital signs (tachycardia, reflex bradycardia, hypertension, fever)
   b. Flushing
   c. Urinary retention
   d. Dry mucous membranes

DOCUMENTATION

~~On medication administration record:~~

EMR: Time medication administered, which eye(s)

Progress note:

~~Time medication administered, which eye(s), and initials of person administering~~

1. Date, time, and physician performing examination.
2. Tolerance of ~~procedures.~~procedure

EQUIPMENT

A. ~~Eye medication~~Eye medications
B. 2x2 gauze
C. Gloves
D. Restraints/assistance as needed
E. Pediatric eye exam tray
F. Sterile 4x4 gauze and Normal Saline syringes to clean equipment between eyes

KEY POINTS

A. Ophthalmic medications are to be kept at bedside.
B. Rather than forcing the lids apart, the eye drops can be placed at the inner canthus (corner area toward bridge of nose) and the drops will roll in.
C. The infant may need to be mummy-wrapped or restrained in bed with the head securely stabilized.
D. When obtaining medications, always check expiration dates; clarity of solutions in bottles; and for any visible defects to tip area of dropper or tube.
E. If instilling medication to dilate pupils for eye exam, unless otherwise specified, it usually can be instilled approximately 60 minutes prior to exam.

REFERENCES:

~~Donn, S.M, Michigan Manual of **Neonatal Intensive Care** 3rd Edition. 2003, pg. 440 - 443.~~
~~Forbes, B. & Khazaeni, L. (2003) Evaluation and Management of a Premature Infant's Eyes. Pediatric Care Reviews, Vol. 3, No. 2, pg. 105-110.~~
~~Friedman, L.S. & Kaufman, L.M. (2003) Guidelines for Pediatrician Referrals to the Ophthalmologist. Pediatric Clinics of North America, pg. 41-53, Vol. 50.~~

Fierson, W.M. (December 2018) Screening Examination of Premature Infants for Retinopathy of Prematurity. *Pediatrics*, 142 (6): e20183061.10.1542/peds.2018-3061

Abdul Aziz, A. A., Isaac, M. & Tehrani, N. N. (2014). Using telemedicine to screen for retinopathy of prematurity. CMAJ, 186(13), pp 1012-1014.

Sunquist Beauman, S. & Bowles, S. (2019). Policies, Procedures, and Competencies for Neonatal Nursing Care, 6th ed. National Association of Neonatal Nurses

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Attachments

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Approval Signatures

Step Description	Approver	Date
Pediatrics Committee	Tracy Chapman: VCMC - Med Staff	pending
Nursing Administration	Sherri Block: Associate Chief Nursing Executive, VCMC & SPH	5/1/2023
Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	5/1/2023
NICU	Maura Krell: Clinical Nurse Manager, Pediatrics/PICU	5/1/2023

VENTURA COUNTY
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Policy Area:	*Administrative - Patient Care*
References:	

PH.83 Intravenous Potassium Administration for Adults

POLICY:

This policy defines safe methods for ordering and administering potassium infusions for adults.

PROCEDURE:

A. Do **NOT** administer intravenous (IV) potassium as a **Bolus, Intramuscular (IM), Subcutaneous (SQ) or undiluted**.

B. Potassium parenteral solutions are considered high risk medications; concentrated potassium solutions shall only be stored in the Pharmacy.

C. All potassium infusions shall be dispensed from the Pharmacy at standard concentrations~~, unless otherwise requested by the physician~~.

D. Potassium infusions shall be administered at standardized rates using programmable pumps with Dose Error Reduction Software (DERs such as Alaris guardrails).

E. This policy applies ~~only~~ to potassium chloride ~~and~~, potassium acetate, and potassium phosphate infusions.

F. Patient shall be placed on a cardiac monitor if potassium infusion is administered faster than 10 milli-equivalents per hour (mEq/hr) for potassium chloride and potassium acetate or 7.5 milli-moles per hour (mmol/hr) for potassium phosphate.

