TRI-CITY HEALTHCARE DISTRICT
AGENDA FOR A REGULAR MEETING
OF THE PROFESSIONAL AFFAIRS COMMITTEE
OF THE BOARD OF DIRECTORS
May 11, 2017, Thursday
12:00 Noon– Assembly Room 1
Tri-City Medical Center, 4002 Vista Way, Oceanside, CA 92056

The Committee may make recommendations to the Board on any of the items listed below, unless the item is specifically labeled "Informational Only"

	Agenda Item	Page Nos.	Time Allotted	Requestor/ Presenter
1.	Call To Order/Opening Remarks		2 min.	Chair
2.	Approval of Agenda	1-2	2 min.	Chair
3.	Public Comments NOTE: During the Committee's consideration of any Agenda item, members of the public also have the right to address the Committee at that time regarding that item.		5 min.	Standard
4.	Ratification of minutes of the April 2017 Meeting	3-12	2 min.	Committee
5.	New Business			
a.	Consideration and Possible Approval of Policies and Procedures	13-14		All
	Patient Care Services			
	1. Antimicrobial Stewardship Policy	15-18		
	2. Blood Glucose Newborn Monitoring Standardized Procedure	19-22		
	3. Elective Surgery Pre-Admission MRSA Screening Protocol	23-27		
	4. Hypoglycemia Management in the Adult Patient Standardized Procedure	28-30		
	5. Insulin Therapy Administration Procedure	31-34		
	6. Insulin, Use of Concentrated Policy	35		
	7. Nutrition Education of Patients Policy	36		
	8. Percutaneous Tracheostomy Assist Procedure	37-39		
	9. Rapid Response Standardized Procedure	40-46		
	10. Sedation Analgesia Used During Therapeutic Or Diagnostic Procedures	47-63		
	11. Self-Administered Continuous Subcutaneous Infusion of Insulin (Insulin Pump Therapy) for the Acute Care Patient Policy	64-70		
	12. TDAP (Tetanus, Diptheria & Pertussis) Vaccine Administration for Antepartum & Post Partum Obstetric Patients Standardized Procedure	71-73		
	13. Titrating Medications, Adult Patients Policy	74-77		
	Administrative Policies and Procedures			
	1. Non-Discrimination of Patients in Health Programs and Activities Policy	78-79		
	2. Policy/ Procedure Approval for Patient Care Services and Department Specific	80-81		
	Unit Specific			
	Medical Staff			
	1. Medical Staff Funds 8710-572	82-83		
	Outpatient Infusion Center			
	1. Emergency Evacuation	84		
	2. Fire Alarm Evacuation Plan	85-86		

	Women's and Newborn Services 1. Medication Administration, NICU- Combined **Formulary Requests** 1. Cepastat 2. Donnatal 3. Urea **Pre-Printed Orders** 1. Anticoagulation Orders 8711-4518 2. Laparoscopic Surgery orders 8711-4542 3. MRI Contrast Medication Orders	87-90 91 92 93-94 95-96 97-98 99		
6.	Review and Discussion of CLINICAL Contracts- Contracts To Review (*Discussion/ Possible Action*)			
7.	Motion to go into Closed Session		2 min.	Committee
8.	CLOSED SESSION a. Reports of the Hospital Medical Audit and/or Quality Assurance Committee (Health & Safety Code Section 32155) b. Conference with Legal Counsel – Significant exposure to litigation (Government Code Section 54956.9(b))		30 min.	Chair
9.	Reports from the Committee Chairperson of any Action Taken in Closed Session (Government Code, Section 54957.1)		10 min.	Chair
10.	Comments from Members of the Committee		5 min.	Committee
11.	The next meeting of the Professional Affairs Committee of the Board is on June 8, 2017.		1 min	Chair
12.	Adjournment		1 min	Chair

DRAFT

Tri-City Medical Center
Professional Affairs Committee Meeting
Open Session Minutes
April 20, 2017

Members Present: Director Laura Mitchell (Chair), Director Jim Dagostino and Dr. Johnson.

Non-Voting Members Present: Steve Dietlin, CEO, Kapua Conley, COO/ Exe. VP , Sharon Schultz, CNE/ Sr. VP, and Cheryle Bernard-Shaw, Chief Compliance Officer.

Others present: Jody Root, General Counsel, Marcia Cavanaugh, Sr. Director for Risk Management, Jami Piearson, Director of Regulatory Compliance, Kathy Topp, Kevin McQueen, Sherry Miller, Aimee Hardt, Nancy Myers, Sharon Davies, Mary Diamond, Oska Lawrence, Merebeth Richns, Linda Sprague, Priscilla Reynolds, Tori Hong, Manuel Escobar, Scott Livingstone, Patricia Guerra and Karren Hertz.

Members Absent: Director Leigh Anne Grass, Dr. Gene Ma, Dr. Scott Worman and Dr. Marcus Contardo.

Topic	Discussion	Follow-Up Action/ Recommendations	Person(s) Responsible
1. Call To Order	Director Mitchell called the meeting to order at 8:39 AM in Assembly Room 1.		Director Mitchell
2. Approval of Agenda	The committee reviewed the agenda; there were no additions or modifications. Due to a lack of quorum, Sharon Schultz was appointed by the committee as a voting member for this month's meeting.	Motion to approve the agenda was made by Director Dagostino and seconded by Dr. Johnson.	Director Mitchell
3. Comments by members of the public on any item of interest to the public before committee's consideration of the item.	Director Mitchell read the paragraph regarding comments from members of the public.		Director Mitchell

Topic	Discussion	Follow-Up Action/ Recommendations	Person(s) Responsible
4. Ratification of minutes of March 2017.	Director Mitchell called for a motion to approve the minutes from March 9, 2017 meeting.	The minutes were ratified and was unanimously approved by the group. Director Dagostino moved and Dr. Johnson seconded the motion to approve the minutes from March 2017.	Karren Hertz
5. New Business a. Consideration and Possible Approval of Policies and Procedures **Patient Care Policies and Procedures:** 1. Admission Criteria Policy 2. Admixture, Intravenous Procedure 3. Blanket Warmers Policy 4. Code Status/ Do Not Resusciate DNR 312 5. Determination of Brain Death	There was a recommendation to remove the the AHP (Allied Health Practitioner) term in this policy. A clarification was made on the use of filter needles when using ampules. There were three stipulations that will be added on the use of blanket warmers as recommended by Safety Officer Kevin Mcqueen. Director Mitchell had a question regarding the surrogate decision maker; committee had a short discussion. It was noted that there is a separate policy addressing End of Life issues. There was no discussion on this policy.	**ACTION:** The Patient Care Services policies and procedures were approved. Director Dagostino moved and Dr. Johnson seconded the motion to approve the policies moving forward for Board approval with the appropriate corrections noted by the Committee members.	Patricia Guerra

Topic	Discussion	Follow-Up Action/ Recommendations	Person(s) Responsible
6. Food and Nutrition Relationships with Other Departments Policy	Director Mitchell recommended to take out the section (i) preparing infant formulas for the obstetrical nursery since the hospital does not practice that anymore.		
7. Glucose Monitoring During Exercise Therapy for Diabetic Patients	This policy is geared solely for diabetics; and this premise needs to be confirmed by the diabetic's PCPs.		
8. Meals, Patients—Times, Menus, Substitutions and Nourishments Policy	It was noted that there is a separate policy addressing food brought from outside.		
9. Medication Recall Policy	There was no discussion on this policy.		
10. Outpatient Summary List Procedure	There was no discussion on this policy.		
11. Purewick Female Urinary Incontinence Management	There was no discussion on this policy.		
12. Research Activity Investigational Drugs Policy	There was an indication that there are a lot of changes in this policy; the reason being is because the hospital didn't have an investigational research in the past. Director Mitchell suggested to have a Glossary placed at the beginning of the policy for better awareness of the abbreviated terms contained in the whole policy.		
Administrative Policies and			

Topic	Discussion	Follow-Up Action/ Recommendations	Person(s) Responsible
Procedures: 1. EMTALA- Emergency Medical Screening 506	There was no discussion on this policy.	**ACTION:** The Administrative policy and procedure was approved. Director Dagostino moved and Dr. Johnson seconded the motion to approve the policy moving forward for Board approval.	Patricia Guerra
Unit Specific Education 1. ACLS Fee Waiver Policy 2. AHA Reciprocity Statement Policy 3. AHA Role of TCMC AHA Training Center Policy 4. AHA TC Course Content Requirements Policy 5. AHA TC Dispute Resolution- Disciplinary Action Policy	Forensics should be replaced with PCU. All the TCMC should be taken out and replaced with THCD.	**ACTION:** The Education policies were approved as moved by Director Dagostino and seconded by Sharon Schultz.	Patricia Guerra
Medical Staff 1. Conflict of Interest	This policy will be reviewed further by the Chief Compliance Officer Cheryle Bernard-Shaw. References will also be updated.	**ACTION:** The Medical Staff policies were approved. Director Dagostino moved and Sharon Schultz seconded the motion to approve the policies moving forward for Board approval.	Patricia Guerra
2. Conflict Resolution Policy	There was no discussion on this policy.		
3. Credentialing Criteria, Chronic Non-Healing Wound Care	Physician assistant will be replced with AHP (Allied Health Practitioner).		
4. Credentialing Criteria,	There was no discussion on this policy.		

Topic	Discussion	Follow-Up Action/ Recommendations	Person(s) Responsible
Hyeprbaric Medicine Oxygen Therapy			
5. Credentialing Policy, Expedited Credentialing and Privileging Process	The committee had a discussion to change the person responsible for granting expedited credentialing in certain emergent cases. Instead of this committee, it was agreed that the Board, or the CEO or a designee shall be the one who will be responsible for this .		
6. Credentialing Policy, Processing Medical Staff Applications	There was no discussion on this policy.		
7. Credentialing Standards Catheter-Based Peripheral Vascular Interventional Procedure	It was noted by the group that the applicant for credentialing peripheral vascular physicians are required to have certification in fluoroscopy.		
8. Documentation Requirements for Emergency Department Residents	Since residents usually come from another facility, they are required to do their documentation the way it is done at TCMC. Guidance will be provided for dictation documentation.		
9. Election Process Members at Large MEC	There was no discussion on this policy.		
10. Emergency Room Call Duties of the On-Call Physician	Certain information was refreshed in this policy.		
11. Liability Insurance Requirements	The liability information was updated in this policy.		

Topic	Discussion	Follow-Up Action/ Recommendations	Person(s) Responsible
12. Management of Conflicts Between Medical Staff and MEC	There is no discussion on this policy.		
13. Medical Record Documentation	All sections that still have Tri-City Medical Center should be changed to Tri-City Healthcare Ditrict.		
14. Medical Staff Governance Documents Development and Review	There is no discussion on this policy.		
15. Name Tags for Health Practitioners	There is no discussion on this policy.		
16. Peer Review Process: OPPE and FPPE	Refrences will be updated for this policy.		
17. Physician Orders/ Family Members	There was no discussion on this policy.		
18. Physician/ Podiatrist Surgical Assistant	The approval dates contained in this policy will be updated.		
19. Physician WellBeing Policy	There was no discussion on this policy.		
20. Professional Behavior Policy and Committee	There was no discussion on this policy.		
21. Requests for New Privileges/ Technologies New to TCMC	Sherry Miller said that a new website link was added to this policy indicating the status of a technology procedure which is used in credentialing process.		

Topic	Discussion	Follow-Up Action/ Recommendations	Person(s) Responsible
22. Standards for Endovascular Repair of Aortic Aneurysms	There was no discussion on this policy.		
23. Supervision of Residents/ Fellows/ Medical Students	There was no discussion on this policy.		
24. Surgical Assistance	Bariatric and robotic cases were added to the areas needing surgical assistance.		
25. Suspension for Delinquent Medical Records and Fine Process	There was no discussion on this policy.		
26. Temporary Privileges	Jody Root recommended to take out the Section number when referring to the Medical Staff bylaws as some of these numbers are constantly changing and might not be accurate at a certain time.		
27. Unintended Intraoperative Awareness During Anesthesia	There was no discussion on this policy.		
NICU			
1. Peripherally Inserted Central Catheters and Midline Catheters Insertion		**ACTION:** The NICU procedure was approved. Director Dagostino moved and Dr. Johnson seconded the motion to approve the procedure moving forward for Board approval.	Patricia Guerra
Surgical Services			
1. Anesthesia Type, Location and Monitoring Policy	There were no discussion on the policies for Surgical services.	**ACTION:** The Surgical Services Services policies were approved.	Patricia Guerra

Topic	Discussion	Follow-Up Action/ Recommendations	Person(s) Responsible
2. Anticoagulation Management During Cardiopulmonary Bypass Procedure 3. Disinfection of Stockert Heater-Cooler System 3T Tanks Procedure 4. Donor Corneas, Transplant Preparation Procedure 5. Eye Laser Patient Management procudre 6. Heart Lung Machine Procedure 7. Heart Valves Thawing (Cyropreserved) Procedure 8. Laser safety Management Procedure 9. Mira Cryo Unit Set-Up Procedure 10. Patient Transportation in the Perioperative Environment Procedure		Director Dagostino moved and Dr. Johnson seconded the motion to approve the policies moving forward for Board approval.	
Women's and Newborn Services			
1. Amnioinfusion	This policy is being deleted as it is in Mosby's already.	**ACTION:** The Women's and Children's Services policies and procedures were approved. Director Dagostino moved and Dr. Johnson seconded the motion to approve the policies moving forward for Board approval.	Patricia Guerra
2. Cord Gas Collection	The cord gas collection information will be in the newborn record and not in the mother's medical record.		
3. Elective Delivery Under 39 Weeks	It was noted that the figures for this population is getting better over time.		

Topic	Discussion	Follow-Up Action/ Recommendations	Person(s) Responsible
4. HIV Intrapartum Management	There was no discussion on this policy.		
5. HIV Newborn Management	There was no discussion on this policy		
6. Misoprostol	There was no discussion on this policy.		
7. Shoulder Dystocia	This is being deleted; all information is in Mosby's		
8. Standards of Care: Antepartum	There was no discussion on this policy.		
9. Umbilical Cord Blood Banking Private Collection	Sharon Davies reiterated that for the umbilical cord collection, the patient has to bring her own kit since TCMC is not sanctioning any companies offering that kind of service.		
Formulary Requests 1. Acetaminophen 2. Articial Saliva 3. Meperidine Oral Tablets 4. Tobramycin Nebulized Soluntion	The committee had a short discussion on these formulary requests but all of them were approved to move forward for Board approval.	**ACTION:** The formulary rtequests were approved. Director Dagostino moved and Dr. Johnson seconded the motion to approve these requests moving forward for Board approval.	
6. Clinical Contracts	No contracts were reviewed for this month.	**ACTION:** No action taken.	Director Mitchell
7. Closed Session	Director Mitchell asked for a motion to go into Closed Session.	Director Dagostino moved, Dr. Johnson seconded and it was unanimously approved to go into closed session at 9:30 AM.	Director Mitchell

Topic	Discussion	Follow-Up Action/ Recommendations	Person(s) Responsible
8. Return to Open Session	The Committee return to Open Session at 11:01AM.		Director Mitchell
9. Reports of the Chairperson of Any Action Taken in Closed Session	There were no actions taken.		Director Mitchell
10. Comments from Members of the Committee	No comments.		Director Mitchell
11. Adjournment	Meeting adjourned at 2:11 PM.		Director Mitchell

PROFESSIONAL AFFAIRS COMMITTEE
May 11, 2017

CONTACT: Sharon Schultz, CNE

Policies and Procedures	Reason	Recommendations
Patient Care Services Policies & Procedures		
1. Antimicrobial Stewardship Policy	3 Year Review, Practice Change	
2. Blood Glucose Newborn Monitoring Standardized Procedure	Practice Change	
3. Elective Surgery Pre-Admission MRSA Screening Protocol	3 Year Review, Practice Change	
4. Hypoglycemia Management in the Adult Patient Standardized Procedure	3 Year Review, Practice Change	
5. Insulin Therapy Administration Procedure	3 Year Review, Practice Change	
6. Insulin, Use of Concentrated	NEW	
7. Nutrition Education of Patients Policy	3 Year Review	
8. Percutaneous Tracheostomy Assist Procedure	3 Year Review	
9. Rapid Response Standardized Procedure	3 Year Review, Practice Change	
10. Sedation Analgesia Used During Therapeutic or Diagnostic Procedures	3 Year Review, Practice Change	
11. Self-Administered Continuous Subcutaneous Infusion of Insulin (Insulin Pump Therapy) for the Acute Care Patient Policy	3 Year Review, Practice Change	
12. TDAP (Tetanus, Diptheria & Pertussis) Vaccine Standardized Procedure	3 Year Review, Practice Change	
13. Titrating Medications, Adult Patients Policy	3 Year Review, Practice Change	
Administrative Policies & Procedures		
1. Nondiscrimination of patients in Health Programs and Activities Policy	NEW	
2. Policy Procedure Approval for Patient Care Services and Department Specific	NEW	
Unit Specific		
Medical Staff		
1. Medical Staff Funds 8710-572	NEW	
Outpatient Infusion Center		
1. Emergency Evacuation	3 Year Review, Practice Change	
2. Fire Alarm Evacuation Plan	3 Year Review, Practice Change	
Women & Newborn Services		
1. Medication Administration, NICU - Combined	DELETE	
Formulary Requests		

PROFESSIONAL AFFAIRS COMMITTEE
May 11, 2017

CONTACT: Sharon Schultz, CNE

Policies and Procedures	Reason	Recommendations
1. Cepastat	Remove from Formulary	
2. Donnatal	Remove from Formulary	
3. Urea	Addition to Formulary	
Pre-Printed Orders		
1. Anticoagulation Orders 8711-4518	DELETE	
2. Laparoscopic Surgery Orders 8711-4542	DELETE	
3. MRI Contrast Medication Orders	Practice Change	

Tri-City Medical Center
Oceanside, California

PATIENT CARE SERVICES ~~POLICY MANUAL~~

ISSUE DATE: 10/10	**SUBJECT:** ~~ANTIBIOTIC~~ ANTIMICROBIAL STEWARDSHIP
REVISION DATE: 05/13	**POLICY NUMBER:** IV.WW

Department Approval:	**12/16**
Clinical Policies & Procedures Committee Approval:	**~~05/13~~01/17**
Nurse Executive Council Approval:	**~~05/13~~02/17**
Medical Staff Department/Division Approval:	**n/a**
Pharmacy & Therapeutics Committee:	**~~05/13~~03/17**
Medical Executive Committee Approval:	**~~06/13~~04/17**
Professional Affairs Committee Approval:	**07/13**
Board of Directors Approval:	**07/13**

A. **PURPOSE:**

~~1. Antibiotic stewardship is a process used to achieve two primary goals: 1) to minimize adverse effects and events secondary to the use of antimicrobial agents; 2) to reduce, minimize, and/or prevent the emergence of resistant microorganisms. A secondary goal of decreasing the cost of antibiotic drug expenditures is a consequence of the two primary goals. Antibiotic stewardship is a multi-faceted approach in which infection control, medical staff, microbiology, infectious diseases, clinical informatics, hospital administration, and pharmacy work together to achieve these goals.~~

1. **To provide a process in order to promote judicious use of antimicrobials**
2. **The goals of the Antimicrobial Stewardship Program (ASP) include, but are not limited to:**
   a. **Minimize adverse effects and events secondary to the use of antimicrobial agents.**
   b. **Reduce, minimize, and/or prevent the emergence of resistant microorganisms.**

~~B. DEFINITIONS:~~

~~1. **Antibiotic stewardship** is the optimal use of antimicrobial agents to prevent or minimize adverse effects of antimicrobials and prevent the emergence of resistant microbes.~~

~~2. **Antibiotic surveillance** is the process of prospectively and retrospectively reviewing the use of antibiotic agents. The prospective process may involve contacting the prescriber with recommendations for optimizing current antibiotic therapy on an individual patient. The retrospective review will include medication use evaluations (MUEs) presented to a Medical staff Committee for review and recommendations.~~

~~3. **The Pharmacy & Therapeutics Committee** will be the medical staff committee through which these activities are reported.~~

~~4. **Restricted antimicrobial** is an antibiotic agent that the medical staff has determined should be restricted in use (either by prescriber or clinical indication). Please see pharmacy policy "Restricted Antimicrobials."~~

~~C. ELEMENTS OF ANTIBIOTIC STEWARDSHIP:~~

~~1. Medical Staff~~
~~a. Formulary review of antimicrobial agents~~
~~b. Policy and procedures~~
~~c. Prescribing~~
~~d. Retrospective reviews (MUEs)~~
~~2. Infection Control~~

~~a. Infection Control Activities~~
~~b. Quality indicators (C. difficile, vancomycin-resistant enterococcus, methicillin-resistant staphylococcus aureus, ventilator-associated pneumonia, etc)~~
~~c. Education~~

~~3. Pharmacy~~
~~a. Pharmacist review of all antibiotic orders~~
~~b. Renal dose adjustments~~
~~c. IV to Oral route conversion program~~
~~d. Prospective reviews (in conjunction with Infectious diseases)~~
~~e. Prepares retrospective reviews (MUEs)~~
~~f. Restricted antibiotic surveillance~~
~~g. Education~~

~~4. Infectious Diseases~~
~~a. Prospective reviews (in conjunction with Pharmacist)~~
~~b. Leadership~~
~~c. Education~~

~~5. Information Systems~~
~~a. Cerner antibiotic adverse drug event (ADE) prevention rules~~
~~b. Computerized alerts & warnings~~
~~c. Data generation and reporting~~

~~6. Microbiology~~
~~a. Culture and sensitivity reporting/alerting~~
~~b. Annual antibiogram~~

~~7. Administration~~
~~a. Financial support of program~~

~~D. REPORTING:~~

~~1. All reporting of quality indicators and other criteria associated with antibiotic use and antibiotic stewardship will occur quarterly at the Pharmacy & Therapeutics Committee of the medical staff.~~

B. POLICY:

1. A physician supervised multidisciplinary antimicrobial stewardship workgroup shall evaluate the judicious use of antimicrobials in accordance with guidelines established by the federal government and professional organizations.

2. Antimicrobial stewardship activities, outcomes, and all quality indicators shall be reported quarterly by the Infectious Disease physician or pharmacist to the Pharmacy Therapeutics Committee and Infection Control.