G. ~~For patients on a cardiac monitor, potassium infusions may be administered at a maximum rate of 20 mEq/hr. For Intensive Care Unit (ICU) and Emergency Department (ED) patients on a cardiac monitor, potassium infusions may be administered at a maximum rate of 40 mEq/hr.~~ For patients on a cardiac monitor, potassium chloride infusions may be administered at a maximum rate of 20 mEq/hr. For Intensive Care Unit (ICU) and Emergency Department (ED) patients on a cardiac monitor, potassium infusions may be administered at a maximum rate of 40 mEq/hr.

I. Contraindications to potassium infusions:

   A. Severe renal impairment

   B. Severe hemolytic disease

   C. Addison's Disease (untreated)

D. Hyperkalemia

E. Acute dehydration

F. Extensive tissue breakdown

G. Heart block

II. Nursing Considerations

A. Decreased urine output: notify physician immediately.

B. Monitored patients: document heart rate and rhythm with administration.

C. Excess potassium may cause bradycardia, cardiac depression, peaking T waves, lowered R waves, depressed P wave, prolonged P-R interval, widening of QRS complex, and cardiac arrest: stop potassium infusion and notify physician immediately.

D. If patient complains of burning at IV site, assess the infusion site for signs of infiltration or extravasation.

E. Refer to Lippincott Procedure "Potassium Infusion Administration" for other considerations, equipment and documentation.

III. The Pharmacy Department shall provide potassium infusions in the standard concentrations as follows. Concentrations and ~~Delivery Rates~~delivery rates (milliliter = mL):

	Peripheral Line (Maximum concentration: 0.~~08~~09 mEq/mL)		
Medication	**Standardized Concentration** IV Piggyback	**Monitored Beds** Maximum Delivery Rate	**Non-Monitored Beds** Maximum Delivery Rate
Potassium Acetate Potassium Chloride	20 mEq/250 mL 40 mEq/500 mL	20 mEq/hr **ICU & ED emergent use only:** 40 mEq/hr	10 mEq/hr
Potassium Phosphate	15 mmol/250 mL 30 mmol/500 mL	7.5 mmol/hr	7.5 mmol/hr

	Central Line (Maximum concentration: 0.4 mEq/mL)		
Medication	**Standardized Concentration** IV Piggyback	**Monitored Beds** Maximum Delivery Rate	**Non-Monitored Beds** Maximum Delivery Rate
Potassium Acetate Potassium Chloride	20 mEq/50 mL 40 mEq/100 mL	20 mEq/hr **ICU & ED emergent use only:** 40 mEq/hr	10 mEq/hr
Potassium Phosphate	15 mmol/100 mL 30 mmol/250 mL	7.5 mmol/hr	7.5 mmol/hr

A. Concentrated potassium salts shall not be added to an already infusing IV bag.

B. Maximum dose of potassium infusion shall not exceed 40 mEq or 30 mmol per dose. If a patient requires more potassium than the maximum allowable dose, consecutive doses may be infused.

C. Potassium levels should be checked after each administration of potassium infusion.

D. Maximum potassium concentration for maintenance fluids is 40 mEq per liter. Parenteral nutrition is an exception to this requirement.

E. If potassium is less than (<) 2.5 mEq/mL and/or patient is symptomatic, potassium infusion should be delivered in a monitored bed.

~~The Pharmacy Department shall provide potassium infusions in standard concentrations as follows:~~

~~***Peripheral Lines (0.08 mEq/mL)***:~~
~~Potassium chloride 20 mEq/250 mL in 0.9% sodium chloride~~
~~Potassium chloride 40 mEq/500 mL in 0.9% sodium chloride~~
~~Potassium acetate 20 mEq/250 mL in 0.9% sodium chloride~~
~~Potassium acetate 40 mEq/500 mL in 0.9% sodium chloride~~

~~***Central Lines (0.4 mEq/mL)***:~~
~~Potassium chloride 20 mEq/50 mL premixed bag~~
~~Potassium chloride 40 mEq/100 mL premixed bag~~
~~Potassium acetate 20 mEq/50 mL in 0.9% sodium chloride~~
~~Potassium acetate 40 mEq/100 mL in 0.9% sodium chloride~~