C. PROCEDURE:

1. Antimicrobial Stewardship Workgroup:
a. Clinicians:
i. A single physician leader, knowledgeable in the area of infectious diseases, responsible for program outcomes.
ii. A pharmacist leader, knowledgeable in the area of infectious diseases, will co-lead the program.
b. Infection Control:
i. Infection control activities
ii. Quality indicators (*C. difficile*, MDRO, device related infections, procedure related infections, etc)
c. Information Systems:
i. Computerized alerts &and warnings
ii. Data generation and reporting
d. Microbiology:
i. Culture and sensitivity reporting/alerting
ii. Annual antibiogram

e. Administration:
   i. Financial support of program

2. Antimicrobial Stewardship Activities:
   a. Prospective audit and feedback conducted by pharmacist leader in conjunction with physician leader.
      i. This process involves prospectively reviewing the use of antimicrobial agents and contacting the prescriber with recommendations for optimizing current antimicrobial therapy on an individual patient.
   b. Development and implementation of a restricted antibiotic policy (Refer to Pharmacy policy "Restricted Antimicrobials").
   c. Surveillance and trending of antimicrobial use patterns and quality indicators.
   d. Education to clinicians and staff:
      i. Development of evidence based, institution-specific guidelines for the treatment of common infections~~.~~.
   e. Other activities:
      i. IV to Oral route conversion program.
      ~~i.~~ii. Renal dose adjustment of antimicrobials.
      ~~ii.~~iii. Preparation of retrospective reviews (i.e. Medication Use Evaluation).

~~B.~~D. REFERENCES:

1. Barlam TF, Cosgrove SE, Abbo LM, et al. Implementing an Antibiotic Stewardship Program: Guidelines by the Infectious Diseases Society of America and the Society for Healthcare Epidemiology of America. Clin Infect Dis 2016; 62:e51.
~~1.~~2. Centers for Disease Control and Prevention. Core Elements of Hospital Antibiotic Stewardship Programs. http://www.cdc.gov/getsmart/healthcare/implementation/core-elements.html (Accessed on December 12, 2016).

A. **Attachment A**

CERNER ANTIBIOTIC SPECIFIC ADE PREVENTION RULES:

ADE_ASYNC_MRSA_1- Asynchronous alert that prints when a bacterial culture results positive for Methicillin Resistant Staphylococcus Aureus (MRSA) and the patient is not on Vancomycin. The pharmacist should contact the physician immediately and suggest an appropriate antibiotic.

ADE_ASYNC_DAPTOMYCIN- Asynchronous alert triggers for elevated CPK results to ensure the proper monitoring of Daptomycin in relation to possible myopathy. Prints an alert to the pharmacist with the manufacture recommendations for weekly CPK levels and more frequently if patient is also on statin.

ADE_ASYNC_ORGANNOANTIBIOTIC- Asynchronous alert that prints when a culture result is positive for bacteria that is resistant to the patient's current antibiotics or in cases where the culture is positive and the patient is not on any antibiotic.

ADE_ASYNC_VRE_2- Asynchronous alert that prints when a bacterial culture results positive for Vancomycin Resistant Enterococcus (VRE) and the patient is not on linezolid or quinapristin/dalfopristin. The pharmacist should contact the physician immediately and suggest an appropriate antibiotic.

ADE_CREATCHANGEDRUG_T- Asynchronous alert that prints when there is a 20% increase in serum creatinine or creatinine clearance and the patient is on a nephrotoxic medication.

ADE_CREATRENALDRUG- Asynchronous alert that prints when there is a serum creatinine > 1.5 or creatinine clearance < 30 and the patient is on a medication that requires dosage adjustment for decreased renal function.

ADE_RENALDRUGCREAT_1- Synchronous alert that appears on screen when a medication that requires adjustment for decreased renal function is being added to a patient with a serum creatinine > 1.5 or with a creatinine clearance < 30. This alert notifies the pharmacist that dosage adjustment is required before the medication order is entered.

ADE_SYN_DAPTOMYCIN- Synchronous alert that appears on screen when ordering daptomycin and there is a CPK level greater than 769. This also triggers a printed Clinical Note to be placed in the chart for the physician.

ADE_SYN_ROCEPHIN_TPN- Alerts the pharmacist if there is either an active order for TPN when entering ceftriaxone or vice versa. The TPN entry is only used for charting and billing purposes at Tri-City Medical Center therefore does not evoke the Multum calcium drug interaction.

PHA_NO_ALLERGIES- Synchronous alert that appears on screen when the pharmacist opens a patient's profile in Med Manager and they either do not have allergies listed or the allergies are free text. Free text allergies will not be caught by Multum's drug-allergy program.

Tri-City Medical Center
Oceanside, California

PATIENT CARE SERVICES

STANDARDIZED PROCEDURE: BLOOD GLUCOSE NEWBORN MONITORING

I. **POLICY:**

A. Function: To screen blood glucose (BG) levels in **infants of diabetic mothers, late-preterm, small for gestational age, large for gestational age, and term symptomatic infants**~~at risk late preterm (36 0/7-36 6/7), at risk term or symptomatic term infants~~ in order to correct or manage neonatal hypoglycemia.

B. Circumstances: Infants 36 0/7-36 6/7 weeks -up to term, infants at ~~high~~ risk, **or symptomatic term infants with no risk factors.**

1. Setting: Labor and Delivery (L&D), Transition Nursery and Mother Baby

C. Background: Neonatal glucose concentrations decrease after birth, to as low as 30 mg/dL during the first 1 to 2 hours after birth, and then increase to higher concentrations, generally above 45 mg/dL by 12 hours after birth.

D. See Patient Care Services (PCS) Glucose **Point of Care** (POC) Testing using the Nova Stat Strip Blood Glucose Meter Procedure for step by step instructions for blood glucose machine.

II. **PROCEDURE:**

A. Identify infants at risk and implement monitoring as appropriate.

1. POC BG is performed for the following ~~at risk~~ infants **classified as at risk**:
   a. Infants of diabetic mothers (IDM)
   b. Large for gestational age (LGA) infants (greater than or equal to 4 kg or 8lbs~~;~~ 13oz)
   c. Small for gestational age (SGA) infants (less than or equal to 2.5 kg or 5lbs~~;~~ 9oz)
   d. Late Preterm **(LPT)** infants – (36 0/7 to 36 6/7 weeks gestation) ~~the gestational~~
   ~~e. age that would be kept in these areas versus transferring to NICU)~~
   ~~f.~~**e.** Post-term infants - (greater than 42 weeks gestation)
   f. Intrauterine Growth Restriction (IUGR) infants
   g. **Infants with signs and symptoms of hypoglycemia: (irritability, tremors, jitteriness, exaggerated Moro reflex, a high-pitched cry, seizures, lethargy, floppiness, cyanosis, apnea and poor feeding**
2. Monitoring **and treatment** is based on hours of age~~, and~~ risk factors**, and symptoms.**

B. Feed at risk infants by 1 hour of age**. If unable to feed in the first hour, notify provider immediately.**

1. Utilize breastfeeding first. ~~and then~~ ~~if being~~**Supplement with** formula **if needed.** ~~fed do not give more than 10 mL at a time in the first 24 hours of life.~~

C. Perform initial **POC BG** screen 30 minutes after the~~initial~~ **first** feed~~ing~~ by performing **a** heel stick per PCS Collection of Blood Specimen by Skin Puncture procedure.

~~1. If initial screen is less than 25 mg/dL, call provider for orders to transfer to NICU~~
~~2. If initial screen 25 mg/dL- 45 mg/dL feed and re-check in 1 hour.~~
~~If initial screen is greater than 45 monitor POC BG before feedings.~~

D. **From birth to 4 hours of age**

1. If infant is symptomatic with a POC BG less than 40, call provider for assessment or NICU consult.

2. If infant is asymptomatic, but falls into one of the risk factor categories above:
   a. If POC BG is greater than or equal to 40 continue feeds every 2 to three hours screening the glucose prior to each feed

Department Review	Clinical Policies & Procedures	Nurse Executive Committee	Division of Neonatology	Department of Pediatrics	Pharmacy & Therapeutics Committee	Inter-disciplinary Committee	Medical Executive Committee	Professional Affairs Committee	Board of Directors
12/14, 09/16	03/15, 10/16	04/15, 10/16	05/15, 01/17	05/15, 02/17	03/17	09/15, 04/17	09/15, 04/17	10/15	10/15

b. **If initial screen is less than or equal to 39/dL, re-feed immediately, and re-check POC BG 1 hour after feed ends.**
   i. **If follow-up POC BG is less than 25 mg/dL, call provider for assessment or NICU consult.**
   ii. **If follow up POC BG is 25-39mg/dl, re-feed immediately, and re-check POC BG 1 hour after feed ends.**
   iii. **If at any time the POC BG falls below 405mg/dl, re-feed immediately, and re-check POC BG 1 hour after feed ends and continue to follow the steps above based on the POC BG result.**
   ~~i.~~iv. **If follow up POC BG is greater than or equal to 40mg/dl, continue feeds every 2-3 hours and screen POC BG prior to each feed until 3 consecutive values greater or equal to 45mg/dl are achieved not counting the initial POC BG.**

E. From 4 hours to 24 hours of age:
1. **If pre-prandial screen is greater than or equal to 45, continue to check POC BG prior to each feed until 3 consecutive values greater than or equal to 45 mg/dL are achieved not counting the initial POC BG**
2. **If pre-prandial screen is less than or equal to 44 mg/dL, re-feed immediately, and re-check POC BG 1 hour after feed ends.**
   a. **If follow-up POC BG is less than 35 mg/dL, 1 hour after feed ends, then call provider for assessment or NICU consult.**
   b. **If pre-prandial screen is 35-44 to mg/dL, re-feed immediately and re-check POC BG 1 hour after feed ends.**
   c. **If follow up POC BS is greater than or equal to 45 mg/dL, continue to monitor POC BG prior to each feed until 3 consecutive values greater than or equal to 45mg/dL are achieved not counting the initial POC BG.**

~~E. Monitor at-risk infants by performing the following:~~
~~1. Symptomatic Infant: (irritability, tremors, jitteriness, exaggerated Moro reflex, a high-pitched cry, seizures, lethargy, floppiness, cyanosis, apnea, poor feeding) do the following:~~
   ~~a. Perform a POC BG~~
   ~~b. Stat serum glucose~~
   ~~c. POC BG less than 45 mg/dL, call provider . orders to transfer to NICU~~
~~2. IDM and LGA infants prior to each feed from 4-hours , of age to 12 hours of age~~
~~3. Late Preterm infants (36 0/7-36 6/7 weeks gestation) or SGA prior to each feed from 4 hours of age to until 24 hours of age~~
~~4. Continue feeds every 2 to 3 hours and perform POC BG prior to every feed~~
   ~~a. POC BG less than 35 mg/dL~~
      ~~i. STAT serum glucose~~
      ~~ii. Call provider for orders to transfer to NICU.~~
~~5. POC BG is greater than 35 mg/dL, but less than 45 mg/dL~~
   ~~a. Re-feed~~
   ~~b. Repeat POC BG prior to next feeding~~
   ~~c. If POC BG less than 45 call PROVIDER for further feeding and/or fluid orders and continue to check blood sugar prior to next feed.~~

III. DOCUMENTATION:

A. Blood glucose results in the electronic health record (EHR)
B. Patient assessment and response to feeding or interventions
C. Any complications or adverse side effects
D. Provider notification and follow-up orders for any critical lab value.
E. When administering medications or implementing orders from a standardized procedure the nurse shall enter the orders electronically unless a screening process triggers the appropriate order(s).

IV. **REQUIREMENTS FOR CLINICIANS INITIATING STANDARDIZED PROCEDURE:**

~~A. Current California RN license.~~

~~B.~~**A.** Education: **Current California License**~~on hire~~

~~C.~~**B.** Initial Evaluation: **New Hire Orientation**~~on hire~~

~~D.~~**C.** Ongoing Evaluation: annually **with Skills Lab**

V. **DEVELOPMENT AND APPROVAL OF THE STANDARDIZED PROCEDURE:**

A. Method: This Standardized Procedure was developed through collaboration with Nursing, Medicine, and Administration.

B. Review: Every two (2) years.

VI. **CLINICIANS AUTHORIZED TO PERFORM THIS STANDARDIZED PROCEDURE:**

A. All healthcare providers in Women and Newborn Services who have successfully completed requirements as outlined above are authorized to direct and perform.

VII. **RELATED DOCUMENT(S):**

A. Blood Glucose Newborn -Screening and Management Guidelines of Glucose Homeostasis in Infants of Diabetic Mothers (IDM), Late-Preterm (LPT), Small for Gestational Age (SGA), Large for Gestational Age (LGA), and Term Symptomatic Infants

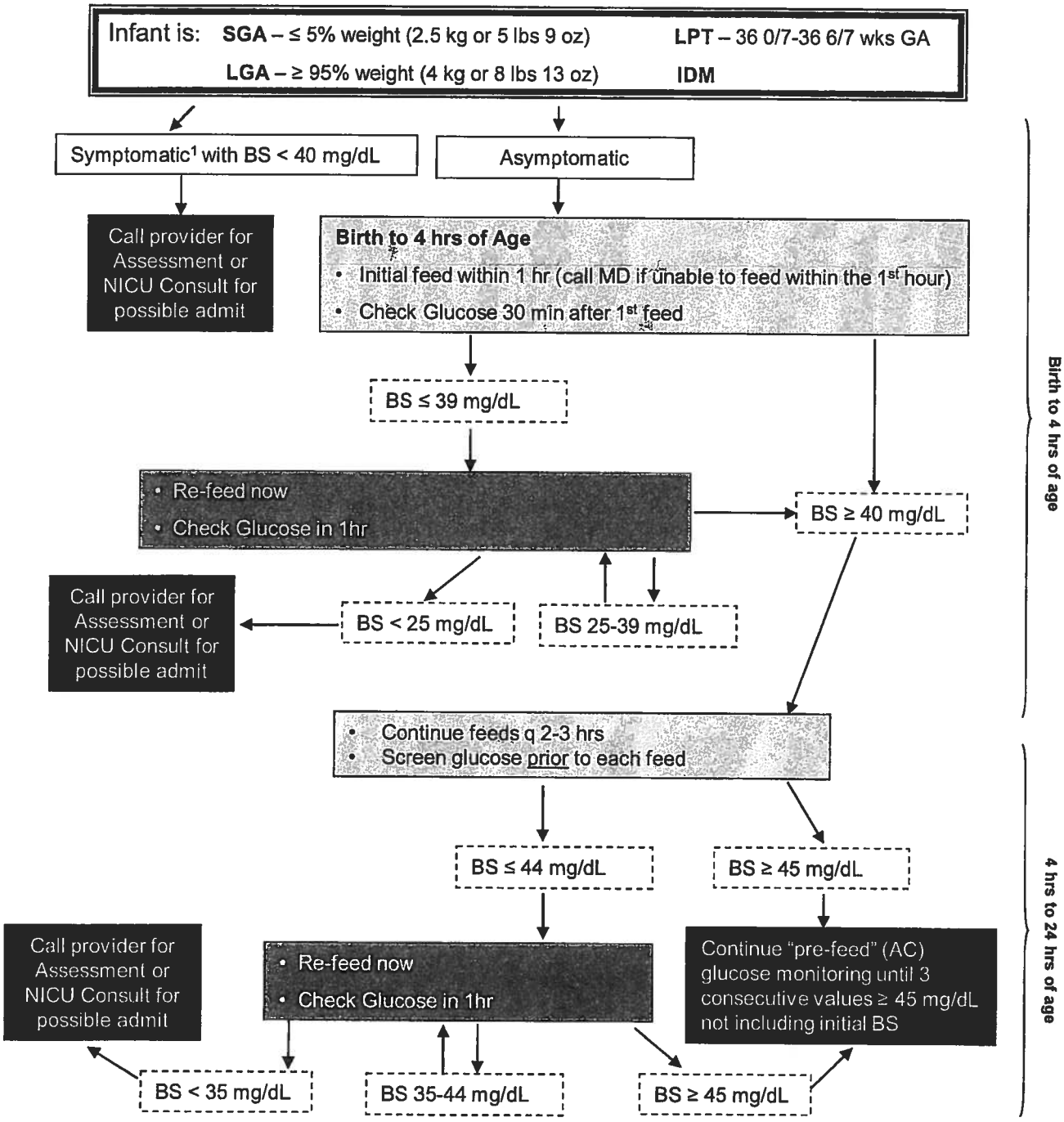
~~A.~~**B.** PCS Glucose POC Testing using the Nova Stat Strip Blood Glucose Meter Procedure

~~B.~~**C.** PCS Collection of Blood Specimen by Skin Puncture procedure

VIII. **REFERENCES:**

A. American Academy of Pediatrics. (2011). Postnatal Glucose Homeostasis in Late Preterm and Term Infants. Pediatrics. 127(3): 575-579. Retrieved online from pediatrics.aapublications.org.

Screening and Management Guidelines of Glucose Homeostasis in Infants of Diabetic Mothers (IDM), Late-Preterm (LPT), Small for Gestational Age (SGA), Large for Gestational Age (LGA), and Term Symptomatic Infants



[1]Symptoms of hypoglycemia include: irritability, tremors, jitteriness, high pitched cry, seizures, lethargy, floppiness, cyanosis, apnea, and poor feeding (applicable to any infant showing symptoms of hypoglycemia).

Further management of symptomatic infants is **at the discretion of the provider** based on severity of symptoms and risk factors. May utilize the same management algorithm for asymptomatic patients as guidance or reference.

*This algorithm serves only as a screening and management guideline. At any time **the practitioner may deviate** from the guidelines noted above.

Updated 5/5/16

Tri-City Medical Center
Oceanside, California

~~STANDARDIZED PROCEDURES MANUAL~~PATIENT CARE SERVICES

STANDARDIZED PROCEDURE: ELECTIVE SURGERY PRE-ADMISSION MRSA SCREENING

I. **POLICY:**

A. To prevent and control the spread of Methicillin Resistant Staphylococcus aureus (MRSA), an Infection Control MRSA Screening Protocol has been established. Antimicrobial resistant pathogens such as MRSA have become a common hospital and community problem. Identified antibiotic resistance is one of the key microbial threats to health in the United States, and decreasing the inappropriate use of anti-microbial is a primary solution to address this threat. The initiation of a screening and surveillance program is one of the ~~CDC's (~~Center for Disease Control and Prevention~~)~~ **(CDC's)** top priorities to eradicate MRSA.

B. Tri-City Medical Center **(TCMC)** has developed a MRSA protocol based on evidence-based practice to prevent anti-microbial resistance in the community as well as the health care setting based on CDC guidelines, recommendations, and other scientific research. It is the goal of Tri-City Medical Center to:

1. Perform active surveillance testing by screening ~~of~~ all patients **scheduled for the following elective procedures** at their pre-operative education appointment~~: having procedures listed in Attachment A~~
   a. **Total hip arthroplasty**
   b. **Total knee arthroplasty**
   c. **Total shoulder arthroplasty (Primary and Reverse)**
   d. **Instrumented cervical spine procedures**
   e. **Instrumented lumbar spine procedures**
2. Educate the ~~above population of~~**applicable** patients and their families about MRSA and its precautions.
3. Implement Contact Precautions per isolation protocol for patients who are colonized or infected.

II. **PURPOSE:**

A. To ensure that patients who are known or suspected to be at risk for infection, or have demonstrated colonization with MRSA are appropriately managed based on approved protocol to reduce post-operative surgical site infections (SSIs).

B. To decrease the incidence of post-operative surgical site infections (SSIs).

III. **DEFINITION(S):**

A. Carrier - a person who is colonized with ~~methicillin-resistant Staphylococcus aureus~~**MRSA**. The organism may be present in the nares (nose), sputum, urine, an open wound, the stool, or on the skin, without clinical manifestations of the disease. A carrier may transmit the organism to another person through direct contact, usually via contact with the hands.

B. Colonization - Presence of MRSA on tissue without the presence of symptoms or clinical manifestations of illness or infection. A carrier is colonized with MRSA.

C. Decolonization - Elimination of MRSA carrier state through the use of infection control measures and/or antibiotics. This decreases the risk of transmission to high-risk individuals (immune-compromised or otherwise highly susceptible persons) or to others in an outbreak situation.

D. Eradication - Elimination of infections and/or colonization of MRSA in a facility through implementation of infection control and hygiene measures and/or antibiotics.

Department Review	Clinical Policies & Procedures	Nurse Executive Committee	Operating Room Committee	Pharmacy and Therapeutics	Interdisciplinary Committee	Medical Executive Committee	Professional Affairs Committee	Board of Directors
12/13	1/14, **04/16**	1/14, **04/16**	**11/16**	1/14, **02/17**	5/14, **04/17**	5/14, **04/17**		5/14

E. Infection - Invasion and multiplication of MRSA in tissue with the manifestation of clinical symptoms of infection such as white blood cell counts, fever, lesions, furuncles, drainage from a break in skin integrity, and erythema. Infection warrants treatment.

F. Invasive Disease - Clinical manifestation of symptoms caused by MRSA such as furuncles, cellulitis, pneumonia, carbuncles, septicemia, osteomyelitis or vascular line infection.

G. Methicillin-Resistant Staphylococcus aureus (MRSA) - A gram-positive bacteria that grows in cluster formation, like grapes; growth of MRSA is not inhibited by methicillin or oxacillin, and many other antibiotics.

H. Screen - A nasal swab collected on or before admission to the hospital or operating room to determine whether a patient is colonized with MRSA.

I. Culture - A specimen that can be collected from various sites on a patient's body (i.e.: nose, perineum, groin, wound, sputum, anus, etc.), though usually from the nose/nostrils to determine the presence of MRSA organisms.

J. Surgical Site Infection (SSI) - infection of superficial surgical incision involving skin or subcutaneous tissue, deep incision involving fascia and/or muscular layers, and organs. TCMC follows the m~~o~~ust current version of the CDC/**National Healthcare Safety Network** (NHSN) definitions of infection.

K. Surveillance - Monitoring of patient data to determine incidence and prevalence of infections and distribution in a facility. ~~TCMC follows the must current version of the CDC/NHSN definitions of infection including post-operative SSI monitoring.~~

IV. PROCEDURE:

A. To the extent possible, patients scheduled for the following elective procedures shall be screened via nasal swab at minimum 10 days prior to date of surgery with the intention of maximizing preventative practices such as decolonization of MRSA.
   1. Total hip arthroplasty
   2. Total knee arthroplasty
   3. Total shoulder arthroplasty (Primary and Reverse)
   4. Instrumented cervical spine procedures
   5. Instrumented lumbar spine procedures

B. The **Registered Nurse** (RN) conducting the patient's pre-operative appointment shall obtain nares culture and enter the order for nasal swab via Computerized Provider Order Entry.
   1. Patients who are screened for MRSA shall receive education on MRSA decolonization in the event the culture is positive (see Patient Information on MRSA Screening and Decolonization).

C. The results of the nasal swab will be communicated to the patient's provider.
   1. The provider/provider's office will notify the patient of positive results and provide necessary prescriptions and additional patient education.

V. PROCEDURE FOR NARES CULTURES:

A. Swab both nares with attention to swabbing the anterior portion of the nares.
   1. Use one culturette swab for both nares.

B. Swab nose using same swab to both nostrils being careful not to touch outside of nose.

C. Insert swab ½ – 1 inch into nares gently rotating swab in a clockwise then counter clockwise 2 – 5 times pressing gently into the nasal septum.

D. Return swab into transport medium being careful not to touch sides of container.

E. Label the culture in accordance with Patient Care Services procedure, *Specimen Handling* and include "rule out MRSA," this allows the lab to screen for only this organism.

~~I.~~VI. ~~RESOURCES AVAILABLE ON INTRANET~~RELATED DOCUMENTS:

A. Patient Information on MRSA Screening and Decolonization

~~II.~~VII. SURVEILLANCE OF SURGICAL SITE INFECTIONS:

A. Surgical site infection surveillance is done as required by the California Department of Public Health (CDPH) using the most recent CDC/ NHSN protocols. Data is entered into the CDC/NHSN database and is published annually by CDPH. Data reports can be provided by Infection Prevention and Control to departments or committees upon request.

~~III.~~VIII. REQUIREMENTS FOR CLINICANS INITIATING STANDARDIZED:

A. Initial training and annual validation through Skills Lab

~~IV.~~IX. DEVELOPMENT AND APPROVAL OF THE STANDARDIZED PROCEDURE:

A. This procedure has been developed by ~~the Clinical Manager of~~ Surgical Services ~~and Pre-Operative Education~~, with approval from the Senior Director of Nursing, the Department of Orthopedics, the Department of Anesthesia, and the **Operating Room** (OR) Committee.

~~V.~~X. CLINICIANS AUTHORIZED TO PERFORM THIS STANDARDZIED PROCEDURE:

A. RN's in the Pre-Operative Admission Area (Pre op Hold) and Pre-Operative Education (Pre op Teach) Departments

~~VI.~~XI. REFERENCES:

A. **Chicago Journals (2008). Strategies to Prevent Surgical Site Infections in Acute Care Hospitals. *Infection Control and Hospital Epidemiology, 29(1)* S51-S61 http://chfs.ky.gov/nr/rdonlyres/ff8bdcc5-441a-4067-9666-8a39588df232/0/sheassicompendium2008.pdf**

~~A.~~B. **Bebko, S.P., Green, D.M., Awad, S.S. (2015) Effect of a Preoperative Decontamination Protocol on Surgical Site Infections in Patients Undergoing Elective Orthopedic Surgery with Hardware Implantation. *JAMA Surg, 150(5)*, 390-395 doi:10.1001/jamasurg.2014.3480 http://jamanetwork.com/journals/jamasurgery/fullarticle/2173311**

MRSA Screening and Decolonization
Orthopaedic and Spine Institute

What is MRSA?

- MRSA stands for Methiciliin-resistant *Staphylococcus aureus* (MRSA). MRSA is a germ that does not go away with standard, "first-line" antibiotics. The germs colonize (stay in your body, usually nostrils) and can be present without causing infection.

Who should be screened for MRSA?

- All patients having scheduled surgery with placement of a permanent implantable device should be screened.

How do you know if you are a MRSA carrier?

- By doing cultures of your nostrils at least 7-10 days before your surgery we can determine if decolonization is appropriate for you. If have a positive result, your physician will provide with you a prescription for a medication called Mupirocin.

What does a positive result mean to me?

- Presence of this bacteria does not necessarily mean that you have an infection, or that it is going to cause you harm. However, sometimes decolonization is appropriate as a precautionary measure to help prevent infection post-operatively.

What is the decolonization process?

There are some simple things that can be done to decrease the number of germs present:

- *2% chlorhexidine showers-* Patients who are positive for MRSA will be instructed to wash with 2% chlorhexidine (Hibiclens) solution daily for 5 days prior to hospital admission.
- Bactroban 2% nasal ointment (Mupirocin) twice a day for 5-7 consecutive days.
- *Clean your sheets, clothing, and home-* Wear clean washed clothing daily for 5 days. Wash sheets twice or more during the 5-7 days leading up to surgery. Wash eating utensils well after each use. Skin cells that are carrying MRSA are continuously shed and may collect in clothing, bed linen, and eating utensils, so it is important to keep these things clean.

Instructions for CHG (chlorhexidine gluconate) wash

- Shower with CHG (chlorhexidine) soap for 5 days before your surgery, the night before your surgery, and again the morning of your surgery.
- Wash your hair as usual with your normal shampoo.
- After wetting your body, step away from the water, pour half the bottle of CHG soap onto a wet wash cloth and apply soap to body, only from the neck down.
- DO NOT use the CHG soap on face, hair or genitals to avoid irritation to those areas.
- Important: Leave the CHG soap on for a minimum of 5 minutes. Rinse well.
- Dry with a fresh, clean, dry towel.
- Repeat this process the morning of your surgery.
- Put on fresh, clean clothes.
- Do not shave anywhere on your body, other than face, for two days before surgery to avoid skin irritation.
- Do not use lotion, powder, perfume or aftershave after your showers.

Note: If you are allergic to chlorhexidine, you may shower with an over the counter antibacterial soap that does not irritate your skin.

Instructions for application of intranasal ointment (mupirocin 2%)

- Wash your hands before and after applying the ointment.
- Put a pea sized amount on a cotton applicator and apply to the inside of your nostril. Repeat for the other nostril.

- **Do not reuse the cotton tip after it has been inserted in your nostril. Use the "clean" end of the cotton applicator, or use a new one for the second nostril.**
- **After application, press the nostrils together and release repeatedly for 1 minute to distribute the ointment throughout the nose.**
- **Wash your hands.**
- **Do not use any medicines inside the nose (such as nasal sprays) during the 5-7 days you are using the ointment.**
- **This must be repeated 2 times a day for 5 days.**

Family and friends
MRSA is not a risk for healthy people. There are no restrictions on normal social contact or activities, and you are not a risk to other members of your family or friends. If there are any activities that you are concerned about, i.e. your work or a visit to a hospital or care home please contact your surgeon for advice.

Any questions, contact your surgeon

Tri-City Medical Center
Oceanside, California

PATIENT CARE SERVICES

STANDARDIZED PROCEDURE: HYPOGLYCEMIA MANAGEMENT IN THE ADULT PATIENT

I. **POLICY:**

A. Function: Management of the adult patient with hypoglycemia.

B. Circumstances:

1. Setting: Tri-City ~~Medical Center~~ **Healthcare District using hospital approved point of care blood glucose meter**

C. Excludes: Patients on intravenous insulin infusion.

II. **ASSESSMENT:**

A. Assess patient for hypoglycemia:

1. Blood glucose less than 70 mg/dL with or without symptoms.
2. Early adrenergic symptoms may include pallor, diaphoresis, tachycardia, shakiness, hunger, anxiety, irritability, headache, dizziness
3. Later neuroglycopenic symptoms may include confusion, slurred speech, irrational or uncontrollable behavior, extreme fatigue, disorientation, loss of consciousness, seizures, pupillary sluggishness, decreased response to noxious stimuli.

III. **TREATMENT ~~FOR DIABETIC PATIENT~~:**

A. Treat if the point of care (POC) blood glucose is:

1. ~~I~~Less than 70 mg/dL~~:~~ **for the diabetic patient, non-diabetic patient and outpatient**

~~A.~~**2. Less than 60 mg/dL for the pregnant patient during all phases of the pregnancy**

B. If patient is conscious and able to tolerate oral intake, give one 15 gram tube of glucose gel. ~~.~~**May give 4 ounces orange or apple juice if patient refuses glucose gel.**

1. **If the POC blood glucose was less than 50 mg/dL give an additional 15 gram tube of glucose gel (total of 30 grams of glucose gel). May give additional 4 ounces orange or apple juice if patient refuses glucose gel (total of 8 ounces orange or apple juice).**

~~2.~~**C.** If patient is NPO or unable to tolerate oral intake or has a decreased level of consciousness, administer:

1. 30 mL of 50% Dextrose intravenously (IV) at a rate of 10mL per minute.

a. **If the POC blood glucose was less than 50 mg/dL give an additional 20 mL of 50% dextrose (total of 50 mL of 50% dextrose)**

~~b.~~**2.** If no IV access, Glucagon 1 mg subcutaneously (SQ) or intramuscularly (IM) **times one (do not repeat).**

D. Recheck POC blood glucose **in** 15**-30** minutes after treatment.

1. If greater than 70 mg/dL, no additional treatment required.

~~3.~~**2.** If still less than 70 mg/dL:

a. Repeat above treatment

~~a.i. For outpatient, notify physician/Allied Health Professional (AHP) for subsequent orders before giving additional treatment~~

b. Obtain serum blood glucose to verify ~~that the treatment was effective.~~ **blood glucose level**

c. If repeated POC blood glucose and initial POC blood glucose was less than 50 mg/dL notify physician and request a 10% dextrose infusion

~~4.~~**E.** Notify the attending physician/**AHP** immediately only if treatment is ineffective, otherwise notify physician of hypoglycemic episode(s) prior to next dose of scheduled insulin or hypoglycemic

Department Review	Clinical Policies & Procedures	Nurse Executive Council	Diabetic Task Force	Pharmacy and Therapeutics	Interdisciplinary Committee	Medical Executive Committee	Professional Affairs Committee	Board of Directors
08/12	09/12, 4/15, **01/17**	09/12, 4/15, **02/17**	05/15,12/16, **02/17**	11/12, 05/15; **03/17**	01/13, 09/15, **04/17**	02/13, 09/15, **04/17**	10/15	02/13; 10/15

agent.

~~B.~~**F.** Treatment of serum (lab draw) blood glucose if less than 70mg/dL:

1. Because serum blood glucose is resulted at least 40 minutes (or more) after the blood is drawn, recheck with POC blood glucose prior to treatment. If less than 70 mg/dL, treat as outlined above.

~~IV. TREATMENT FOR NON-DIABETIC PATIENT AND OUTPATIENTS:~~

~~A. Treat if the POC blood glucose is less than 70 mg/dL:~~

~~1. If patient is conscious and able to tolerate oral intake, give one 15 gram tube of glucose gel.~~

~~2. If patient is NPO or unable to tolerate oral intake or has a decreased level of consciousness, administer:~~

~~a. 30 mL of 50% Dextrose intravenously (IV) at a rate of 10mL per minute.~~

~~b. If no IV access, Glucagon 1 mg subcutaneously (SQ) or intramuscularly (IM)~~

~~3. Recheck POC blood glucose in 15-30 minutes after treatment. If still less than 70 mg/dL:~~

~~a. Notify provider for subsequent orders~~

~~b. Obtain serum blood glucose to verify blood glucose level. that the treatment was effective.~~

~~4. Notify the attending physician immediately only if treatment is ineffective, otherwise notify physician of hypoglycemic episode(s) prior to next dose of scheduled insulin or hypoglycemic agent.~~

~~B. Treatment of serum (lab draw) blood glucose if less than 70mg/dL:~~

~~1. Because serum blood glucose is resulted at least 40 minutes (or more) after the blood is drawn, recheck with POC blood glucose prior to treatment. If less than 70 mg/dL, treat as outlined above.~~

~~V. TREATMENT FOR PREGNANT PATIENT:~~

~~A. Treat if the POC blood glucose is less than 60 mg/dL during all phases of pregnancy:~~

~~1. If patient is conscious and able to tolerate oral intake, give one 15 gram tube of glucose gel.~~

~~2. If patient is NPO or unable to tolerate oral intake or has a decreased level of consciousness, administer:~~

~~a. 30 mL of 50% Dextrose intravenously (IV) at a rate of 10mL per minute.~~

~~b. If no IV access, Glucagon 1 mg subcutaneously (SQ) or intramuscularly (IM)~~

~~3. Recheck POC blood glucose in 15-30 minutes after treatment. If still less than 60 mg/dL:~~

~~a. Repeat above treatment~~

~~b. Obtain serum blood glucose to verify blood glucose level. that the treatment was effective.~~

~~4. Notify attending physician immediately only if treatment is ineffective, otherwise notify physician of hypoglycemic episode(s) prior to next dose of scheduled insulin or hypoglycemic agent.~~

~~B. Treatment of serum (lab draw) blood glucose if less than 60 mg/dL:~~

~~1. Because serum blood glucose is resulted at least 40 minutes (or more) after the blood is drawn, recheck with POC blood glucose prior to treatment. If less than 60 mg/dL, treat as outlined above.~~

I. DOCUMENTATION:

A. Document the following:

1. Document patient symptoms, glucose values, treatments, and patient's response to treatment and physician notification in the medical record.
2. When administering medications or implementing orders from a standardized procedure, the Registered Nurse shall enter the medication/order into the electronic health record as a standardized procedure.
   a. Not required if a screening process triggers the order.
3. Document administration of medications on the Medication Administration Record

II. **REQUIREMENTS FOR CLINICIANS PROVIDING INTERVENTIONS:**

A. Current California RN license.
B. Education and Training: Blood glucose analysis training using blood glucose monitoring device including hypoglycemia management.
C. Initial Evaluation: Orientation
D. Ongoing Evaluation: Annual blood glucose monitoring device review with return demonstration and hypoglycemia management.

III. **DEVELOPMENT AND APPROVAL OF THE STANDARDIZED PROCEDURE:**

A. Method: This Standardized Procedure was developed through collaboration with Nursing, Medicine, and Administration.
B. Review: Every two (2) years.

IV. **CLINICIANS AUTHORIZED TO PERFORM THIS STANDARDIZED PROCEDURE:**

A. All Registered Nurses (RNs) who have successfully completed requirements as outlined above are authorized to direct and perform Hypoglycemia Management Standardized Procedure.

V. **REFERENCES:**

A. California Diabetes and Pregnancy Program Sweet Success: Guidelines for Care. 2012. California Department of Public Health.
B. Rule of 15 endorsed by the ADA and Mayo Clinic, Complete Nurses Guide to Diabetes Care, second edition, ADA, 2009.
C. Diabetes Spectrum Volume 18, Number 1, 2005.
D. Hospital Practice, 2016, Volumen 44, No. 1, 1-8.
~~B.~~**E. Clinical Diabetes, Volume 34, Number 4, Fall 2016, American Diabetes Association.**

Tri-City Medical Center	Distribution: Patient Care Services
PROCEDURE:	**INSULIN THERAPY ADMINISTRATION**
Purpose:	To outline the nursing management of patients requiring insulin via intravenous (IV) infusion and/or subcutaneously.
Supportive Data:	Only regular insulin is administered intravenously. All insulin drips will be delivered by an infusion control pump. All insulin drips are mixed by the Pharmacy except in emergent or urgent situations. An insulin syringe must be used when preparing insulin for administration. Insulin (or any other additive) shall never be added to IV solutions that are already hanging or infusing.
Equipment:	1. IV infusion control pump and tubing 2. Labels for IV tubing and insulin solution

A. **PROCEDURE FOR INSULIN DRIP MANAGEMENT:**

1. Obtain baseline blood glucose.
2. Verify physician/**Allied Healthcare Professional (AHP)** order.
3. Administer regular insulin via continuous infusion pump.
   a. Attach pre-mixed insulin drip bag to IV pump tubing with date-change label
   b. Prime tubing
   c. Connect IV tubing to pump
   d. Program infusion rate (concentration is 100 units regular insulin per 100 mL of 0.9% sodium chloride) using infusion pump Guardrails™;
   e. Verify the following for accuracy with another registered nurse (RN) when hanging a new IV insulin bag and/or changing the rate of an insulin infusion:
      i. Pre-mixed insulin IV bag from pharmacy or insulin concentration when preparing the insulin drip urgently
      ii. Initial infusion rate
      iii. Blood glucose
   f. Connect tubing to infusion site
   g. Document in the **electronic health**~~medical~~ record **(EHR)** ~~(~~initiation of insulin order and include second witness ~~(~~see Patient Care Services (PCS) Medication Administration Policy~~)~~.
4. Monitor blood glucose as ordered by ~~physician~~**physician/AHP** and PRN.
5. Check blood glucose one hour after discontinuing an insulin drip, then every 2 hours times 2 or as ordered by the ~~physician~~**physician/AHP**.
6. Document blood glucose in ~~medical record~~**EHR.**
7. Administer subcutaneous insulin injection two hours prior to discontinuing an insulin drip as ordered by ~~physician~~**physician/AHP**.

B. **PROCEDURE FOR SUBCUTANEOUS INSULIN MANAGEMENT:**

Examples of Subcutaneous Insulin	Approximate Time of Action		
	Onset	Peak	Duration
Rapid-acting • Humalog (lispro) • NovoLog (aspart)	5 – 15 minutes	0.5 – 2 hours	2 – 5 hours
Short-acting • Humulin R® (regular) • Novolin R® (regular)	0.5 – 1 hour	2 – 5 hours	4 – 8 hours
Intermediate-acting • Humulin N® (NPH, isophane suspension) • Novolin N® (NPH, isophane suspension)	1 – 2 hours	4 – 12 hours	10 – 24 hours
Long-acting • Lantus® (glargine) • Levemir® (detemir)	~~1~~ **3** – ~~42~~ hours	None to slight	~24 hours

Department Review	Clinical Policies & Procedures	Nurse Executive Committee	Diabetes Task Force	Pharmacy & Therapeutics Committee	Medical Executive Committee	Professional Affairs Committee	Board of Directors
3/93; 9/08; 01/09; 11/11;12/13	12/11;12/13, **10/16, 02/17**	12/11;12/13, **10/16**, 02/17	**12/16**	**03/17**	1/12;3/14, **04/17**	2/12;4/14	2/12;4/14

1. **If the licensed nurse administering the insulin did not perform the blood glucose test they must verify the blood glucose in the EHR or glucose meter before administration.** ~~The licensed nurse that checks the blood glucose with a glucose meter is also responsible for administering the insulin and documenting the insulin administration in Cerner. Only the nurse who checks the blood glucose will administer the insulin to the patient.~~
   ~~1.~~**a. Insulin is time sensitive and must be given with 30 minutes of the blood glucose test. If it has been greater than 30 minutes the blood glucose must be re-checked before the insulin administration.**
2. Patients who are NPO and/or receiving parenteral nutrition or continuous tube feeding will have their blood glucose levels checked and correction insulin administered every **4 to** 6 hours ~~(0600, 1200, 1800, 2400)~~.
3. Patients receiving meals will have their blood glucose levels checked and insulin administered before meals (AC) and at bedtime (HS) (0800, 1130, 1730, 2100) **unless otherwise ordered.**
   a. Patients that are scheduled for early morning dialysis will also have their blood glucose levels checked and insulin administration at 0600 just before their early breakfast trays arrive.
4. Administer short-acting (regular) insulin 30 minutes before the meal for which it was ordered.
5. ~~ALWAYS a~~Administer rapid-acting insulin just prior to the meal **with meals per physician/AHP orders.**
6. Lantus® (glargine) or Levemir® (detemir) is usually dosed once daily at bedtime or twice a day at 0800 and 2100. Even though Lantus® and Levemir® are clear insulins, do not mix with other insulins.
7. Do not massage injection site after injecting insulin.
8. Administration from vials:
   a. Single Dose of Insulin:
      i. Verify correct type and dosage of insulin.
      ii. Check expiration date on insulin vial (see ~~Patient Care Services~~**PCS** Medication Administration Policy).
      iii. Mix intermediate-acting insulin, (NPH, isophane) by gently rolling the bottle between hands. (Do not shake). Do NOT mix Lantus® or Levemir® with other insulins.
      iv. After cleaning the top of the vial with an alcohol swab, withdraw dose as ordered by ~~physician~~**physician/AHP** after inserting air equal to the insulin dose into the vial.
      ~~v. Verify blood glucose and dose with a second witness (see Patient Care Services Medication Administration Policy).~~
      ~~vi.~~**v.** Inject insulin subcutaneously, preferably into abdomen.
      ~~vii.~~**vi.** Document in ~~medical record~~**EHR** ~~and include second witness (see Patient Care Services Medication Administration Policy)~~.
   b. Mixed Doses of Insulin (i.e., NPH + regular) in same syringe:
      i. Do NOT mix Lantus® or Levemir® with other insulins
      ii. Verify correct types and dosages of insulins
      iii. Check expiration dates on insulin vials. (see ~~Patient Care Services~~**PCS** Medication Administration Policy).
      iv. Clean the tops of both vials with an alcohol swab.
      v. Draw up an amount of air equal to the total amount of insulin ordered.
      vi. First inject the amount of air equal to the intermediate-acting insulin into that vial. Do not withdraw any insulin at this time.
      vii. Next inject the rest of the air into the vial of short- or rapid-acting insulin. Do not remove the needle from the vial. Withdraw the dose of short- or rapid-acting insulin.
      ~~viii. Verify blood glucose and dose with a second witness (see Patient Care Services Medication Administration Policy).~~

~~ix.~~**viii.** Insert the needle into the intermediate-acting insulin vial and withdraw the intermediate-acting dose.

~~x.~~**ix.** Inject insulin subcutaneously, preferably into abdomen.

~~xi.~~**x.** Document in ~~medical record~~**EHR** ~~and include second witness (see Patient Care Services Medication Administration Policy~~).

9. Insulin Pens:
   a. Policy:
      i. Insulin pens are for single patient use only and should not be shared with other patients.
      ii. Un-used Insulin pens are returned to pharmacy when patient is discharged per PCS Medication Administration Policy.
      iii. Insulin pens must be primed before each injection.
      iv. A new pen needle is used for each administration of insulin. Never use a syringe to withdraw insulin from an insulin pen.
      v. Insulin pens expire 28 days from date dispensed per Pharmacy label and are stored in the patient specific bins per PCS Medication Administration Policy.
   b. Procedure:
      i. Check expiration date on insulin pen.
      ii. Verify the insulin pen label matches the type of insulin ordered.
      iii. Verify the patient's name and ~~medical record~~**EHR** number matches the patient name and ~~medical record~~**EHR** number on the insulin pen. (Insulin pens are for single patient use only).
      iv. Remove pen cap from the insulin pen.
      v. Clean the rubber seal on the tip of the pen with an alcohol swab.
      vi. Pop the label and twist to remove the cap on the ~~Autoshield~~**safety pen** needle.
      vii. Line up the ~~Autoshield~~**safety pen** needle with the insulin pen, keeping the needle straight while pushing and then screwing the needle in clockwise onto the rubber seal.
      viii. Pull the cover of the ~~Autoshield~~**safety pen** needle straight off. Do not touch the white shield.
      ix. Prime the needle by dialing up a dose of 2 units
      x. Hold the pen with the ~~Autoshield~~**safety pen** needle pointing upward.
      xi. Tap the insulin reservoir to make any air bubbles rise up toward the needle.
      xii. Press the injection button all the way in and check to be sure insulin comes out of the needle tip.
      xiii. If insulin does not come out of the ~~Autoshield~~**safety pen** needle, repeat priming steps up to three times before changing the pen needle and trying again.
      xiv. If you are still unsuccessful, you may need another insulin pen.
      xv. After priming make sure the dial window reads "0" and then dial in the dose of insulin.
      xvi. ~~Verify blood glucose and insulin dose with a second witness (see Patient Care Services Medication Administration Policy).~~ NOTE: If you dial past the desired dose, dial the pen back down to the desired prescribed dose.
      xvii. Select the area of the body for the subcutaneous injection preferably into the abdomen.
      xviii. Clean the selected site with alcohol.
      xix. In one continuous motion, insert the needle into the ~~flat~~ skin at a 90-degree angle until the ~~plastic Autoshield~~**safety pen needle clicks** ~~is fully retracted up against the insulin cartridge~~. Your thumb should not be on the injection button during this step.
         ~~1. If patient is thin, alternative method is to lightly pinch a fold of skin at the cleaned, selected site. Use a wide pinch, allowing for approximately one inch of skin between the fingers after the pinch is completed.~~

xx. Maintaining constant pressure, deliver the dose **slowly** by pressing the injection button with your thumb all the way in, **then** ~~for a slow~~ count ~~to~~**of** 10 **before removing the needle**~~after the injection button is fully depressed~~. The number on the dose window will return to "0" as you inject.

xxi. Withdraw needle from skin.