~~If a desired concentration is not listed above, please contact the Pharmacy Department for preparation.~~

All revision dates: 6/7/2023, 6/21/2022, 5/15/2019, 4/1/2016, 10/1/2008, 6/1/2006

Attachments

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Medical Executive Committee	Tracy Chapman: VCMC - Med Staff	pending
Pharmacy & Therapeutics Committee	Sul Jung: Associate Director of Pharmacy Services	6/7/2023
Pharmacy Services	Sul Jung: Associate Director of Pharmacy Services	6/7/2023

VENTURA COUNTY
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Policy Area:	*Trauma Services*
References:	

T.11 Request for Trauma Data Through the Trauma Registry

POLICY:

To provide data from the Trauma Registry for the purpose of improving trauma care and patient outcomes.

PROCEDURE:

Parties requesting trauma data from the Trauma Service will receive a response in writing from the Trauma Service whether the request is approved or denied. Data received from the Trauma Registry is the property of the Trauma Service and given credit as such.

1. Parties seeking trauma data shall submit their request in writing to the Trauma Registrar. The request shall specify the type of data needed, the dates the data is to be extracted from, and the purpose of the request.
2. The Trauma Program Manager and Trauma Medical Director will review all requests.
3. If the request is approved, the data will be provided to the requesting party.
4. Credit for the data will be given to the Ventura County Medical Center Trauma Service.
5. Data requests will be kept on file with the Trauma Service.

Approved in the Trauma Operational Process Performance Systems Committee meeting on October 20, 2010.

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Medical Executive Committee	Tracy Chapman: VCMC - Med Staff	pending
Trauma Operations, Performance & Patient Safety (TOPPS) Committee	Gina Ferrer: Manager, Trauma Services	5/23/2023
Hospital Administration	Diana Zenner: Chief Operating Officer, VCMC & SPH	5/10/2023
Nursing Administration	Sherri Block: Associate Chief Nursing Executive, VCMC & SPH	5/9/2023
Nursing Administration	Danielle Gabele: Chief Nursing Executive, VCMC & SPH	5/9/2023
Trauma Services	Thomas Duncan: Trauma Director	5/9/2023
Trauma Services	Gina Ferrer: Manager, Trauma Services	4/27/2023

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References:	

T.12 Trauma Registry Data Management

POLICY:

The purpose of this policy is to establish procedures for the maintenance of a successful Trauma Registry database at Ventura County Medical Center (VCMC). The successful Trauma Registry serves the hospital and community by facilitating the study of traumatic disease, assessment of trauma system care delivery, and improving injury prevention[1]. As such, this policy will address registry data integrity, timeliness of data entry, and record completeness. It will also identify confidentiality practices which are specific to trauma registry data.

PROCEDURE:

Definitions

Trauma Registry: A disease-specific data collection composed of files containing uniform data elements that describe the injury event, demographics, prehospital information, diagnosis, care, outcomes, and costs of treatment for injured patients[2]

NTDB: The National Trauma Data Bank is a project of the American College of Surgeons Committee on Trauma. The NTDB serves as a national trauma registry and receives annual data submissions from hospitals throughout the country. Its purpose is to grow the knowledge base for trauma research and policy development.

NTDS: The National Trauma Data Standard is a dictionary which lists and defines individual pieces of information which, at minimum, should be collected for each trauma patient. These standardized definitions facilitate data aggregation at state and national levels.

Database: A self-describing collection of integrated records.

A. **Data Integrity**

1. To maintain a standardized data set, the data definitions established by the National Trauma Data Standard and California Emergency Medical Information System will serve as the guidelines for VCMC trauma registry abstraction and data entry.
    a. Data points with known potential for inaccuracy will be avoided.

b. The addition of elements to the trauma registry beyond those specified by NTDS or California Emergency Medical SERVICES Information System (CEMSIS) trauma requires establishment of the following:

i. Definition of data element.

ii. Source from which the data will be abstracted.

iii. Description of the conditions in which null values are to be used for this data element (such as not known/not recorded or not applicable).