~~xxii. Confirm by hearing an audible click that the Autoshield needle is locked.~~

~~xxiii.~~**xxii.** Remove pen needle from the insulin pen by twisting counterclockwise. Never store the pen with a pen needle attached.

~~xxiv.~~**xxiii.** Discard the used ~~Autoshield~~**safety pen** needle into the sharps container.

~~xxv.~~**xxiv.** Replace pen cap and return the insulin pen to the patient's medication container in the medication room.

~~xxvi.~~**xxv.** Document in the ~~medical record~~**EHR** ~~and include second witness (see Patient Care Services Medication Administration Policy)~~.

C. RELATED DOCUMENT(S):

1. **PCS Policy: Medication Administration**

~~C.~~D. REFERENCES:

1. **Humalog (R) [package insert]. Indianapolis, IN: Lilly USA, LLC; 2015.**
2. **Novolog ® [package insert]. Bagsvaerd, Denmark: Novo Nordisk; 2016.**
3. **Humulin ® [package insert]. Indianapolis, IN: Lilly USA, LLC; 2015.**
4. **Novolin ® [package insert]. Bagsvaerd, Denmark: Novo Nordisk; 2016.**
5. **Humulin N ® [package insert]. Indianapolis, IN: Lilly USA, LLC; 2015.**
6. **Novolin N ® [package insert]. Bagsvaerd, Denmark: Novo Nordisk; 2016.**
7. **Lantus ® [package insert]. Bridgewater, NJ: Sanofi-aventis, LLC; 2015**
8. **Levemir ® [package insert]. Bagsvaerd, Denmark: Novo Nordisk; 2015.**
9. **ISMP. Do not use an insulin pen for multiple patients! Hazard Alert. *ISMP Medication Safety Alert!* 2012;17(1):1,4**
10. **Becton, Dickson and Company. (2017). AutoShield™ Duo Pen Needle –Instructions for Use.**

~~1. American Hospital Formulary Service 2005. "AHFS Drug Information 2005."~~
~~2. Eli Lilly and Company. (2006). Insulin time action profile pamphlet.~~
~~3. Becton, Dickson and Company. (2008). BD AutoShield Pen Needle – Instructions for Use.~~
~~4. Eli Lilly and Company. (2006). Kwikpen user manual a step by step guide on how to use the kwikpen.~~
~~5. Eli Lilly and Company. (2007). Kwikpen package insert.~~
~~6. Sanofi Aventis. (2008). Your Guide to the lantus solar star.~~
~~7. The Institute for Safe Practice (2008, May 8). Considering insulin pens for routine hospital use. http://ismp.org/Newsletters/acutecare/articles/20080508.asp retrieved February 25, 2009.~~
~~8. Lantus® SoloStar® Instruction Leaflet (2011, March).~~
~~9. ISMP Medication Safety Alert (2011, August 11), Volume 16, Issue 16.~~

Tri-City Medical Center
Oceanside, California

PATIENT CARE SERVICES

ISSUE DATE: NEW

SUBJECT: INSULIN; USE OF CONCENTRATED POLICY

REVISION DATE(S):

Department Approval Date(s):	**11/16**
Clinical Policies and Procedures Approval Date(s):	**12/16**
Nurse Executive Committee Approval Date(s):	**01/17**
Diabetes Task Force Approval Date(s):	**12/16**
Pharmacy and Therapeutics Approval Date(s):	**03/17**
Medical Executive Committee Approval Date(s):	**04/17**
Professional Affairs Committee Approval Date(s):	
Board of Directors Approval Date(s):	

A. **PURPOSE:**

1. To address the inpatient management of insulin regimens for patients on a concentrated insulin product on an outpatient basis.
   a. Concentrated insulin products, particularly U-500 regular insulin pose a significant patient safety risk with regard to appropriate dose calculation, administration, and dose adjustments.
   b. Risk of inappropriate dosage adjustments is high due to lack of familiarity with concentrated insulin products by most non-specialized providers and the variable insulin needs of admitted patients.
      i. Many patients require significantly less insulin during admission as compared to their usual outpatient needs for various clinical reasons.

B. **DEFINITION(S):**

1. Concentrated insulin: Any insulin dosage form manufactured at concentrations greater than 100 units/mL including but not limited to U-500 regular insulin, insulin degludec **(Tresiba)** U-200, ~~and~~ insulin glargine **(Toujeo)** U-300, **and Humalog U-200.**

C. **POLICY:**

1. Concentrated insulins are not permitted for use at Tri-City Medical Center.
2. Patients on a concentrated insulin prior to admission who require continued insulin therapy during admission will be converted by a physician to a formulary based insulin regimen.
   a. A conversion to a basal/bolus regimen using insulin glargine and insulin lispro, respectively are recommended.
   b. A **20**~~25~~-**50**% reduction in total daily insulin units is recommended for the majority of patients when converting patients from a concentrated insulin regimen to a standard concentration basal/bolus regimen.

D. **REFERENCES:**

1. Paulus AO, Colburn JA, True MW, et al. Evaluation of total daily dose and glycemic control for patients taking U-500 regular insulin admitted to the hospital. Endocrine Practice. 2016;22:1187-1191
2. Samaan KH, Dahlke M, Stover J. Addressing safety concerns about U-500 insulin in a hospital setting. American Journal of Health Systems Pharmacy. 2011;68:63-68
3. Tripathy PR, Lansang MC. U-500 regular insulin use in hospitalized patients. Endocrine Practice. 2016;21:54-58

Tri-City Medical Center
Oceanside, California

PATIENT CARE SERVICES ~~POLICY MANUAL~~

ISSUE DATE: 10/96	**SUBJECT: Nutrition Education of Patients**
REVISION DATE: 6/03, 1/04, 05/11	**POLICY NUMBER: V.D**

Department Approval:	**02/17**
Clinical Policies and Procedures Approval:	**~~03/11~~03/17**
Nurse Executive Committee Approval:	**~~03/11~~03/17**
Pharmacy and Therapeutics Approval:	**n/a**
Medical Executive Committee Approval:	**04/17**
Professional Affairs Committee Approval:	**04/11**
Board of Directors Approval:	**05/11**

A. **POLICY:**

1. Registered Dietitian (RD) shall educate patients, family, and/or significant others, as appropriate, regarding prescribed diet and means by which nutritional goals can be met.
2. RD shall determine the need for patient education based upon nutritional assessment and assessment of patients' knowledge of prescribed diet.
3. The patient's educational needs shall be assessed for language, cognitive, and emotional barriers. Readiness to learn shall be assessed and available support networks are determined.
4. The patient/family/significant other shall be educated regarding diet so as to improve dietary compliance or nutritional needs. Appropriate tools are utilized to enhance patient understanding of education. Both verbal and written tools are utilized; copies of written materials are provided for use at home.
5. Patients are educated at a time when they are ready to learn. For example, education is timed so that it does not occur when the patient is distracted, in pain, or awaiting imminent discharge.
6. Questions are asked of patient to solicit assessment of patient understanding. Diet history may be obtained. The patient is encouraged to develop a plan for implementing necessary changes in diet/nutrition.
7. Documentation of any educational activity is completed in the patient's medical record. Documentation shall include description of materials provided, assessment of patient's understanding of education and motivation to comply with restrictions.
8. Follow up teaching is accomplished through the patient's stay. Phone number is given for patient to contact RD with questions as needed after discharge.
9. The Registered Nurse (RN) is responsible for the initial functional assessment during the admission process, as well as reinforcing education provided by the dietitian as needed and upon discharge.
10. The RN shall also initiate the appropriate plan of care and per the Patient Care Services Policy; Interdisciplinary Plan of Care (IPOC)~~, IV.G~~.

B. **RELATED DOCUMENT(S):**

~~C.~~**1. Patient Care Services Policy; Interdisciplinary Plan of Care (IPOC).**

Tri-City Medical Center	Distribution: Patient Care Services

PROCEDURE:	PERCUTANEOUS TRACHEOSTOMY ASSIST
Purpose:	Percutaneous dilational tracheostomy (PDT), also referred to as bedside tracheostomy, is the placement of a tracheostomy tube without direct surgical visualization of the trachea. It is a procedure that can be performed in the intensive care unit at the patient's bedside with continuous monitoring of patient's vital signs. The procedure may be performed under local anesthesia.
Supportive Data:	A. Advantages of Percutaneous Dilational Tracheostomy: 1. Time required for performing bedside PDT is considerably shorter than that for an open tracheostomy. 2. Eliminates complications that can occur during transport to or from the OR such as accidental extubation or intravascular catheter decannulation. 3. Elimination of the need to use an operating room and anesthesiology team 4. A smaller operative scar 5. Less bleeding and tracheal erosion 6. Reduced likelihood of infection. B. Indications: 1. The need for prolonged artificial airway. 2. The patient that is unable to cough effectively requiring assistance in the removal of bronchial secretions. 3. The need for positive pressure ventilation when using a cuffed tracheostomy\tube. 4. To prevent aspiration of gastric secretions or contents in the unconscious (or paralyzed) patient by the use of a cuffed tracheostomy tube that will not allow those fluids to communicate with the trachea.

A. **POLICY:**

1. The procedure should be scheduled in advance to ensure the availability of the Video bronchoscope. The Pulmonary lead should be called to schedule: 760-802-1974.
2. The bedside nurse and respiratory therapists will be responsible for monitoring the patient and providing the Physician with the necessary equipment for the bedside tracheostomy procedure.
3. One respiratory therapist is responsible for ventilator adjustments and tube manipulations. The physician is responsible for manipulating the bronchoscope.

B. **PROCEDURE (NURSING):**

1. Ensure that all the necessary supplies are available – obtain Percutaneous Tracheostomy Cart
2. Provide education to the patient about the procedure.
3. Ensure that the procedural consent is signed.
4. Place patient in a supine position with the head midline and the neck extended with chin pointing toward the ceiling.
5. Assist physician with sterile draping and site preparation
6. Ensure Time Out is performed per Patient Care Services (PCS) Universal Protocol Procedure
7. Document Time Out in the medical record
8. Support and reassure the patient during the procedure.
9. Administer sedation as ordered by physician per PCS Sedation/Analgesia Used During Therapeutic or Diagnostic Procedures.
10. Assist the physician with the procedure and equipment as needed. Open sterile supplies as directed by physician.

Department Review	Clinical Policies & Procedures	Nurse Executive Council	Critical Care Committee	Pharmacy & Therapeutics Committee	Medical Executive Committee	Professional Affairs Committee	Board of Directors
3/13, 12/16	3/13, 1/17	3/13, **02/17**	**03/17**	**n/a**	8/13, **04/17**	10/13	10/13

11. Monitor and document patient's vital signs every 5 minutes during procedure. Vital Signs include but are not limited to:
    a. Heart rate,
    b. Respiratory rate,
    c. Blood pressure,
    d. Pulse oximetry,
    e. End-tidal CO_2 and Color.
12. Assist with post procedural tube securement and dressing.

C. **PROCEDURE (RESPIRATORY):**

1. Make sure protective equipment is being worn, such as gown, gloves, mask and eye protection.
2. Assist with monitoring vital signs as noted above.
3. Monitor end-tidal CO_2 measurements (if applicable)
4. Place patient on 100% FiO_2 in preparation for the procedure and increase peak pressure limit to allow adequate V_T delivery during procedure.
5. Suction patient (both orally and down endotracheal (ET) tube) if necessary.
6. Attach syringe to pilot balloon for cuff inflation and deflation.
7. Have videoscope/bronchoscope ready to insert down ET tube and follow physician instructions.
8. Deflate the cuff upon physician request and slowly withdraw the ET tube to a level just above the vocal cords—physician will guide the RCP during the process.
9. The RCP may need to adjust the V_T and rate on the ventilator to compensate for the air leak created when the ET tube cuff is deflated. Another option is the RCP may gently re-inflate cuff only until V_T is achieved.
10. Observe insertion of needle, dilators and tracheostomy tube by the physician.
11. Inflate cuff on tracheostomy tube and attach ventilator tubing.
12. Check end-tidal CO_2.
13. Assess breath sounds.
14. Remove the scope.
15. Remove ET tube after proper placement is confirmed.
16. Secure tracheostomy tube.
17. Return ventilator to the ordered settings.
18. Tape obturator at the head of bed to assist in emergent replacement in case of decannulation.
19. Keep appropriate sized back up tracheostomy at bedside.
20. Clean scope appropriately per ~~Pulmonary Cleaning of Flexible Bronchoscopes Using Medivator CER 1~~ PCS High Level Disinfection Procedure.

D. **RELATIVE CONTRAINDICATIONS TO PERCUTANEOUS TRACHEOSTOMY:**

1. Children younger than 12 years of age
2. Emergency Airway Access
3. Hemodynamic instability
4. Anatomic abnormality of the trachea
5. Palpable blood vessel over the tracheostomy site
    a. For example malposition of the brachiocephalic or innominate artery
6. FiO_2 > 60%
7. PEEP >15 cmH_2O
8. Coagulopathies
9. Limited ability to extend the cervical spine

E. **COMPLICATIONS THAT CAN OCCUR WITH PERCUTANEOUS TRACHEOSTOMY:**

1. Bleeding
2. Infection
3. Accidental Extubation
4. Para-tracheal Insertion
5. Esophageal perforation
6. Subcutaneous emphysema

7. Pneumothorax
8. Tracheal stenosis.
9. Airway obstruction as evidenced by:
   a. Restlessness
   b. Tachycardia
   c. Tachypnea, wheezing, stridor
   d. Decreased SpO_2 levels, cyanosis, pallor
10. Injury to thyroid or laryngeal nerve.

F. **DOCUMENTATION:**

1. Document in the medical record.
2. Respiratory to chart new tracheostomy insertion under Artificial Airway

G. **RELATED DOCUMENTS:**

1. PCS Sedation/Analgesia Used During Therapeutic or Diagnostic Procedures
2. PCS Universal Protocol Procedure
3. ~~Pulmonary Cleaning of Flexible Bronchoscopes Using Medivator CER 1 Procedure~~
3. **PCS High Level Disinfection**

H. **REFRENCES:**

1. Cianchi G, Bonizzoli M, Batacchi S, Cammelli R, Biondi S, Spina R, Peris A. A Comparison between single step and balloon dilatational tracheostomy in intensive care unit; a single centre, randomized controlled study. Br J Anaesth. 2010 Jun: 104 (6): 728-732. Epub 2010 April 2010.
2. Marchese S,Corrado A, Scala R, Corrao S, Ambrosino N; Intensive Care Study Group, Italian Association of Hospital Pulmonologists (AIPO) Tracheostomy in patients with long-term mechanical ventilation: a survey.Respir Med. 2010 May; 104 (5) 749-753. Epub 2010 Feb 1.

STANDARDIZED PROCEDURE: RAPID RESPONSE

I. **POLICY:**

A. Function: A systematic method for the Rapid Response Team (RRT) to collaborate with the attending physician in the assessment, diagnosis, evaluation, and management or stabilization of the adult patient exhibiting signs and symptoms of impending respiratory and/or cardiovascular deterioration.

B. Circumstances:

1. Setting: Adult patients (age 14 years and older) admitted to or being treated at Tri-City Medical Center.
2. Supervision: None Required

C. The ~~Rapid Response Team~~**RRT or designated Intensive Care Unit (ICU) Registered Nurse (RN)** is available for consultation 24 hours per day, seven days per week and may be activated for all situations where rapid patient evaluation is necessary.

1. The ~~Rapid Response Team~~ **RRT** may be initiated in any location of the hospital.

D. All overhead pages requesting the ~~Rapid Response Team~~**RRT** shall initiate the following responders:

1. Team Leader: An ~~Intensive Care Unit (ICU) Registered Nurse (RN)~~
2. Respiratory Care Practitioner (RCP)
~~2.~~**3. Administrative Supervisor (AS)**
~~3.~~**4. Phlebotomist**
~~4.~~**5. Electrocardiogram (EKG) Technician**

E. The ~~Rapid Response Team~~**RRT** shall assess the patient and initiate life-saving interventions per Code Blue and Emergency Care Standardized Procedure and Rapid Response Standardized Procedure.

F. The attending physician shall be notified of change in the patient's condition and interventions initiated by the RRT.

G. In the event of a delay in the attending physician response, where the patient's condition warrants immediate physician consultation, the RRT shall contact the Chair of Critical Care Committee, Medical Director of ICU, or designee for orders.

H. The Assistant Nurse Manager (ANM)/designee shall provide support to the family/caregiver using social services or chaplain services and by providing regular updates and information.

II. **PROCEDURE:**

~~A. Activate the Rapid Response Team~~**RRT** ~~by dialing 66 and request "Rapid Response Team" to location or room number:.~~

~~1. Dialing 66 and requesting "Rapid Response Team" to location or room number or~~
~~2. Calling the RRT cellular telephone~~

~~B. Rapid Response Team~~**RRT** ~~shall be activated if the patient shows evidence of any of the following signs/symptoms (clinical triggers):~~

~~1. Staff member is concerned about patient condition;~~
~~2. Acute change in:~~
~~a. Heart rate (less than 50 bpm or greater than 130 bpm);~~
~~b. Systolic blood pressure (less than 90 mmHg or greater than 180 mmHg or diastolic blood pressure greater than 110);~~

Revision Dates	Clinical Policies & Procedures	Nursing Executive Council	Critical Care Committee	Pharmacy & Therapeutics Committee	Interdisciplinary Committee	Medical Executive Committee	Professional Affairs Committee	Board of Directors
1/08, 6/08 3/10, 8/10, 12/13, **07/16**	3/10, 12/11; 1/14, **09/16**	8/10, 4/12; 1/14, **09/16**	8/14, **10/16**	8/10, 5/12; 3/14; **03/17**	8/10, 11/12, 9/14, **04/17**	8/10, 11/12, 11/14, **04/17**	1/15	6/08, 8/10, 12/12, 1/15

~~c. Respiratory rate (less than 8 breaths/minute or greater than 28 breaths/minute) or threatened airway;~~
~~d. Oxygen saturation, (less than 92% despite oxygen therapy) or increasing oxygen demand to maintain baseline oxygen saturation;~~
~~e. Acute change in mental status such as sudden unexplained agitation, confusion, or decrease in level of consciousness;~~
~~f. Urine output (less than 15 mL/hour in 4 hours);~~
~~g. Acute chest pain.~~

~~3. Neurological changes such as new onset unilateral motor weakness, sensory loss, and/or aphasia;~~
~~4. **Chest pain;**~~
~~5. Acute significant bleeding;~~
~~6. New, repeated, or prolonged seizures;~~
~~7. Failure to respond to treatment for an acute problem/symptom;~~
~~8. Change in skin tone (pale, dusky, gray or blue);~~

~~C. Immediate responsibilities of the primary care RN are as follows:~~
~~1. Assess and stay with the patient~~
~~2. The primary nurse shall have the following available for **the** RRT:~~
~~a. Patient chart~~
~~b. Most recent lab results~~
~~c. **Recent** Vvital signs available for review~~
~~3. The primary care RN shall assist the Rapid Response Team**RRT** with interventions.~~

~~D.~~**A.** Responsibilities of the ~~Rapid Response Team~~**RRT** are as follows:
1. The ICU RRT Team Leader:
   a. Conducts physical assessment of patient
   b. Places patient on an **electrocardiogram** (ECG) monitor
   c. Applies a pulse oximeter
   d. Ensures patent Intravenous (IV) access
   e. Reassesses vital signs every 5 to 15 minutes or as condition dictates
      i. If the ~~Rapid Response Team~~**RRT** Leader determines a full team response is warranted, a Code Blue announcement shall be initiated.
   f. Collaborates with RCP if patient condition warrants.
   g. Implements initial lifesaving interventions per Standardized Procedure: Code Blue and Emergency Care if situation warrants.
   h. Communicates with patient's attending physician/designee and reports assessment, initial interventions with patient responses, and discusses plan of care for any significant intervention using the **Situation, Backround, Assessment, and Recommendation** (SBAR) technique.

~~E.~~**B.** Hypotension:
1. If hypotension is due to fluid volume deficit:
   a. Administer Normal Saline IV bolus of 500 mL over 30 minutes. If responsive (MAP or SBP increase greater than 10%) but MAP remains less than 65 mm Hg may repeat one time.
   b. Contact physician for further IV fluid orders.
2. If volume loss is due to acute bleeding draw blood for **immediate** (STAT) CBC, **prothrombin time and partial thromboplastin time** (PT/PTT), type and ~~cross~~**screen**, and contact physician to order blood products and IV fluids.

~~F.~~**C.** Sepsis:
1. Sepsis shall be considered in all patients with known or suspected infection who have 2 or more of the following Systemic Inflammatory Response Syndrome (SIRS) criteria:
   a. Heart rate greater than 90 beats per minute
   b. Temperature less than 36°**Celcius (C)** (96.8°**Farenheit [F]**) or greater than 38°C (100.4°F)

c. Respiratory rate greater than 20 breaths per minute or $PaCO_2$ less than 32 mmHg
d. White blood count (WBC) greater than 12,000/mm^3 or less than 4,000/mm^3

2. Severe sepsis: patients that meet sepsis criteria complicated by acute organ dysfunction.
3. Septic shock: patients that meet the above severe sepsis criteria complicated by hypotension that is refractory to fluid bolus and requires vasopressors.
4. Treatment of severe sepsis:
   a. Administer Normal Saline 500 mL IV bolus. May repeat times one to maintain MAP greater than 65mmHg, **Central Venous Pressure** (CVP) of 8–12 mmHg, and urine output greater than 0.5 mL/kg/hr
   b. Draw blood for serum lactate level, **Comprehensive Metabolic Panel** (CHEM-12), and CBC (complete blood count) with manual differential
   c. Obtain arterial blood gas (ABG)
   d. Obtain blood, sputum and urine cultures
   e. Contact physician for orders regarding:
      i. Appropriate patient placement (transfer to ICU)
      ii. Removal of potential infection source (i.e. invasive lines or abscess)
      iii. Broad spectrum antibiotics
      iv. Blood glucose control

~~G.~~**D.** Acute Change in Mental Status:
1. Check blood glucose. If blood glucose is less than 70 mg/dL, follow the **PCS** Standardized Procedure: Hypoglycemia Management **in the Adult Patient** ~~(Not Including, Newborns, Neonatal Intensive Care Unit or Pediatrics)~~.
2. If acute cerebrovascular accident (CVA) is suspected due to new onset of one-sided motor weakness, facial droop, slurred speech and/or aphasia, perform NIH Stroke Scale assessment.
   a. If new deficits are confirmed, dial 66 to initiate an "In-House Stroke Code" and page the on-call ~~n~~**N**eurologist.
3. If hypoxia is suspected, apply oxygen via nasal cannula, simple mask, or non-rebreather mask as needed to maintain oxygen saturation greater than 92%. Draw ABG.
4. If the patient is receiving sedation or analgesia:
   a. Stop **Patient Care Analgesia** (PCA) and sequester equipment if applicable.
   b. Administer naloxone (Narcan) 0.4 mg IV push for opiate reversal. If necessary, repeat every 2–3 minutes to a maximum dose of 2 mg.
   c. Consider flumazenil (Romazicon) 0.25 mg IV push for acute benzodiazepine reversal. If necessary, may repeat every 1 minute to a maximum dose of 1mg. Further doses may be required with a Physician Order.
   d. If a reversal agent has been used the patient shall be monitored for 90 minutes.
5. If the patient is agitated or delirious and may be going through alcohol withdrawal, administer lorazepam (Ativan) 2 mg IV push times one **dose**.
6. If the patient is agitated or delirious with no history of alcohol abuse and none of the above treatments apply (i.e. patient is not hypoxic or hypoglycemic), administer Haldol 2 mg IM **or IV** push times one **dose (see PCS SP: Haloperidol IV Administration)**.

~~H.~~**E.** Chest Pain/In-House STEMI Activation:
1. Assess pain quantity, quality, location, radiation, time of onset and precipitating factors.
2. Order STAT ECG ~~by dialing 760-802-9484 (04:00-20:30) or 760-802-1974 (20:30-0400)~~ and review for ischemic changes.
   a. If ECG is positive for ***Acute **Myocardial Infarction** (MI)***, dial 66 to initiate an "In-House Code STEMI" (see Patient Care Services Code STEMI policy)
3. Apply oxygen at 4 L/min via nasal cannula.
4. Administer aspirin 162 mg PO if patient has not already taken it and has no contraindications (i.e. Aspirin allergy or active bleeding).

5. Administer nitroglycerin 0.4 mg sublingual every 5 minutes **as needed** (PRN) for chest pain up to 3 doses. Hold if SBP is less than 90 mmHg.
   a. If nitroglycerin is ineffective in relieving chest pain, administer morphine 2 mg IV push times one.
6. Obtain STAT portable **Chest X-Ray** (CXR).
7. Draw blood for ~~cardiac enzymes~~ **CK, Mb Fraction, Cardiac Troponin (Troponin I), Basic Metabolic Panel** (CHEM 7), **and** PT/PTT.

~~I.~~**F.** Respiratory Distress:

1. Apply oxygen via nasal cannula, simple mask, or non-rebreather mask as needed to maintain oxygen saturation greater than 92%.
2. Oral or **nasotracheal** (NT) suction if the patient is unable to clear secretions.
3. If the respiratory rate is less than 8 breaths per minute, please refer to Acute Change in Mental Status section.
4. Obtain physician order for **bi-level (biphasic) positive airway pressure** (BIPAP) if the respiratory rate is greater than 25 breaths per minute **and as patient condition warrants.**
5. Administer **nebulized medications** ~~Albuterol 2.5 mg and Atrovent 0.5 mg via nebulizer~~ for wheezing: ~~times 1 dose~~
   a. **Albuterol 2.5 mg and Ipratropium 0.5 mg (DuoNeb inhalation solution) times 1 dose, ~~or~~**
      ~~**Albuterol 2.5 mg times 1 dose.**~~
6. Administer furosemide (Lasix) 40 mg IV push times 1 and draw blood for CHEM 7 and BNP if respiratory distress occurs with signs and symptoms of fluid overload (e.g. intake greater than output, bibasilar crackles, jugular venous distension, edema).
7. Draw ABG.
8. Order a STAT portable CXR~~.~~,
9. Order STAT ECG.

~~J.~~**G.** Hypertensive Crisis:

1. Assess patient for end organ dysfunction due to hypertensive emergency: change in mental status, respiratory distress, visual disturbances, or acute renal failure.
   a. If present, start nicardipine (Cardene) 5mg/hr to keep diastolic blood pressure (DBP) 100–110 mmHg. Avoid in patients with known or suspected EF **<less than** 25%. Lower starting doses of 2.5mg/hr can be considered in patients with renal failure or age **≥ greater than or equal to** 65.
   b. Decreasing blood pressure too rapidly could result in cerebral hypoperfusion or coronary insufficiency. May increase by 2.5-5 mg/hour every **5 to** 15 minutes up to 15mg/hr. The initial goals of treatment should be to decrease the MAP by 20-25% and reduce the DBP to 100-110 mmHg. Consider reduction to 3mg/hour after response is achieved.
2. If no signs and symptoms of end organ dysfunction are present: (hypertensive urgency): administer Hydralazine 10 mg IV. May repeat in 20 minutes if MAP has not decreased by 20-25% or if DBP is greater than 110 mmHg (contraindicated in acute aortic dissection).
   a. If the patient has a history of coronary artery disease (CAD) or a heart rate greater than 80 beats per minute, administer Labetalol **(Trandate)** 20 mg IV. May repeat in 5 minutes if MAP has not decreased by 20–25% or if DBP is greater than 110 mmHg.
3. If IV access cannot be obtained, administer Clonidine **(Catapres)** 0.2 mg PO one time.

~~K.~~**H.** Bradycardia:

1. If the patient is having signs and symptoms of poor perfusion related to bradycardia (i.e. change in mental status, chest pain, hypotension or other signs of shock):
   a. Prepare for transcutaneous pacing. Pace without delay for second degree type 2 or third degree block.
      i. Apply pacing pads in the anterior/posterior position.

ii. Set initial external pacemaker settings to a rate of 80 and mA of 80.
iii. Adjust mA as needed to maintain capture.

b. Consider Atropine 0.5 mg IV while awaiting pacer. May repeat every 5 minutes up to 3 mg.

c. Consider Dopamine 5 mcg/kg/min continuous IV infusion while awaiting pacer or if pacing is ineffective. May titrate in ~~1-4~~2mcg/kg/min ~~increments every~~ **in** 10 minutes as needed to achieve goal HR.

d. Obtain a STAT 12-lead ECG.

e. Draw blood for CHEM 7, **CK Mb Fraction, and Troponin I** ~~and cardiac enzymes~~. Draw blood for drug levels (such as digoxin) if applicable.

f. Check blood glucose and if less than 70 mg/dL treat per Standardized Procedure: Hypoglycemia Management.

~~L.~~**I.** Tachycardia:

1. Order STAT ECG.
2. Draw blood for CHEM 7, **CK Mb Fraction and Troponin I** ~~cardiac enzymes,~~ and ABG after treating the patient.
3. Stable:
   a. Regular, Narrow QRS Complex:
      i. Attempt vagal maneuvers by having patient bear down or cough.
      ii. Administer Adenosine **(Adenocard)** 6 mg IV push over 1–3 seconds. If tachycardia persists, repeat in 1–2 minutes with 12 mg IV push.
         1) Reduce dose by 50% (Adnenocard 3mg followed by Adenocard 6mg should tachycardia persist) for the following:
            1. Administering through a central line
            ~~1.~~2. Patient has a history of heart transplant
      ~~ii.~~iii. Administer normal saline 20 mL IV push after each dose of adenosine.
   b. Irregular, Narrow QRS Complex:
      i. Administer diltiazem (Cardizem) **10 mg IV push times 1 dose; may repeat times 1 dose if**~~0.25mg/kg (actual body weight) IV push over 2 minutes. ACLS guideline recommends total dose 15-20 mg. If~~ tachycardia persists after 15 minutes.~~, 0.35mg/kg IV push over 2 minutes (ACLS guideline recommend 20-25mg) and~~
      ii. **Consider calling physician for a** ~~start a~~ Diltiazem continuous IV infusion **after bolus doses.**~~at 10 mg/hour~~.
      iii. Do not use diltiazem in patients receiving beta blockers or known/suspected EF **<less than** 25%. ~~Rate may be increased in 2.5-5mg/hour increments every 15 minutes up to 15mg/hour as needed to achieve goal HR as BP tolerates; some patients may respond to an initial rate of 5mg/hour~~.
   c. Wide QRS Complex:
      i. Administer amiodarone 150 mg diluted in 100ml of D5W IV over 10 minutes. **Infuse through a 0.22 micron filter.**
      ii. **Consider calling physician for amiodarone infusion after initial bolus dose.**
4. Unstable:
   a. Heart rate is greater than 150 beats per minute and serious signs and symptoms such as chest pain, shortness of breath, decreased level of consciousness, or hypotension are present and believed to be related to rapid rate.
      i. Prepare for immediate synchronized cardioversion.
      ii. Consider sedation if the patient is conscious and a physician order can be obtained, but do not delay cardioversion.
      iii. Ensure the defibrillator pads and monitor leads are attached to the patient and the defibrillator is in synchronization mode.

iv. Cardiovert with 50 joules and check the patient's rhythm.
1) If necessary, repeat cardioversion at 75, 100, 120, 150 and 200 joules. Be sure to reset the defibrillator to synchronization mode with each increase in ~~J~~joules.

~~M.~~**J.** Seizures:
1. Protect patient from injury. Do not place anything in the patient's mouth.
2. Administer **Lorazepam** (Ativan) 4 mg (if patient weighs less than 40kg, give 0.1 mg/kg) **slow** IV push **over 2 minutes**. May repeat one time in ~~10-15~~**5-10** minutes if seizures continue. Doses not to exceed 8 mg **total**.
3. Draw blood for CHEM 7, Calcium, capillary blood glucose and any applicable drug levels (i.e. Dilantin).
4. **Obtain physician** order **for** EEG.

~~N.~~**K.** Anaphylaxis:
1. Anaphylaxis is a severe allergic reaction that may occur after exposure to certain foods, drugs, or contrast dye in susceptible patients. Signs and symptoms may include hypotension, rash, swelling of the lips, face, neck or throat, wheezing, and difficulty breathing.
2. If patient is experiencing stridor and is in danger of airway occlusion call Code Blue for emergent intubation.
3. Severe reaction:
   a. Administer epinephrine ~~(1:1,000 = 1 mg/mL)~~ 0.5 mg **(using 1mg/ml solution)** intramuscularly ~~or subcutaneously~~. May be repeated ~~every~~ **in** 5-15 minutes in the absence of clinical improvement ~~for up to two doses~~**times one dose**.
   b. If patient weighs less than 50 kg, administer epinephrine ~~(1:1,000 =1 mg/mL)~~ 0.01 mg/kg intramuscularly ~~or subcutaneously~~ **(using 1mg/ml solution). May be repeated in 5-15 minutes in the absence of clinical improvement times one dose.**
      ~~i. If the 1:1,000 dilution is not readily available, may administer Epinephrine 3-5 mL of 1:10,000 dilution IV.~~
   c. **Obtain physician order to** ~~A~~administer normal saline IV at **a rate of** 999ml/hr for up to 2 liters to restore adequate blood pressure.
   d. Provide adjunctive therapies as listed below once patient is stable to prevent relapse of the reaction.
4. Mild reaction:
   a. Administer normal saline 500 mL IV fluid bolus if the patient is hypotensive; **may repeat one time.**
   b. Administer Albuterol 2.5 mg via nebulizer if the patient is wheezing
   c. Famotidine (Pepcid) 20 mg IV **once; obtain physician orders for additional dosing**~~Q12H~~.
   d. Administer diphenhydramine (Benadryl) 25 mg IV push **once**.
   e. Administer hydrocortisone **(Solu-CORTEF)** 200 mg IV push if severe prolonged reaction is expected.

III. **POST EVENT PROCEDURE:**

A. The ~~Rapid Response Team~~**RRT** shall ~~continually~~ re-evaluate the patient's condition after providing interventions.

B. A phone call shall be placed to the ~~primary~~ **attending** physician to provide an update on patient status **or** ~~for~~ any ~~significant~~ interventions **performed**.

C. Transfer **patient to higher level of care if deemed appropriate by the RRT or attending**~~orders must be obtained from the~~ physician.

D. The ~~Rapid Response Team~~**RRT** shall remain with the patient until patient is stabilized on the unit or transferred to a higher level of care.
   1. ~~Rapid Response Team~~**RRT** leader shall provide hand-off communication to the receiving nurse.

2. In the event the patient is transferred to a higher level of care, the ~~Rapid Response Team~~**RRT** leader shall provide the staff nurses with an update on patient's status after transfer.

E. If patient is maintained on the unit, the ~~Rapid Response~~**RRT** Team RN shall place a follow-up call or visit the staff nurse 1 to 4 hours after the event for an update on the status of the patient.

IV. DOCUMENTATION ~~AND FORMS~~:

A. The ~~Rapid Response Team~~**RRT** Leader shall document all events in the medical record to include the following:
   1. Reason for call
   2. Interventions performed, medications administered, and labs or diagnostic tests ordered per standardized procedure
   3. Follow-up report

B. All new physician orders shall be **placed in the electronic health record**~~documented on the appropriate physician order sheet~~.

V. REQUIREMENTS FOR CLINICIANS INITIATING STANDARDIZED PROCEDURE:

A. Current California RN license.
B. Minimum of 2 years critical care experience
C. Education: Successful completion of ACLS course (with current course completion card).
D. Initial Evaluation: Successful completion of Rapid Response Orientation.
E. Ongoing Evaluation: **Completion of** Annual ICU Skills Lab **and RRT Standardized Procedure Computer-Based Learning module.**

VI. DEVELOPMENT AND APPROVAL OF THE STANDARDIZED PROCEDURE:

A. Method: This Standardized Procedure was developed through collaboration with Nursing, Medicine, and Administration.
B. Review: Every two (2) years.

VII. CLINICIANS AUTHORIZED TO PERFORM THIS STANDARDIZED PROCEDURE:

A. All Registered Nurses who have successfully completed requirements as outlined above are authorized to direct and perform RAPID RESPONSE Standardized Procedure.

VIII. RELATED DOCUMENTS:

A. **PCS SP: Code Blue and Emergency Care**
B. **PCS SP: Haloperidol IV Administration**
C. **PCS SP: Hypoglycemia Management in the Adult Patient**
~~C.~~**D. PCS: Rapid Response Team and Condition Help (H)**

Tri-City Medical Center	Distribution: Patient Care Services
PROCEDURE:	**SEDATION/ANALGESIA USED DURING THERAPEUTIC OR DIAGNOSTIC PROCEDURES**
Purpose:	To establish guidance for the safe administration of sedatives used specifically for a level of sedation referred to as moderate sedation/analgesia (previously referred to as "conscious sedation") and deep sedation, delineate required components of care delivery and facilitate comparability of care organization-wide in sedation/analgesia. This procedure does not apply to therapeutic/diagnostic procedures when anesthesiologist is present or NICU setting.
Equipment:	The following equipment/supplies are readily available and functional during sedation and recovery periods: 1. Emergency cart with cardiac monitor/defibrillator and airway management equipment readily available 2. Cardiac Monitor 3. Capnography Monitor 4. Pulse oximeter with alarm 5. Blood Pressure Monitor 6. Suction Equipment 7. Positive-pressure oxygen delivery system available 8. Reversal medications -Naloxone (Narcan) and Flumazenil (Romazicon) - readily available

A. **DEFINITION(S):**

~~1. **Ramsey Scale:** Level of sedation for adults using the Ramsey Scale:~~

~~a. 1 = Patient anxious and agitated or restless or both~~

~~b. 2 = Patient cooperative, oriented and tranquil~~

~~c. 3 = Patient responds to commands only~~

~~d. 4 = A brisk response to loud auditory stimulus~~

~~e. 5 = A sluggish response to loud auditory stimulus~~

~~f. 6 = No response to loud auditory stimulus~~

~~g.~~**1. Richmond Agitation-Sedation Scale (RASS):**

4	**Combative**	**Overly combative or violent, immediate danger to staff**
3	**Very Agitated**	**Pulls on or removes tubes or catheters or has aggressive behavior toward staff**
2	**Agitated**	**Frequent non purposeful movement or patient-ventilator dyssynchrony**
1	**Restless**	**Anxious or apprehensive but movements not aggressive or vigorous**
0	**Alert and calm**	
-1	**Drowsy**	**Not fully alert, but has sustained, more than 10 seconds, awakening with eye contact to voice**
-2	**Light Sedation**	**Briefly, less than 10 seconds, awakening with eye contact to voice**
-3	**Moderate Sedation**	**Any movement, but no eye contact to voice**
-4	**Deep Sedation**	**No response to voice, but any to movement to physical stimulation**
-5	**Unresponsive**	**No response to voice or physical stimulation**

2. Minimal Sedation: A drug-induced state during which patients respond normally to verbal

Department Review	Clinical Policies & Procedures	Nurse Executive Committee	Department of Anesthesiology	Pharmacy & Therapeutics Committee	Medical Executive Committee	Professional Affairs Committee	Board of Directors
9/06; 10/08; 06/11; 02/12; **11/15**	08/12; **02/16, 05/16**	08/12, **05/16**	**03/17**	**03/17**	10/12, **04/17**	10/12	10/12

commands. Although cognitive function and coordination may be impaired, ventilatory and cardiovascular functions are unaffected. This level of sedation is associated with the **RASS score of - 2**~~Ramsey Sedation Scale, Level 2~~.

3. Moderate Sedation/Analgesia (Previously referred to as "Conscious Sedation"): A drug-induced depression of consciousness during which patients respond purposefully to verbal commands, either alone or accompanied by light tactile stimulation. (Note: Reflex withdrawal from painful stimulus is not considered a purposeful response.) No interventions are required to maintain a patent airway, spontaneous ventilation is adequate, and cardiovascular function is usually maintained. Moderate sedation/analgesia may only be administered during therapeutic, diagnostic or surgical procedures. This level of sedation is associated with the **RASS score of – 3** ~~Ramsey Scale, Levels 3-4-5~~.
   ~~a. Minimum Staffing Requirements:~~
      ~~i. One physician~~
         ~~One RN to supervise nursing care.~~
   ~~ii.~~**a. Medications used for Moderate Sedation should be those easily titrated for this purpose. Rapid onset anesthetics (e.g. propofol, etomidate, ketamine, and thiopental) are not appropriate for moderate sedation and must not be used for this purpose.**
4. Deep Sedation/Analgesia: A drug-induced depression of consciousness during which patients cannot be easily aroused but respond purposefully following repeated or painful stimulation. Patients may require assistance in maintaining a patent airway and spontaneous ventilation may be inadequate. Cardiovascular function is usually maintained. This level of sedation is associated with the **RASS score of - 4**~~Ramsey Scale, Level 6~~.
   ~~a. Minimum Staffing Requirements:~~
      ~~i. Physician/LIP performing the procedure~~
      ~~ii. Physician/LIP to monitor the patient~~
      ~~iii. RN to assist physician/LIP~~
   ~~b.~~**a.** A Registered Nurse (RN) may not administer medications for deep sedation (propofol, ketamine, or etomidate) or provide monitoring for deep sedation.
   b. Medication administration ~~and monitoring~~ for deep sedation may only be performed by a physician~~/LIP~~**AHP** who has been privileged in deep sedation.
   ~~5.~~**c. Monitoring for deep sedation may be performed by a physician/AHP.**
~~6.~~**5.** Anesthesia: Consists of general anesthesia and spinal or major regional anesthesia. It does not include local anesthesia.
   a. General anesthesia is a drug-induced loss of consciousness during which patients are not arousable, even by painful stimulation. The ability to independently maintain ventilatory function is often impaired. Patients often require assistance in maintaining a patent airway, and positive pressure ventilation may be required because of depressed spontaneous ventilation or drug-induced depression of neuromuscular function. Cardiovascular function may be impaired.
~~7.~~**6.** Rescue: Rescue of a patient from a deeper level of sedation than intended is an intervention by a practitioner proficient in airway management and advanced life support. The qualified practitioner corrects adverse physiological consequences of the deeper-than-intended level of sedation (such as hypoventilation, hypoxia, and hypotension) and returns the patient to the originally intended level of sedation. It is not appropriate to continue the procedure at an unintended level of sedation.
~~8.~~**7. Allied Health Professional (AHP)** ~~Licensed Independent Practitioner (LIP)~~: An individual credentialed/privileged to provide specified patient care, treatment and services.
~~9.~~**8.** End tidal CO2 ($EtCO_2$): The measuring of End tidal CO2 ($EtCO_2$) via the Capnography machine is not a diagnostic measurement. Rather, $EtCO_2$ measurements are to give a non-invasive trending measurement. Therefore, it is important to establish a patient's baseline $EtCO_2$ before sedation is given.
~~10.~~**9.** Respiratory depression: can be defined as:
   a. $EtCO_2$ values 10mmHg higher or lower than the patient's baseline with an absolute maximum of 50mmHg
   b. 10% change in $EtCO_2$ values above or below a patient's baseline

c. Apnea that last for 15 seconds or longer

B. **POLICY**:

1. Tri-City Medical Center (TCMC) provides for the safe administration of sedatives, minimize clinical risks to patients, and assure comparability of care throughout the organization.
2. This policy is intended to discuss the care of patients receiving a specific level of sedation/ analgesia under the care of non-anesthesiologists privileged to administer sedation/analgesia. It has been designated to be applicable to procedures performed in a variety of settings and by various disciplines. These settings may be inpatient or outpatient and include but are not limited to:
   - **a. Moderate Sedation: Cardiac Catheterization Lab, Critical Care, Telemetry, Diagnostic Imaging, Emergency Department, Operating Room/ Endoscopy/ Bronchoscopy, Post Anesthesia Care Unit, Interventional Radiology.**
   - **b. Deep Sedation: Emergency Department**
   - ~~a. Cardiac Cath Lab~~
   - ~~b. Critical Care~~
   - ~~c. Telemetry~~
   - ~~d. Diagnostic Imaging~~
   - ~~e. Emergency Department~~
   - ~~f. Operating Room/Endoscopy/Bronchoscopy~~
   - ~~g. Post-Anesthesia Care Unit (PACU)~~
   - ~~h. Interventional Radiology~~
3. This policy excludes:
   - a. Patients who are NOT undergoing therapeutic or diagnostic procedures (i.e., preoperative or postoperative sedation, pain management, sedation for insomnia, or seizure management)
   - b. Emergent procedures
   - c. Patients undergoing major regional anesthesia or general anesthesia.
   - d. Situations where it is anticipated that the required sedation analgesia will eliminate purposeful response to verbal commands or tactile stimulation accompanied by partial or complete loss of protective reflexes; such patients require a greater level of care than covered in this policy.
   - e. Otherwise healthy patients receiving peripheral nerve blocks, local or topical anesthesia.
   - ~~f. Patients with a protected airway (i.e., an intubated or trached patient on mechanical ventilation)~~
   - ~~g.~~**f.** Minimal Sedation/Anxiolytic - *note*: if patient slips into the moderate sedation level, this sedation/analgesia procedure must be implemented.
   - ~~h.~~**g.** Drug or alcohol withdrawal or prophylaxis.
   - **h.** The use of any level of sedation/analgesia in any area of the hospital where an anesthesiologist is present.
   - **i. Single doses of sedatives and narcotics (PO, IM, or IV) given in usual and customary doses for routine care of patients during procedures such as dressing changes, etc. do not require the provider to follow the sedation policy as long as the RASS score remains at a – 1 or below.**
   - ~~i.~~**j. The decision to use a single dose of medication for anxiolysis or pain control or to use the sedation policy should be based on the patient's history and planned procedure.**
4. Patient Consent:
   - a. Pre-procedural education, treatments, and services are provided according to the plan of care
   - b. Physician/**AHP**~~LIP~~s shall be responsible for discussing alternatives and risks prior to administration of medication as in any other procedure.
   - c. Procedural/Informed consents are required to be signed by all patients before any procedures.
     - i. Adolescent patients shall participate in the consent process as appropriate.
5. The Registered Nurse (RN) will monitor the patient for the presence of pain. Any patient

undergoing a procedure who expresses concern regarding unresolved pain management has the right to request pain relief. Any patient request for temporary cessation or termination of the procedure will be honored as expeditiously as possible.