2. Data entry errors will be minimized by utilizing a trauma registry software internal validation scheme.
3. Abstracted data will be validated on a regular basis.
   a. 10% chart audit to be completed by trauma registrar (TR) & trauma program manager (TPM), and reviewed with trauma medical director (TMD) on a quarterly basis.

B. **Timeliness of Data Entry**

1. Hospital records required for accurate data abstraction will be accessible to the Trauma Office in a timely manner.
   a. Emergency Department (ED) records and patient care records (PCRs)
   b. Hardcopy medical record
2. Not less than 80% of trauma registry records will be completed within two (2) months of patient discharge.

C. **Record Completeness**

1. Completion of NTDS data elements
   a. running the NTDB validator
2. Locking completed records

D. **Confidentiality**

1. The Trauma Registry database will only be accessed by authorized users.
   a. Database structure
      i. The Trauma Registry has three unique components, all of which must work in concert for the Registry to function: the database application, database management system, and the database itself.
      ii. Patient data is housed only in the actual database.
      iii. The database application alone is unable to display any trauma patient data. The application must be connected to both the database management system and actual database in order to access confidential patient information.
   b. Accessing the database management system (DBMS) and database
      i. The DBMS and database will be stored on a secure server maintained by the Ventura County Health Care Agency (HCA). Computer workstations without access to this server will not be able to access Trauma Registry patient data.
      ii. All users authorized to access this server will be provided a unique username and password. This username and password will be required each time the user logs in to the HCA computer system through the Novell client.

iii. The server housing the DBMS and database will only be accessible through the HCA intranet.

iv. Once the user has obtained access to the server containing the DBMS and database, he/she may initiate access to the Trauma Registry database application.

c. Accessing the database application

i. All users authorized to access the Trauma Registry database application will be assigned a unique username and provided the opportunity to create a personal password. This username and password are required to open and use the database application.

ii. The username and password used to access the application will be different from that required to access the DBMS and database server.

iii. The user will not leave the database application open when he/she leaves the workstation unattended.

d. Accessing the Trauma Registry with a laptop computer

i. A laptop that is capable of accessing the Trauma Registry will not leave the hospital building under any circumstances.

ii. Patient data will not be stored locally in the laptop computer. As such, inpatient data will remain protected in the event of laptop theft or loss. Patient data is only accessible when the computer is connected to the HCA intranet and an authorized user has authenticated with a username and password.

iii. A laptop connected to the Trauma Registry will not be left unattended by the user. A password-protected screen saver must be activated before a user may step away from a Trauma Registry laptop.

iv. Closing the laptop will cause the network connection to be dropped. The user must re-authenticate to both the database server and database application in order to resume Trauma Registry work.

2. Secure backup copies of Trauma Registry data

a. Trauma Registry data will not be saved to a local disk for backup purposes.

b. Routine backup of Trauma Registry data will occur once every twenty-four hours.

i. Trauma Registry software backup and maintenance is administered by the HCA IT dept.

3. Secure storage of hardcopy trauma patient data records

a. Includes data abstraction forms and hardcopy medical records

b. Locked office doors and locked file cabinet

c. Confidential recycle bin

4. Secure email exchange

a. #SECURE# shall be inserted in the subject line of all emails. See policy 109.043, *Email Communication of Private Health Information*.

5. Trauma Registry reports

a. The Trauma Registry will not generate reports that may reveal (directly or indirectly) a patient's identity, with one exception:

i. Any such report may be provided only to authorized individuals, and will not contain more information than is necessary for completion of his/her task.

b. Confidentiality statement

i. Reports provided at the request of external departments will be distributed with a cover letter which will contain the following:

ii. Any information with identifiers is confidential and proprietary. Trauma data received from VCMC is protected by Health Insurance Portability and Accountability Act (HIPAA) abbr.

Approved in the Trauma Operational Process Performance Committee on October 20, 2010

[1] p.154 ATS trauma registry course

[2] Green book p.87

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Medical Executive Committee	Tracy Chapman: VCMC - Med Staff	pending
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Hospital Administration	Diana Zenner: Chief Operating Officer, VCMC & SPH	5/10/2023
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