6. Medical Staff Credentialing Requirements:
   a. In order to prescribe and administer moderate or deep sedation/analgesia a physician/**AHP**~~LIP~~ must have requisite privilege (physician/**AHP**~~LIP~~ privileges available on TCMC Intranet). See Medical Staff **Policy: Criteria for Granting Moderate and Deep Sedation/Anesthesia Privileges to Non-Anesthesiologists** ~~Credentialing guidelines~~.
7. **RN**~~Licensed Staff~~ Training Requirements:
   a. Moderate sedation self-study and test.
   b. Demonstrate competency in basic dysrhythmia recognition
   c. BLS, training including airway management, recognition of cardiovascular and respiratory side effects of sedatives and variability of patient responses with re-certification every 2 years is required.
   d. ACLS, PALS, ENPC, NRP staff member is readily available as appropriate.
      i. Healthcare providers shall use child CPR guidelines for children from 1 year of age to puberty.
         1) Signs of puberty include breast development on the female and underarm, chest, and facial hair on the male. Once a child reaches puberty, healthcare providers shall use adult CPR guidelines for resuscitation.
8. Administering medications:
   a. Medication administration ~~and monitoring~~ for deep sedation may only be performed by a physician/~~LIP~~**AHP** who has been privileged in deep sedation.
   b. The physician/~~LIP~~**AHP** is present prior to administering any moderate sedation/analgesia medication.
   c. Intravenous (IV) sedation analgesia drugs should be given in small incremental doses that are titrated to the desired endpoints of analgesia and sedation. Sufficient time must elapse between doses to allow the effect of each dose to be assessed before subsequent drug administration. When drugs are administered by non-IV routes (oral, rectal, intramuscular (IM), intranasal), allowance should be made for the time required for drug absorption before supplementation is considered.
   d. All medications commonly used in moderate sedation, regardless of their safety profile, produce general anesthesia and may cause cardio respiratory arrest.
   e. See resource on TCMC Intranet for the list of medications commonly used for moderate sedation/analgesia, reversal agents, and typical dosages for all ages.
   f. The RN who is directly responsible to administer medications, monitor and observe the patient's response to medications shall be with the patient at all times and may not engage in tasks that would compromise continuous monitoring during the procedure.
   g. Medications used for Moderate Sedation should be those easily titrated for this purpose. Rapid onset anesthetics (e.g. propofol, etomidate, ketamine, and thiopental) are not appropriate for moderate sedation and must not be used for this purpose.
   ~~f.~~**h. A Registered Nurse (RN) may not administer medications for deep sedation (propofol, ketamine, or etomidate) or provide monitoring for deep sedation.**
9. Required Staff, Equipment and Supplies
   a. Sufficient numbers of qualified staff (in addition to the person performing the procedure) are present to evaluate the patient, assist with the procedure, provide sedation and/or anesthesia, monitor, and recover the patient.
   b. Minimum Staffing Requirements
      i. Moderate Sedation
         1) Physician/~~LIP~~**AHP** to perform procedure
         2) RN to monitor patient
      ii. Deep Sedation
         1) Physician/~~LIP~~**AHP** to perform the procedure

2) Physician/~~LIP~~**AHP** to monitor the patient
3) RN to assist physician/~~LIP~~**AHP**

~~c. The following equipment/supplies are readily available and functional during sedation and recovery periods:~~
~~i. Emergency cart with cardiac monitor/defibrillator and airway management equipment~~
~~ii. Cardiac Monitor~~
~~iii. Capnography Monitor (trending device, not diagnostic)~~
~~iv. Pulse oximeter with alarm~~
~~v. Blood Pressure Monitor~~
~~vi. Suction Equipment~~
~~vii. Positive pressure oxygen delivery system available~~
~~viii. Reversal medications -Naloxone (Narcan) and Flumazenil (Romazicon)~~

~~10.~~C. PROCEDURE: PRE-SEDATION:

1. Pre-procedure RN:

a. **Reviews** ~~T~~the anticipated needs of the patient are assessed to plan for the appropriate level of post procedure care.

b. **Ensures** ~~It is required that in addition to initial~~ **a** pre-anesthesia/sedation assessment **is** performed by the physician/~~LIP~~**AHP and documented in the health record**~~, completes a second pre-anesthesia assessment to be performed immediately prior to the administration of the anesthesia/sedation medications~~.

c. **Ensures** ~~A~~ **the** physician/~~LIP~~**AHP** documents patient's unchanged condition from last History &Physical or ~~is to~~ performs a pertinent pre-anesthesia/sedation assessment, to include, but not limited to:

i. Cardiac, respiratory and/or other major system abnormalities
ii. Current medications and drug allergies and/or adverse experience sedation/analgesia and anesthesia.
iii. Airway Assessment: Patient's ability to hyperextend neck, maintain airway and open mouth without difficulty and if teeth are intact.
iv. Time and nature of last oral intake. **Recommended guidelines**
1) Patients **should**~~must~~ be NPO prior to procedure time for:
a) Six (6) hours after clear liquids
b) Eight (8) hours after solids
2) Oral medications may be taken with small amounts of clear liquids.
3) Patients under 10 years of age must be NPO for a period of time as indicated below:
a) Infants 0 –1 year of age:
i) No solids the day of procedure
ii) Formula or breast milk until four (4) hours before procedure
iii) Clear liquids until 2 hours prior to procedure
iv) NPO thereafter until the procedure.
b) Ages 1 to 2 years:
i) No solids the day of procedure
ii) Full liquids until six (6) hours prior to procedure
iii) Clear liquids until three (3) hours prior to procedure
iv) NPO thereafter until the procedure
c) Ages 3 to 10 years:
i) No solids the day of procedure
ii) Clear liquids until four (4) hours prior to procedure
iii) NPO thereafter until the procedure

v. American Society of Anesthesiologists (ASA) **Physical Status Classification System** ~~Providers Class Determination~~

ASA PS Classification	Definition	Examples, including but not limited to:

ASA~~Class~~ I	A normal healthy patient ~~with no physiologic or organic disturbance~~.	**~~Healthy~~, non-smoking, no or minimal alcohol use**
ASA~~Class~~ II	A patient with a mild systemic disease.	**Mild diseases only without substantive functional limitations. Examples include (but not limited to): current smoker, social alcohol drinker, pregnancy, obesity (30 < BMI < 40), well-controlled DM/HTN, mild lung disease** ~~Cardiovascular disease with minimal restriction of activity. Hypertension, asthma, obesity, diabetes mellitus, or tobacco abuse.~~
ASA~~Class~~ III	A patient with severe systemic disease~~ that limits activity but is not incapacitating~~.	**Substantive functional limitations; One or more moderate to severe diseases. Examples include (but not limited to): poorly controlled DM or HTN, COPD, morbid obesity (BMI ≥40), active hepatitis, alcohol dependence or abuse, implanted pacemaker, moderate reduction of ejection fraction, ESRD undergoing regularly scheduled dialysis, premature infant PCA < 60 weeks, history (>3 months) of MI, CVA, TIA, or CAD/stents.** ~~Cardiovascular or pulmonary disease that limits activity. Severe diabetes with systemic complications. History of poorly controlled hypertension.~~
ASA~~Class~~ IV	A patient with severe systemic disease that is a constant threat to life.	**Examples include (but not limited to): recent (< 3 months) MI, CVA, TIA, or CAD/stents, ongoing cardiac ischemia or severe valve dysfunction, severe reduction of ejection fraction, sepsis, DIC, ARD or ESRD not undergoing regularly scheduled dialysis** ~~Severe cardiac, pulmonary, renal, hepatic, or endocrine dysfunction.~~
ASA~~Class~~ V	A moribund patient who is not expected to survive ~~24 hours with or~~ without the operation.	**Examples include (but not limited to): ruptured abdominal/thoracic aneurysm, massive trauma, intracranial**

		bleed with mass effect, ischemic bowel in the face of significant cardiac pathology or multiple organ/system dysfunction ~~Surgery is done as a last recourse or resuscitation effort. Cerebral trauma, ruptured aneurysm, or large pulmonary embolus.~~
ASA~~Class~~ VI	Patient declared brain dead whose organs are being removed for donor purposes.	

d. Verify physician/~~LIP~~**AHP** orders for sedation.
e. Ensure IV access in place (as ordered by physician/~~LIP~~**AHP**):
   i. Appropriate equipment to administer intravenous fluids and drugs including blood and blood components is available.
f. Review/initiate individualized plan of care.

~~11.~~**2.** Immediate Pre-Procedure, RN monitoring or assisting ~~LIP~~**AHP** shall:
a. Check consent
b. Verify procedure with patient
c. Obtain baseline vital Signs: BP, heart rate, respiratory rate, $EtCO_2$, LOC, 02 saturation, Pain score and document on the Sedation Flowsheet or electronic medical record.
   i. For pediatric patients, include height and weight. Calculate correct dosage of reversal agent for potential administration prior to procedure.
d. Assess Level of Consciousness: Level of alertness and orientation to person/time/place/event (age appropriate).
e. Ensure a "time out" is completed before starting the procedure as described in the Patient Care Services Universal Protocol.
f. The patient is re-evaluated before moderate or deep sedation.

~~C.~~**D. INTRA-PROCEDURE FOR PLANNED MODERATE SEDATION:**

1. Measure/assess on an ongoing basis and document every 5 minutes or more often if significant changes in the patient's condition occurs during the procedure:
   a. BP
   b. Heart rate
      i. Continuous EKG rhythm is recommended for all patients receiving moderate sedation/analgesia, and REQUIRED for patients with ASA score of III or greater.
   c. Respiratory rate
   d. Adequacy of ventilation
   e. $EtCO_2$ **(except for mechanically ventilated patients)**
   f. O_2 Saturation
   ~~g. Level of sedation for adults using the Ramsey Scale:~~
      ~~1) 1 = Patient anxious and agitated or restless or both~~
      ~~2) 2 = Patient cooperative, oriented and tranquil~~
      ~~3) 3 = Patient responds to commands only~~
      ~~4) 4 = A brisk response to loud auditory stimulus~~
      ~~5) 5 = A sluggish response to loud auditory stimulus~~
      ~~6 = No response to loud auditory stimulus~~
   g. Level of sedation for adults using the RASS:

4	**Combative**	**Overly combative or violent, immediate danger to staff**
3	**Very Agitated**	**Pulls on or removes tubes or catheters or has**

		aggressive behavior toward staff
2	Agitated	Frequent non purposeful movement or patient-ventilator dyssynchrony
1	Restless	Anxious or apprehensive but movements not aggressive or vigorous
0	Alert and calm	
-1	Drowsy	Not fully alert, but has sustained, more than 10 seconds, awakening with eye contact to voice
-2	Light Sedation	Briefly, less than 10 seconds, awakening with eye contact to voice
-3	Moderate Sedation	Any movement, but no eye contact to voice
-4	Deep Sedation	No response to voice, but any to movement to physical stimulation
-5	Unresponsive	No response to voice or physical stimulation

h. Level of sedation for pediatrics using the Aldrete Score:

Activity:	Able to move 4 extremities voluntarily or on command	Score: 2
	Able to move 2 extremities voluntarily or on command	Score: 1
	Unable to move extremities voluntarily or on command	Score: 0
Respiration:	Able to breathe deeply and cough freely	Score: 2
	Dyspnea, limited breathing, or tachypnea	Score: 1
	Apneic or mechanical ventilator	Score: 0
Circulation:	BP = 20% of pre-anesthetic level	Score: 2
	BP = 20% to 49% of pre-anesthetic level	Score: 1
	BP = 50% of pre-anesthetic level	Score: 0
Conscious:	Fully awake	Score: 2
	Arousable on calling	Score: 1
	Not responding	Score: 0
Color:	Pink	Score: 2
	Pale dusky blotchy, jaundiced, other	Score: 1
	Cyanotic	Score: 0

i. Pain level

j. O2 saturation and heart rate are monitored continuously throughout the procedure. If O2 saturation is not maintained at above 90%, (unless baseline was below 90), obtain an order for supplemental oxygen and/or anesthesia consult. Supplemental oxygen is also recommended during the procedure for the following:

~~1)~~**i.** ASA class III or greater patients

~~2)~~**ii.** Patients whose O2 saturation reading is less than 90% pre-procedure while on room air

k. The measuring of End tidal CO2 ($EtCO_2$) via the Capnography machine is not a diagnostic measurement. Rather, $EtCO_2$ measurements are to give a non-invasive trending measurement. Therefore, it is important to establish a patient's baseline $EtCO_2$ before sedation is given.

i. If during the procedure hypoventilation or respiratory depression occurs, intervene immediately by:
   1) Repositioning the patient's head to open up the airway
   2) Verbally or physically stimulate the patient to breathe
   3) If the patient is apneic, start bag/mask ventilation.

ii. Respiratory depression can be defined as:
   1) $EtCO_2$ values 10mmHG higher or lower than the patient's baseline with an absolute maximum of 50mmHg

2) 10% change in $EtCO_2$ values above or below a patient's baseline
3) Apnea that last for 15 seconds or longer

iii. Important: Respiratory depression may occur after the procedure is complete. That is, before the patient returns to a level of consciousness. Continue to monitor the patient with $EtCO_2$ until the patient is fully awake and alert or returns to baseline.

l. Medications and fluids including drugs, dosages, route, times and personnel administering drugs are documented in the medical record.

m. Any unusual occurrences are documented.

~~D.~~E. INTRA-PROCEDURE PLANNED FOR DEEP SEDATION:

1. The RN shall document vital signs as requested by physician/~~LIP~~**AHP**/~~LIP~~**AHP**.

~~E.~~F. POST PROCEDURE CARE, DOCUMENTATION AND DISCHARGE:

1. Patients status is assessed immediately after the procedure and/or administration of moderate or deep sedation and vital signs and pain level are continuously monitored and documented every 5 - 15 minutes according to the patient's condition or until the vital signs return to the pre- procedure baseline (minimum recovery time is 30 minutes), and the following criteria are met:

a. Patient achieves a score of 7 or greater or pre-sedation baseline, on the modified Aldrete scoring system:

Activity:	Able to move 4 extremities voluntarily or on command	Score: 2
	Able to move 2 extremities voluntarily or on command	Score: 1
	Unable to move extremities voluntarily or on command	Score: 0
Respiration:	Able to breathe deeply and cough freely	Score: 2
	Dyspnea, limited breathing, or tachypnea	Score: 1
	Apneic or mechanical ventilator	Score: 0
Circulation:	BP = 20% of pre-anesthetic level	Score: 2
	BP = 20% to 49% of pre-anesthetic level	Score: 1
	BP = 50% of pre-anesthetic level	Score: 0
Conscious:	Fully awake	Score: 2
	Arousable on calling	Score: 1
	Not responding	Score: 0

b. If the patient does not meet the above criteria, the physician/~~LIP~~**AHP** is notified for further orders.

c. If a reversal agent has been used the patient shall be recovered for an additional 90 minutes.

d. Patients must meet the following discharge criteria prior to being discharged home:
   i. Pre-procedure LOC
   ii. Pre-procedure Activity
   iii. Vital signs within pre-procedure values
   iv. Oral fluids retained
   v. Pain controlled
   vi. Voided
   vii. Evaluate procedure site
   viii. Dressing clean & dry

e. Obtain a Physician/~~LIP~~**AHP** order for discharge when all criteria are met.

f. The patient and/or designated adult receives discharge instructions if outpatient and accompanied home by a responsible adult.

2. Monitoring Outcomes:

a. The following outcome data shall be collected in all areas where moderate or deep sedation/analgesia is performed. Data shall be aggregated by department/service and practitioner specific. The anticipated needs of the patient are assessed to the plan for the appropriate level of post procedure care including:
   i. Airway intervention

ii. Allergic reaction
iii. Anesthesia consult
iv. Aspiration
v. Death
vi. Deeper than desired level of sedation
vii. Rise or drop in systolic BP greater than 30 mmHg
viii. Sustained tachycardia (greater than150 beats/min.) or bradycardia (less than50 beats/min.) or serious arrhythmia (as monitored).
ix. Rise or drop in respiratory rate (+/- 6/min. from baseline); dyspnea, apnea, hypoventilation or cyanosis
x. O2 saturation 5% below baseline
xi. Marked decrease in patient responsiveness to verbal/tactile stimulation
xii. Other complications
xiii. Unplanned admit to ICU or Telemetry
xiv. Unplanned admit to PACU
xv. Use of Reversal agent

3. Pre procedural education, treatments, and services are provided according to the plan of care, treatment, and services.
4. Patient Discharge:
   a. Patients are discharged from the recovery area and the hospital by a qualified physician/~~LIP~~**AHP** and by meeting discharge criteria.
   b. Patients who have received sedation in the outpatient setting are discharged in the company of a responsible, designated adult.

~~F.~~G. RELATED DOCUMENT(S)~~RESOURCES LOCATED ON THE INTRANET~~:

1. Physician Pre-Procedure/Sedation Assessment **Sample**
2. Sedation Flow Sheet **Sample**
3. Sedation/Analgesia Audit **Sample**
4. Agents Commonly Used for Procedural Sedation
5. ~~: Procedural Verification Checklist~~

~~G.~~H. REFERENCES:

1. Hospital Accreditation Standards 2006 (PC13.10, 13.20, 13.30, 13.40)
2. Rothrock, Jane C. (2007), Alexander's Care of the Patient in Surgery. *Mosby, Co. 13th Edition.*
3. AORN Perioperative Standards and Recommended Practices, 2011 Edition.
4. ***ASA Physical Status Classification System.* (2014, October 15th). Retrieved January 11th, 2016, from American Society of Anesthesiologists: https://www.asahq.org/resources/clinical-information/asa-physical-status-classification-system**
5. **(2006). In U. L, S. K, & L. M, *Thelan's Critical Care Nursing Diagnosis and Management* (5th Edition ed., p. 153). St. Louis, Missouri: Mosby Elsevier.**

PHYSICIAN PRE-PROCEDURE/ SEDATION ASSESSMENT SAMPLE

Physician: _____ Procedure: _____
Allergies _____

Immediately Prior To This Procedure

Ht: _____
☐ History & Physical completed and attached. ☐Power Note: ED Wt: _____
History of difficulty with anesthesia/Sedation: ☐Yes ☐No
☐ Interval Change in patient's status ☐Yes ☐No since History & Physical date _____ (explain
_____
NPO Status: _____
Airway Assessment WNL (mouth opening, neck ROM, Teeth Intact) ☐Yes ☐No: _____
☐**Endotracheal / Tracheostomy Tube**

Physician's verification of Informed Consent:
☐ I have discussed the following with the patient/patient legal representative: an explanation of the procedure(s), its benefits and risks, ~~and~~ the possible alternatives and their benefits and ~~possible~~ risks **the potential problems that may occur during recuperation, the likelihood of achieving treatment goals, and any research or economic interests I may have regarding the treatment**. All questions have been answered to the patient's/Patient legal representative's satisfaction. Additional comments, if necessary: _____

ASA Classification

☐ Class I Normal health patient. ☐Class III A patient with severe systemic disease that limits activity but is not incapacitating.
☐ Class II A patient with mild systemic disease. ☐Class IV A patient with an incapacitating systemic disease that is a constant threat to life.
☐ Emergency medical condition

Plan for Sedation

Plan:
☐ Moderate Sedation/Analgesia
☐ Deep Sedation/Analgesia
☐ Supplemental Oxygen
☐ IV _____
☐ Patient is an appropriate candidate for planned sedation

☐ **Continue sedation at present level**
Medication: _____
_____
_____
_____

Post Sedation Plan of Care

☐ PACU/OP-PACU to non-monitored bed ☐Emergency Department
☐ PACU/OP-PACU to ICU
☐ PACU/SPRA to Telemetry
☐ OP-PACU then discharge home
☐ ICU-TELE direct
☐ ACS/Non-Monitored bed ☐**Remain in ICU**

Comments: _____
_____
_____

~~Informed Consent~~

☐ ~~Risks, benefits, and alternatives explained and patient/surrogate accepted plan for sedation/procedure~~

Re-evaluation

☐ Patient re-evaluated immediately prior to sedation. [See Flow Sheet]

Signature
Attending Physician: **Date:** **Time:** _____

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PHYSICIAN PRE-PROCEDURE/ SEDATION ASSESSMENT

(Rev. 2/10)

SEDATION FLOW SHEET SAMPLE

page 1 of 2

Physician: _____ Procedure: _____
Allergies: _____ Date _____

MODIFIED ALDRETE SCORING SYSTEM			Disc D/C	MODIFIED ALDRETE SCORING SYSTEM			Disc D/C
ACTIVITY				CIRCULATION			
Able to move 4 extremities voluntarily or on command 2				BP = 20 % of pre-anesthetic level			
Able to move 2 extremities voluntarily or on command 1				BP = 20 % to 40 % of pre-anesthetic level			
Unable to move extremities voluntarily or on command 0				BP = 50 % of pre-anesthetic level			
RESPIRATION				CONSCIOUSNESS			
Able to breathe deeply and cough freely				Fully awake			
Dyspnea, limited breathing or tachypnea				Arousable on calling			
Apneic or on mechanical ventilator				Not responding			
Calculate TOTAL SCORE before, immediately after procedure and upon discharge or discontinuing 1:1 Monitoring							

Pre Procedure Target Pain Score

Patient Assessment	Time	BP	HR	RR	ETCO2	O2 sat %	RASS Ramsey (LOC1-6)	Pain Level	Nursing Notes Medications / Cardiac rhythm
Immediate									
Intra-Procedure vitalsigns Minimally every 5 minutes based on patient's condition									
Immediate Post-Procedure vitalsigns									
Post-Procedure vitalsigns every 15 minutes until patient meets criteria for discharge or discontinue 1:1 monitoring									

** LOC = Level of Consciousness Score patients LOC 1-6 using the RASS Ramsey Scale listed

~~1 = Patient anxious and agitated or restless or both~~
~~2 = Patient cooperative, oriented and tranquil~~
~~3 = Patient responds to commands only~~
~~4 = A brisk response to loud auditory stimulus~~
~~5 = A sluggish response to loud auditory stimulus~~
~~6 = No response to loud auditory stimulus~~

Medication Totals

Signature _____ Date/Time _____

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SEDATION FLOW SHEET

8720-1030
(Rev. 8/12)

Sedation Flow Sheet

NURSING NOTES
IV INTAKE: PO INTAKE: OUTPUT:
▫ IV Discontinued @_____ ▫ Catheter
RHYTHM STRIPS

Pre-Procedure LOC	Met	Not Met	N/A
Pre-Procedure Activity	Met	Not Met	N/A
Vital signs within pre-procedure values	Met	Not Met	N/A
Oral Fluids Retained	Met	Not Met	N/A
Pain Controlled	Met	Not Met	N/A
Voided	Met	Not Met	N/A
Evaluate procedure Site	Met	Not Met	N/A
Dressing Clean and dry		No N/A	Changed X:

Signature _____ Date/Time _____

SEDATION / ANALGESIA AUDIT SAMPLE

Department _____ Date _____ Physician's Name _____
Medications Administered by _____
Procedure _____
Person Auditing _____
Medication used and total dosage (Check all that apply)
D Versed _____ D Valium _____ D Demerol _____
D Fentanyl _____ D Morphine _____ D Other _____

	Sedation/Analgesia Audit Form	YES	NO	NA
1.	Consent signed for procedure			
2.	H&P on chart			
3.	Pre-procedure Assessment completed for:			
	a. Pre-procedure H&P completed by MD, Interval change noted			
	b. Informed consent for sedation and procedure			
	c. Airway Assessment			
	d. Previous hx. of complications with sedation/anesthesia			
	e. ASA classification			
	f. NPO status			
	g. Plan for sedation			
	h. Post procedure plan of care			
	i. RN plan of care			
4.	Immediate pre-procedure assessment by licensed staff completed			
	a. Baseline Aldrete score			
	b. Pre-procedure VS, O2 sat., LOC and pain target and level			
5.	Intra-procedure Assessments completed for: (every 5 min)			
	a. O2 Saturation			
	b. Blood Pressure			
	c. Respiration			
	d. End-tidal CO2			
	e. Level of Consciousness			
	f. Heart rate and Cont. EKG for ASA score of 3 or >			
6.	Post-procedure assessment completed for:			
	a. Immediate post procedure vital signs completed			
	b. Vital signs (every 5-15 min until return to baseline)			
	c. Aldrete score			
	d. Monitoring discontinued appropriately based on Aldrete Score			
	e. Signatures present where indicated			
	f. Physician order for discharge obtained			
7.	For patient being discharged home:			
	a. All DC criteria met			

OUTCOMES: (One selection required/Check all that apply)

- ☐ No Complications, case completed as planned
- ☐ Unplanned escalation to moderate sedation level
- ☐ Unplanned escalation to deep sedation level
- ☐ Patient received reversal medications (i.e. Naloxone, Flumazenil)
- ☐ Unplanned respiratory support required in light or moderate sedation (i.e. Placement of nasal trumpet or oral airway, supraglottic airway, or ET tube, or chin lift/jaw thrust, assisted ventilation with bag-valve-mask)
- ☐ Oxygen saturation < 85% for greater than 3 minutes
- ☐ Hemodynamic instability requiring intervention (e.g. fluid bolus, pressor agents)
- ☐ Patient experienced a serious adverse event (e.g. perforation, anaphylaxis, aspiration, cardiac arrest, death)
- ☐ Unplanned admission/transfer to a higher level of care
- ☐ Other/Comments

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7420-1050

SEDATION / ANALGESIC AUDIT

AGENTS COMMONLY USED FOR PROCEDURAL SEDATION

DRUG	CLASS & MECHANISM OF ACTION	DOSING GUIDELINES (IV ADMINSTRATION	ONSET, PEAK EFFECT, AND DURATION OF ACTION	ADVERSE DRUG REACTIONS	COMMENTS	REVERSAL
Midazolam (Versed)	Benzodiazepine (Binds to GABA receptor resulting in CNS depression)	**IV:** 0.02-0.04 mg/kg **IM:** 0.02-0.1 mg/kg **PO:** 0.5-0.8 mg/kg	Onset(IV): 1-3 min ** allow 15-30 min for effect with PO administration** Peak Effect (IV): 5-7 min Duration of Action(IV): 20-40 min	Respiratory and cardiovascular depression may occur. May also cause ataxia, dizziness, hypotension, bradycardia, blurred vision, and paradoxical agitation.	Advantages include quick onset and short duration of action. Reduce dose by 25-30% when combining with opioid to decrease risk of respiratory distress.	Flumazenil (0.2 mg over 15 seconds, may repeat every 1 min with MAX of 4 doses
Lorazepam (Ativan)	Benzodiazepine (Binds to GABA receptor resulting in CNS depression)	**IV:** 0.02-0.04 mg/kg **IM:** 0.5-1 mg	Onset(IV): 3-7 min Peak Effect(IV): 10-20 min Duration of Action(IV): 6-8 hrs	Respiratory and cardiovascular depression may occur. May also cause ataxia, dizziness, hypotension, bradycardia, blurred vision, and paradoxical agitation.	Slower onset and longer duration of action than midazolam. Limited utility in procedural sedation due to slower onset of action. Reduce dose by 25-30% when combining with opioid to decrease risk of respiratory distress.	Flumazenil (0.2 mg over 15 seconds, may repeat every 1 min with MAX of 4 doses
Diazepam (Valium)	Benzodiazepine (Binds to GABA receptor resulting in CNS depression	**IV:** 1-5 mg **IM:** Unreliable absorption **PO:** 5-10 mg,	Onset(IV): 1-5 min ** allow at least 30 min for effect with PO administration** Duration of Action(IV/PO): 6-8 hrs	Respiratory and cardiovascular depression may occur. May also cause ataxia, dizziness, hypotension, bradycardia, blurred vision, and paradoxical agitation.	Longer duration of action than midazolam and lorazepam. Limited utility in procedural sedation due to slower onset of action. Reduce dose by 25-30% when combining with opioid to decrease risk of respiratory distress.	Flumazenil (0.2 mg over 15 seconds, may repeat every 1 min with MAX of 4 doses
Fentanyl (Sublimaze)	Opioid narcotic (Binds to opioid receptor in the CNS)	**IV:** 0.5-1 mcg/kg; *MAX: 2 mcg/kg per procedure or 250 mcg*	Onset: 1-2 min Peak Effect: 10-15 min Duration of Action: 30-60 min	Hypotension, bradycardia, respiratory depression, nausea, vomiting, constipation, biliary spasm, and skin rash	Quick onset and short duration of action. Reduce dose when combining with benzodiazepines. Less histamine release and hypotension than morphine.	Naloxone (0.4mg initially followed by 0.1-0.2mg every 2-3 min as needed)
Morphine	Opioid narcotic (Binds to opioid receptor in the CNS)	**IV:** 2-4 mg increments; *MAX :15-20 mg/procedure* **IM/SQ:** not recommended due to tissue necrosis with repeat doses (0.1 mg/kg; max 4 mg/DOSE)	Onset: 2-3 min Peak Effect: 20 min Duration of Action: 2-4 hrs	Hypotension, bradycardia, respiratory depression, nausea, vomiting, constipation, biliary spasm, and skin rash	Slower onset and longer duration of activity vs. fentanyl. More histamine release and hypotension especially in under resuscitated patients vs. fentanyl. Reduce dose when combining with benzo.	Naloxone (0.4mg initially followed by 0.1-0.2mg every 2-3 min as needed)

Meperidine (Demerol)	Opioid narcotic (Binds to opioid receptor in the CNS)	**IV:** 25-50 mg increments *MAX: 150mg/procedure*	Onset: 5 min Peak Effect: 1 hour Duration of Action: 2-4 hrs	Seizures, hypotension, bradycardia, respiratory depression, nausea, vomiting, constipation, biliary spasm, and skin rash	No major advantage over other opioids. Use is not recommended in the elderly due to increased risk of adverse events including seizures.	Naloxone (0.4mg initially followed by 0.1-0.2mg every 2-3 min as needed)
Propofol (Diprivan)	Hypnotic/anesthetic phenolic compound (General anesthetic and sedative properties; Structurally unrelated to opioid, barbiturate, and benzodiazepine drugs)	**IV bolus:** 1mg/kg *MAX: 100 mg /procedure*	Onset: 30 seconds Duration of Action: 10-15 min	Hypotension, heart block, asystole, and other arrhythmias, bradycardia, and possible infection from lipid based vehicle. Allergic reactions in patients with a history of an egg allergy	Rapid onset and short duration of action. Bolus doses are restricted to patients monitored for hypotension and bradycardia (ED/ICU). No analgesic effect, caution for respiratory distress when combined with opioids.	NONE
Ketamine (Ketalar)	Dissociative general anesthetic (Produces a cataleptic-like state in which the patient is dissociated from the surrounding environment; Produces intense analgesia and sedation without causing hypotension)	**IV:** 0.2-1mg/kg **IM:** 2-4 mg/kg *MAX: 2mg/kg (per procedure)*	Onset 1-2 min Duration of Action: 15-30 min		Can cause HYPERtension and tachycardia. Avoid in patients with aneurysms, elevated ICP, or hypertension. Produces both sedation and analgesia. SLOW IV push to avoid respiratory depression, especially when combined with opioids.	NONE

PEDIATRIC DOSAGES-IV
(under 12 years of age)

Medication-Pediatric IV/IM	Dose (Pediatric)	Incremental Dose Interval	Reversal
Midazolam (Versed)	0.05-0.1 mg/kg, max total dose 6 mg	Q 3-5 min	**Flumazenil IV:** Children >1 year old: Start 0.01 mg/kg (max dose:0.2 mg) given over 15 seconds; may repeat 0.01 mg/kg (max of 0.2mg) after 45 seconds. Then every minute (max of 4 doses) to a max total cumulative dose of 0.05 mg/kg or 1 mg ~~whatever~~ **whichever** is lower. Usual total dose 0.08 to 1 mg
Fentanyl (Sublimaze)	0.5-2 mcg/kg, start with 0.5 mcg/kg may repeat every 15 min up to max 3 mcg/kg total for procedure	Every 15-30 min	**Naloxone IV:** Birth (including premature infants) to 5 years old or < 20 kg 0.1 mg/kg (max of 2 mg) repeat every 2 to 3 minutes if needed. >5 years old or >20 kg 2 mg, if no response, repeat every 2-3 minutes up to 10 mg.
Meperidine (Demerol)	0.5-1 mg/kg, max of 150 mg per procedure	Every 5 min	**Naloxone IV:** Birth (including premature infants) to 5 years old or < 20 kg 0.1 mg/kg (max of 2 mg) repeat every 2 to 3 minutes if needed. >5 years old or >20 kg 2 mg, if no response, repeat every 2-3 minutes up to 10 mg.
Lorazepam (Ativan)	0.02-0.09 mg/kg (Usual 0.05 mg/dose)	Every 20 min	**Flumazenil IV:** Children >1 year old: Start 0.01 mg/kg (max dose:0.2 mg) given over 15 seconds; may repeat 0.01 mg/kg (max of 0.2mg) after 45 seconds. Then every minute (max of 4 doses) to a max total cumulative dose of 0.05 mg/kg or 1 mg ~~whatever~~ **whichever** is lower. Usual total dose 0.08 to 1 mg
** **Etomidate** (Amidate)	0.1-0.2 mg/kg	0.05 mg/kg every 5 min	N/A
Ketamine (Ketalar)	IM: 2-5 mg/kg/dose IV: 0.5-1 mg/kg/dose	Every 20 min	N/A

** Dosing information in children less than 10 years old is limited with Etomidate

PEDIATRIC DOSEAGES-PO/RECTAL
(under 12 years of age)

Medication-Pediatric IV/IM	Dose (Pediatric)	Comments	Reversal
Midazolam (Versed)	0.25-1 mg/kg; PO or Rectal (usual 0.5 mg/kg) max 20 mg per procedure	Allow 20-30 minutes for effect	**Flumazenil IV:** Children >1 year old: Start 0.01 mg/kg (max dose:0.2 mg) given over 15 seconds; may repeat 0.01 mg/kg (max of 0.2mg) after 45 seconds. Then every minute (max of 4 doses) to a max total cumulative dose of 0.05 mg/kg or 1 mg ~~whatever~~ **whichever** is lower. Usual total dose 0.08 to 1 mg
Diazepam (Valium)	0.2-0.3 mg/kg; PO or rectal, max of 10 mg per procedure	Allow 30-60 minutes for effect	**Flumazenil IV:** Children >1 year old: Start 0.01 mg/kg (max dose:0.2 mg) given over 15 seconds; may repeat 0.01 mg/kg (max of 0.2mg) after 45 seconds. Then every minute (max of 4 doses) to a max total cumulative dose of 0.05 mg/kg or 1 mg ~~whatever~~ **whichever** is lower. Usual total dose 0.08 to 1 mg
Ketamine (Ketalar)	5-8 mg/kg for 1 dose, mixed in 0.2-0.3 mL/kg of cola or other beverage	Allow 30 minutes for effect	N/A

Cautions:

(1) There is an increased risk of respiratory depression and cadiovacular depression with combinations of benzodiazepines and opioid narcotics
(2) Repiratory depression effects may last longer than analgesic; monitor for respiratory depression and apnea
(3) Use smaller (25-30% decrease) doses in elderly patients (>65 years of age)
(4) Use of nalxaone (0.4 mg dose) to reverse narcotics respiratory depression, especially if mild, can result in surge in sympathetic tone, hypertension, and ultimately pulmonary edema, in some cases

References:

1. Lacy CF, Armstrong LL, Goldman MP, Lance LL. Drug Information Handbook. 11th Edition; American Pharmaceutical Association and Lexi-Comp Inc. Hudson, Ohio, 2009-2010.
2. McArdle P. Intravenous analgesia. Crit Care Clin 1999;15(1):89-104.
3. Horn E, Nesbit SA. Pharmacology and pharmacokinetics of sedatives and analgesics. Gastrointestinal Clinics of North America 2004; 14(2):247-268

Tri-City Medical Center
Oceanside, California

PATIENT CARE SERVICES POLICY MANUAL

ISSUE DATE: 6/12	**SUBJECT:** **Self-Administered Continuous Subcutaneous Infusion of Insulin (Insulin Pump Therapy) for the Acute Care Patient**
REVISION DATE: 10/13	**POLICY NUMBER:** **NEW**

Department Approval:	**09/16**
Clinical Policies & Procedures Committee Approval:	**~~11/13~~10/16**
Nurse Executive Council Approval:	**~~11/13~~10/16**
Diabetes Task Force Approval:	**12/16**
Pharmacy & Therapeutics Committee Approval:	**~~02/17~~03/17**
Medical Executive Committee Approval:	**~~02/14~~04/17**
Professional Affairs Committee Approval:	**02/14**
Board of Directors Approval:	**02/14**

A. **POLICY:**

1. Continuous subcutaneous infusion of insulin (CSII) or insulin pump therapy is an option for hospitalized adult patients who desire intensive insulin management. CSII is not initiated in the hospital. This policy includes self-management of a Continuous Glucose Monitor, if applicable.

B. **CONTRAINDICATIONS:**

1. Altered level of consciousness or change in judgment.
2. Receiving medications with the potential of inducing altered mental awareness or level of consciousness as determined by attending/consulting physician.
3. Mental and/or physical inability to independently manage the pump (dosing changes and boluses, settings infusion sets, tubing changes, reservoir and insulin, etc.)
4. Risk for suicide.
5. Other circumstances identified by the attending/consulting physician.

C. **PROCEDURE: PATIENT ASSESSMENT:**

~~1.~~ Verify that the patient's attending physician has **initiated the "Insulin Pump (CSII) – Subcutaneous Self-Administered" PowerPlan** ~~written an order to allow patient self-management of his/her insulin pump.~~

2. Notify Biomedical Engineering to evaluate the pump and Continuous Glucose Meter for safety and obvious damage **per Patient Care Services (PCS) Policy: Medical Equipment Brought Into the Facility**~~immediately~~.
3. **Complete the "Initial Assessment for Insulin Pump Patients"** .Verify that patient
   a. Is alert to time, person and place on admission and then at least once per shift.
   b. Is able to independently perform psychomotor tasks to manage the insulin infusion as follows:
      i. Knows and can change basal rate(s).
      ii. Knows and can manage mealtime insulin infusions based on insulin to carb ratio(s).
      iii. Knows and can manage correction infusions based on insulin sensitivity factor(s).
      iv. Can change **insertion site,** infusion set, **tubing** ~~insertion set~~, and reservoir with insulin every 72 hours and prn.

NOTE: there might be slight differences in supplies depending on the pump.

~~iv.~~**v. For a Continuous Glucose Monitor (CGM), can change the sensor at appropriate intervals.**

c. Has his/her own supplies at the bedside necessary for self-management: infusion sets, tubing, reservoirs, ~~and~~ insulin**, etc.**
NOTE: Insulin brought in from home for use in the hospital must be ordered by the physician and verified by the pharmacy according to Patient Services (PCS) Medications Brought in by the Patient Policy.

d. Has signed the Insulin Pump Therapy Patient Agreement

e. Is willing to keep written records of insulin infusions using the Patient Insulin Pump Record

~~f. Completes Patient Assessment for Self-Management of Insulin Pump~~

4. Check point of care (POC) blood glucose levels as ordered by the physician using the hospital meter or readings from the patient's continuous glucose monitor.
   a. If 2 consecutive POC blood glucose readings are above 250 mg/dL (200 mg/dL, if pregnant) within a 4-6 hour interval, **obtain order for**~~send~~ a urine specimen to **check**~~the lab~~ for ketones and instruct the patient to change the infusion set, insertion site, and reservoir with insulin.
   b. Call the physician for a correction dose of lispro insulin to be administered subcutaneously by the nurse when the POC blood glucose is above 250 or if the pump is disconnected for more than 30 minutes.
5. Discontinue the pump when ordered by the physician or if the patient's level of consciousness suddenly changes.

D. **RESPONSIBLITIES:**
1. Patient must change entire pump set-up including insertion site, infusion set, and reservoir with insulin at least every 72 hours and PRN.
2. Nurse will assess insertion site every shift for redness, signs of infection, purulent drainage, or leakage.
3. Patient will change infusion set, tubing, and insertion site if:
   a. Tubing is clogged or infusion set is leaking
   b. Site is red, painful, irritated, and/or there are signs of infection
   c. Two consecutive POC blood glucose readings are above 250 mg/dL (200mg/dL if pregnant) within a 4-6 hour interval.

E. **MEDICATION INTERVENTIONS:**
1. If patient is **NO LONGER ALERT** or any of the other assessment criteria have changed:
   a. Explain to patient and/or patient's family that the pump will be removed for patient's safety.
   b. Remove the pump and infusion~~s~~ set and instruct a family member to take the pump home. If family member is not available, send pump to Pharmacy for safe-keeping.
   c. Continue to measure POC blood glucose levels as ordered.
   d. Obtain orders for basal insulin, mealtime insulin, and correction insulin. Alternatively, begin continuous infusion of IV regular insulin according to physician orders.
   e. A pump should not be discontinued without starting either subcutaneous or intravenous insulin at least 60 minutes before the subcutaneous pump infusion is removed.
   f. Continue subcutaneous or IV insulin orders until patient is assessed by physician to be able to once again, independently, self-manage the pump.

F. **SPECIAL PROCEDURES:**
1. For procedures requiring sedation (surgery, cardiac catheterization, bronchoscopy, endoscopy, etc.), the pump will be disconnected. Contact the physician for specific orders for starting IV or SC insulin therapy.

2. Pumps should never be exposed to x-ray beams which may cause the pump to empty its entire reservoir of insulin and potentially cause severe hypoglycemia and death.
3. For CT scans and general x-rays, it is not necessary to disconnect the pump if the pump is not in the area of interest. It can be covered with a lead apron.
4. For MRIs, disconnect the pump. Remove the insertion set ONLY if it is metal.
5. For mammograms and bone density tests, it is not necessary to disconnect the pump.
6. For ultrasound, it is not necessary to disconnect the pump.
7. If the pump is stopped for over 30 minutes, the pump may need to be reconnected for a dose of insulin prior to continuing the radiology procedure to prevent rapid onset DKA.
8. In case of hypoglycemia, treat per PCS Hypoglycemia Management in the Adult Patient Standard**ized** Procedure.

G. **PUMP INFORMATION:**

1. An external insulin pump is about the size of a pager and contains a reservoir filled with rapid acting insulin (lispro, aspart, or glulisine), has a computer chip, and a battery-operated pump. Many pump models exist; some have visible tubing, others are self-contained and disposable. An insulin pump does not automatically control blood glucose levels. Pump users check their blood glucose levels 4-10 times/day (8-12 times/day when pregnant), calculate doses of insulin based on the blood glucose level and/or carbohydrate intake and program the pump to deliver a dose (bolus) of insulin. The pump is also programmed to deliver continuous basal insulin.
   a. All insulin is delivered through an infusion set
   b. The patient changes the insertion site, infusion set, and reservoir with insulin every 72 hours, or more often as needed, to prevent infection and to promote good insulin delivery.
2. Refer to the 800 number on the back of the pump/CGM if needed for technical support.
3. Diabetic Ketoacidosis (DKA) CAUTION: The effect of rapid acting insulin lasts about 4 hours; therefore, if insulin delivery is interrupted, DKA can develop rapidly in both non-pregnant and pregnant patients. If the insulin pump is removed, physician orders for either **subcutaneous (SC)** or **intravenous (IV)** insulin should start immediately.
   NOTE: DKA is not likely to occur in patients with type 2 diabetes
4. The most common causes of DKA in pump users:
   a. Insertion set/tubing is clogged, kinked or leaking
   b. Site has NOT been changed recently and site is irritated
   c. Failure to treat hyperglycemia appropriately
   d. Insulin has lost potency in the vial of insulin currently in use **(check expiration date).**
5. Correction doses:
   a. Most pumps have a built-in feature to limit the amount of insulin delivery for correction doses.
   b. Correction dosing is NOT advised more than once every two hours
6. When the pump is discontinued, the patient may resume pump therapy with a physician order.

H. **KEY POINTS:**

1. **Insulin is delivered either by pump or injection—NOT BOTH**
~~1.~~**2.** Patient to self-maintain fasting and pre-meal blood glucose range ~~100-140~~**140-180** mg/dL~~. and post meal levels less than 180 mg/dL. Critical care blood glucose range is 140-180 mg/dL~~. POC blood glucose levels will be checked by RN using the hospital meter or readings from the patient's continuous glucose meter.
~~2.~~**3.** For pregnant patients, POC blood glucose targets are as follows:
   a. Antepartum targets: Fasting 70-99 mg/dL; one hour after first bite of a meal 100-129 mg/dL
   b. Intrapartum (during labor): 70-110 mg/dL
   c. Postpartum and breastfeeding: Fasting 70-99 mg/dL, one hour after the first bite of a meal 100-150 mg/dL. Higher targets may be set for individual patient needs.

~~3.~~**4.** The bedside glucose monitor allows for necessary actions to be taken quickly along with follow-up care. However, for accurate Nova StatStrip readings, the hematocrit range must be 25-60%. If HCT is less than 25% the blood glucose may be inaccurately high~~;~~ if greater than 60%, blood glucose may be inaccurately low.

I. **DOCUMENTATION:**

1. Assure patient has signed the Patient Agreement for Self-Administered Continuous Subcutaneous Infusion of Insulin
2. Complete the Initial Assessment for Insulin Pump Patients
3. Document insertion site **location** on the Patient Insulin Pump Record
4. Provide Patient with a supply of the Patient Insulin Pump Record.
5. Document POC blood glucose readings on the Patient Insulin Pump Record and in the Electronic Medical Record.
6. The Patient Insulin Pump Records are scanned into the medical record at discharge.
7. Ensure that the patient records all self-administered mealtime and correction doses of insulin; the basal rate and changes to the basal rate, and the grams of carbohydrate consumed at each meal.
~~7.~~**8.** **Documentation on the Patent Insulin Pump record must include the date of each infusion set change and insertion site change (if not the same as set change date).**

J. **FORM(S):**

1. Patient Agreement for Self-Administered Continuous Subcutaneous Infusion of Insulin
2. Patient Insulin Pump Record
3. Initial Assessment for Insulin Pump Patients

K. **RELATED DOCUMENTS:**

1. PCS Medications Brought in by the Patient Policy
2. PCS Hypoglycemia Management in the Adult Patient Standard**ized** Procedure
~~2.~~**3.** **PCS Policy: Policy: Medical Equipment Brought Into the Facility**

L. **REFRENCES:**

1. American Diabetes Association, Clinical Practice Recommendations – 2002, Continuous Subcutaneous Insulin Infusion; Diabetes Care 25: S116
2. American Diabetes Association, Standards of Medical Care – 2006, Diabetes Care in the Hospital; Diabetes Care 29: S4- 42S
3. Cook, et al. Use of Subcutaneous Insulin Infusion (Insulin Pump) Therapy in the Hospital Setting – Proposed Guidelines and Outcomes Measures; The Diabetes EDUCATOR; Volume 31, Number 6, November/December 2005
4. Pickup, J and Keen, H. Continuous Subcutaneous Insulin Infusion at 25 years: Evidence base for the expanding use of insulin pump therapy in Type 1 Diabetes; Diabetes Care 25: 1079-1087
5. The Diabetes Educator. Vol. 31 No. 6, November/December 2005. The use of Subcutaneous Insulin Infusion (Insulin Pump) in the Hospital Setting: Proposed Guidelines and Outcome Measures.
6. American Association of Diabetes Educators, Inpatient Position Statement. The Diabetes Educator, In Press, 2009.
7. American Diabetes Association: Managing Preexisting Diabetes for Pregnancy. Diabetes Care, Volume Number 5, May 2008

PATIENT AGREEMENT FOR SELF-ADMINISTERED CONTINUOUS SUBCUTANEOUS INFUSION OF INSULIN

For your safety and optimal medical care during this hospitalization, we request that you agree to the following recommendations. If you believe that you cannot agree to these recommendations, we would like to treat your diabetes with insulin injections and request that you discontinue the use of your insulin pump.

1. I agree to hold harmless Tri-City Medical Center from any recalls, alerts and preventive maintenance brought to my attention for my insulin pump and continuous glucose meter, if applicable.
2. I agree to accept total responsibility for maintaining the pump and related equipment as well as self-administered insulin boluses and basal rates.
3. My insulin pump and Continuous Glucose Meter, if applicable, is approved by the Federal Drug Administration (FDA).
4. I agree to allow Biomedical Engineering to evaluate my pump and Continuous Glucose Meter, if applicable for safety and possible damage.
5. The make, model, and serial number (usually found on the back of the pump) are as follows:
6. Insulin Pump make & model _____ Serial Number_____

During my hospital stay, I agree to:

1. Write my basal rate, mealtime, and correction insulin boluses on the **Patient Insulin Pump Record** so the nurse can monitor my care.
2. Write the carbohydrate grams or servings consumed for each meal on the **Patient Insulin Pump Record.**
3. Write the insertion site, infusion set, and reservoir with insulin changes on the **Patient Insulin Pump Record.**
4. Change my basal rate if determined necessary by my physician.
5. Change the insertion site, infusion set, and reservoir with insulin every 72 hours or more often if
   a. The insertion site is red, irritated, painful, or if there are signs of infection
   b. The infusion set is leaking or the tubing is clogged
   c. Two consecutive capillary blood glucose (or CGM) readings are greater than 250 mg/dL (200 mg/dL if pregnant)
   d. A "no delivery" alarm occurs on the pump
6. Provide my own insulin pump supplies including insulin, which I agree to allow ~~verification by~~ the pharmacy **to verify.**
7. Allow the nurses and physicians caring for me to view the **Patient Insulin Pump Record** as needed.
8. Allow the nurse to check my pump insertion site for irritation, redness or leaks.
9. Report any symptoms of low blood sugar.
10. Report any pump problems immediately to my nurse.
11. Ask questions if I do not understand my doctor's orders for my insulin pump.
12. Have my pump disconnected if I can no longer, independently, manage my pump and I agree, then, to an alternate insulin delivery method.
13. Send my pump and supplies home with a family member for safekeeping if my pump is disconnected or have Tri-City Medical Center's Pharmacy department store my pump for safe-keeping.

I also understand that my insulin pump may be discontinued or disconnected (either temporarily or longer) and an alternate method of insulin delivery used for any of the following situations:

1. Changes in my level of consciousness, awareness, or judgment.
2. Changes in my physical ability to manage my pump.
3. Radiological procedure such as x-rays, CT scans, MRIs or other procedures.
4. Other reasons determined to be medically necessary by my doctor.

Patient Signature:_____Date:_____

Witness Signature:_____Date:_____

PATIENT INSULIN PUMP RECORD

To be kept at the bedside for the patient to complete during hospitalization. Start a new record each day.

DATE:_____ **PATIENT NAME:**_____

Patient to record the following:

- Enter date of last **infusion set change and** insertion site change **(if not the same as set change date:** _____ (must change every 72 hours)
- **Location of insertion site:** _____
- Circle the type of insulin currently in your pump: Humalog (lispro) Novolog (aspart) Apidra (glulisine)
- Nurse will record the **Point of Care**~~Capillary~~ Blood Glucose (~~C~~BG) readings that are obtained from the hospital meter or you will record your Continuous Glucose Monitor (CGM) readings before meals.
- Estimated total carbohydrate grams or servings for each meal

TELL YOUR NURSE IF:

- Something is wrong with your pump, or you do not feel capable of managing your pump
- You notice redness at the insertion site, or you changed your insertion site
- You have symptoms of low blood sugar or high blood sugar
- Your pump is unplugged for more than 30 minutes

TIME	CGM/ CBG done by nurse	CARBS consumed (grams or servings)	BOLUS amount		BASAL rate	Comments
			Mealtime	Correction		

Basal rate is the "background" insulin, the amount needed to maintain glucose levels when not eating.
Bolus dose is the "mealtime" or "correction" insulin used to manage spikes in glucose.

Initial Assessment for Insulin Pump Patients

1. Has the attending physician completed the **Power Plan Insulin Pump (CSII) – Subcutaneous Self-Administered** ~~Order Set for *Patient Self-Administered Continuous Subcutaneous Infusion of Insulin (Insulin Pump Therapy) for the Adult Acute Care Patient*~~?
   ☐ Yes ☐ No

2. Is the patient alert to time, place, and person? ☐ Yes ☐ No

3. Does the patient have the requisite knowledge to be able to self-manage the pump as follows:
   Pump model and manufacturer _____ Serial number _____

   Pump customer service number (found on back of pump) _____

   Type of insulin used in the pump:
   ☐ Humalog® (lispro) ☐ Novolog® (aspart) ☐ Apidra® (glulisine)

   Basal rate 1 _____ units/hour from _____ a.m./p.m. to ____ a.m./p.m.

   Basal rate 2 _____ units/hour from _____ a.m./p.m. to ____ a.m./p.m.

   Basal rate 3 _____ units/hour from _____ a.m./p.m. to ____ a.m./p.m.

   NOTE: patient may have one or more basal rates in a 24 hour period
   (if additional basal rates, add to back of form)

   Insulin to carb ratio breakfast _____ units of insulin per _____ grams of carb

   Insulin to carb ratio lunch _____ units of insulin per _____ grams of carb

   Insulin to carb ratio dinner _____ units of insulin per _____ grams of carb

   Insulin to carb ratio snack _____ units of insulin per _____ grams of carb

   NOTE: patient may have one or more Insulin to carb ratios or take fixed amounts at each meal:

   _____units at breakfast; _____units at lunch; _____units at dinner

   Correction Factor:
   _____ Units for every _____ mg/dL over _____ mg/dL (target glucose)

   or one unit will bring blood glucose down _____ mg/dL

   or make copy of written correction scale supplied by patient and add to chart

4. Does the patient have the physical ability to manage the pump, deliver the doses, and make setting changes? ☐ yes ☐ no
5. Does the patient have pump supplies and insulin at bedside? ☐ yes ☐ no
6. Has the pharmacy verified the insulin? ☐ yes ☐ no
7. Has Biomedical Engineering evaluated the pump for safety? ☐ yes ☐ no
8. Has the patient signed the *Patient Agreement for Self-Administered Continuous Subcutaneous Infusion of Insulin?* ☐ yes ☐ no

NOTE: all questions must be answered "yes" before patient may use pump.

Tri-City Medical Center
Oceanside, California

PATIENT CARE SERVICES

STANDARDIZED PROCEDURE: Tdap (TETANUS, DIPHTHERIA & PERTUSSIS) VACCINE ADMINISTRATION FOR ANTEPARTUM & POSTPARTUM OBSTETRIC PATIENTS

I. **POLICY:**

A. Function: To provide guidelines for administration of the Tdap vaccine to antepartum and postpartum women, and hospital employees.

1. Tdap vaccine will be offered to all inpatient antepartum patients with every pregnancy (unless already received **in current pregnancy**) and postpartum women **who did not receive the vaccination during the pregnancy**, ~~who have never been vaccinated~~ and do not have a contraindication to vaccination before discharge from the hospital.
2. The RN shall:
   a. Identify and provide Tdap vaccine to all inpatient antepartum and postpartum women meeting screening criteria.
      i. Tdap vaccine is *contraindicated*:
         1) In those with history of serious allergic reaction (anaphylaxis) to any component of the vaccine
         2) In those with history of encephalopathy (coma or prolonged seizure) within 7 days of receiving a vaccine with Pertussis.
      ii. Physician notification with a new order is required to proceed with immunization for the following risk factors:
         1) Moderate or severe acute illness with or without fever until the acute illness resolves.
         2) Guillain-Barré syndrome **less than (<)** 6 weeks after previous dose with tetanus toxoid containing vaccine
         3) Unstable neurologic condition (consult MD if patient has any neurologic condition for further advice)
         4) History of an Arthus reaction (i.e. a severe injection site reaction with hemorrhage or local necrosis typically developing 4 – 12 hours after vaccination) following a previous dose of a tetanus toxoid–containing and/or diphtheria toxoid–containing vaccine
      iii. Simultaneous vaccination of Tdap with MMR and Influenza vaccine is safe.
      iv. Tdap may be given in the 2nd or 3rd trimester of pregnancy ~~or if breastfeeding~~ and should be given with every pregnancy. **If not given during the pregnancy the vaccination should be given postpartum prior to discharge.**
   b. Make referrals for significant others, and household contacts of newborn infant to a nearby clinic affiliated with the Tdap vaccination or to their primary care provider for screening and if eligible to receive the Tdap vaccination.
   c. Employee Health Clinic shall provide screening and vaccination of all health care providers/employees who have direct patient contact at Tri-City Medical Center.

B. Circumstances:

1. Setting: Tri-City Medical Center – Inpatient Antepartum and Mother-Baby postpartum care units:
2. Supervision: None required

Department Review	Clinical Policies & Procedures	Nursing Executive Council	Department of OB/GYN	Pharmacy and Therapeutics	Interdisciplinary Committee	Medical Executive Committee	Professional Affairs Committee	Board of Directors
6/10; 5/12; 1/15, **08/16**	05/12; 2/15, **09/16**	05/12; 2/15, **09/16**	06/15, **12/16**	05/12; 09/15, **02/17**	11/12; 01/16, **04/17**	11/12; 01/16, **04/17**	02/16	12/12; 02/16

3. Considerations for administration:
   a. Requires careful screening of patient's prenatal care or lack of prenatal care, availability of immunization record, and assessment of risk factors associated with exposure and potential for development of Pertussis
   b. Reduces the risk of Pertussis exposure from postpartum women, significant others, and extended family members to their newly born infants.
   c. Compliance with recommendation from the California Department of Health, Centers for Infectious Disease to prevent infant deaths under 12 months due to Pertussis ~~– May 2014~~

II. **PROCEDURE:**

A. The RN shall:

1. Identify and document vaccination history regarding previous Td and Tdap vaccination while screening patient for eligibility for Tdap immunization by going to Ad Hoc, WNS Maternal Forms, OB Immunization profile for all inpatient antepartum patients and postpartum patients upon admission to the unit.
   a. Patient is not eligible for vaccination if any of the risk factors below are identified:
      i. Previous severe allergic reactions (i.e. anaphylaxis) to any component of the vaccine.
      ii. History of coma or prolonged seizures occurring **less than (<)** 7 days of administration of a pertussis vaccine (DTP, DTaP, Tdap) that was not attributable to any identifiable cause.
         1) Note: Family history of seizures is not a contraindication
      iii. Patient received and can verify administration of the Tdap vaccine in this pregnancy ~~or last ten years (exception the inpatient antepartum patient whom should receive the vaccine with every pregnancy).~~
         1) A woman who did not get a dose of Tdap in pregnancy, ~~and has never received a dose of Tdap in the past,~~ should get a dose of Tdap ~~immediately~~ postpartum **prior to discharge**.
         ~~2) If woman previously received Tdap she does not need postpartum dose (if does not know, it is best to give the dose)~~
         ~~3) A pregnant woman who is due for routine 10-year booster should receive Tdap.~~
      iv. Physician order not to give vaccine at this time
   b. Physician notification with a new order is required to proceed with immunization for the following risk factors:
      i. Moderate or severe acute illness with or without fever until the acute illness resolves
      ii. Guillain-Barre syndrome **less than** (<) 6 weeks after previous dose with tetanus toxoid containing vaccine
      iii. Unstable neurologic condition (consult MD if patient has any neurologic condition for further advice)
      iv. History of an Arthus reaction (i.e. a severe injection site reaction with hemorrhage or local necrosis typically developing 4 – 12 hours after vaccination) following a previous dose of a tetanus toxoid – containing and/or diphtheria toxoid – containing vaccine

III. **REQUIREMENTS FOR CLINICIANS INITIATING STANDARDIZED PROCEDURE:**

A. Current California RN license.
B. Initial Evaluation: Orientation
C. Ongoing Evaluation: Annual Skills Lab

IV. **DEVELOPMENT AND APPROVAL OF THE STANDARDIZED PROCEDURE:**

A. Method: This Standardized Procedure was developed through collaboration with Nursing, Medicine, and Administration.
B. Review: Every two (2) years.

V. **CLINICIANS AUTHORIZED TO PERFORM THIS STANDARDIZED PROCEDURE:**

A. All Registered Nurses who have successfully completed requirements as outlined above are authorized to direct and perform Tdap Vaccine Administration **For Antepartum** and Postpartum **Obstetric Patients** Standardized Procedure.

VI. **REFERENCES:**

A. The American College of Obstetricians and Gynecologists Committee. Update on Immunization and Pregnancy: Tetanus, Diptheria, and Pertussis Vaccination. Opinion Number 521, March 2012
B. CDC, MMWR , February 22, 2013 / Vol. 62 / No. 7 Updated Recommendations for Use of Tetanus Toxoid, Reduced Diptheria Toxoid, and Acellular Pertussis Vaccine (Tdap) in Pregnant Women-Advisory Committee on Immunization Practices (ACIP), 2012.
C. Centers for Disease Control and Prevention. Guidelines for Vaccinating Pregnant Women. March 2013 **Reaffirmed 2015.**
D. Forsyth, K., Plotkin, S., Tan, T., Wirsing von Konig, C.H. Strategies to Decrease Pertussis Transmission to Infants. *Pediatrics* 2015;135;e1475 Retrieved August 26, 2016.
~~D. Immunization Action Coalition. (February 2013, Vol. 23, No. 1). Needle Tips. Retrieved from www.immunize.org/nslt.d/n55.pdf~~

Tri-City Medical Center
Oceanside, California

PATIENT CARE SERVICES ~~POLICY MANUAL~~

ISSUE DATE: 04/05	**SUBJECT:** Titrating Medications, Adult Patients
REVISION DATE: 08/07; 02/09; 12/11, 03/12	**POLICY NUMBER:** IV.GG

Clinical Policies & Procedures Committee Approval:	**~~03/12~~08/15**
Nurse Executive Committee:	**~~03/12~~09/15**
Pharmacy & Therapeutics Committee Approval:	**09/16~~5~~**
Critical Care Committee Approval:	**03/17**
Medical Executive Committee Approval:	**~~04/12~~04/17**
Professional Affairs Committee Approval:	**05/12**
Board of Directors Approval:	**05/12**

A. **PURPOSE:**
1. To define the manner in which medications requiring titration to patient effect are utilized.

B. **POLICY:**
1. It is the policy of Tri City Medical Center to allow orders for medication titration, which is the progressive increase or decrease of the medication dose in response to the patient's clinical status.
   a. This policy pertains to the areas where titration occurs (Intensive Care Unit, Emergency Department, Post-Anesthesia Care Unit, Pain Clinic, Endoscopy, Interventional Radiology, ~~ICU,~~ **Labor and Delivery~~&D~~**).
2. Orders for medications that require titration must include the clinical effect the prescriber desires for the patient (i.e., titrate to achieve systolic blood pressure (SBP) greater than or equal to 100). Titration increments and starting dose may vary depending on the patient's clinical status, co-morbid conditions and other factors. In general, initial doses are started at the lower doses and longer intervals and titrated up to the desired patient effect.
3. Medications ordered for titration must be approved by the Pharmacy and Therapeutics Committee. Safe dose ranges for medications that are to be titrated must be reviewed and approved by that committee.
   a. A dose limit (maximum and minimum limits) at which the licensed independent practitioner must be called for each titrated medication must be set. These dose limits will correspond to the maximum and minimum dose ranges defined in the Alaris Medication Safety System Infusion pumps.
   b. If a titrated medication continues at or above the dose limit, the Registered Nurse (RN) shall contact the licensed independent practitioner ordering the titrated medication to approve the current dose at least every 24 hours by writing specific orders with a new dose limit at which he/she should be contacted.
   c. Clinical staff must assess the patient frequently when titrating mediations to detect potential problems as early as possible.
4. The attached table defines the medications currently approved for titration.

C. **RELATED DOCUMENTS:**
1. **Patient Care Services Policy: Medication Administration**
2. **Titratable Drips Reference**

~~C. REFERENCE:~~
~~1.3. Medication Administration, Policy IV.I~~

Titratable Drips Reference

DRUG	STANDARD CONCENTRATION	YIELDS	CHART IN	USUAL DOSE RANGE	Titration Parameter
Argatroban	250 mg / 250 mL NS	1 mg/mL	mcg/kg/min	0.25 – 10 mcg/kg/min	Titrate per Protocol
*Cisatracurium	**100**~~400~~ mg/**100**~~400~~ mL NS	1 mg/mL	mcg/kg/min	1-10 mcg/kg/min;Start 3mcg/kg/min;titrate by 0.3mcg/kg/hr every 10 min	Goal train-of-four 2:4 or Bedside Shivering Assessment Scale Score of 0
Dexmedetomidine (Precedex)	400 mcg / 100 mL NS	4 mcg/mL	mcg/kg/hr	0.2 – 1.4 mcg/kg/hr; Start 0.4 mcg/kg/hr; titrate by 0.1 mcg/kg/hr every 30 minutes	To maintain RASS of 0 to -2
Diltiazem (Cardizem)	125 mg / 100 mL NS (Total volume =125 mL)	1 mg/mL	mg/hr	5 – 15 mg/hr Start 5mg/hr; titrate by 2.5 mg/hr every 15 min	Keep Systolic blood pressure LESS than 165 mmHg and/or keep heart rate less than 120 BPM
*Dobutamine (Dobutrex) (Premix)	500 mg / 250 mL D5W	2 mg/mL	mcg/kg/min	2 – 20 mcg/kg/min; Start 2.5 mcg/kg/min; titrate by 0.5 mcg/kg/min every 15 min	Keep Cardiac Index GREATER than 2.2 L/min per square meter
*Dopamine (Premix)	400 mg / 250 mL D5W	1.6 mg/mL	mcg/kg/min	2 – 20 mcg/kg/min; Start 5 mcg/kg/min; titrate by 2 mcg/kg/min every 5 min	Keep Heart Rate GREATER than 60 BPM and/or keep Mean Arterial Pressure GREATER than 65 mmHg and/or Systolic Blood Pressure GREATER than 90 mmHg
*Epical (Adrenalin/calcium)	2 mg Epinephrine, 1Gm CaCl/250 mL D5W	8 mcg/mL	mcg/min	Based on Epi (as below)	Keep Heart Rate GREATER than 60 BPM and/or Systolic Blood Pressure GREATER than 90 mmHg
*Epinephrine (Adrenalin)	4 mg / 250 mL NS	16 mcg/mL	mcg/min	1 – 10 mcg/min; Start 2 mcg/min; titrate by 2 mcg/min every 5 min ***Weight based for CV Surgery Patients* 0.01 – 0.5 mcg/kg/min; Start at 0.02 mcg/kg/min and titrate by 0.02 mcg/kg/min every 5 min**	Keep Heart Rate GREATER than 60 BPM and/or Systolic Blood Pressure GREATER than 90 mmHg
Esmolol (Brevibloc) (Premix)	2500 mg / 250 mL D5W	10 mg/mL	mcg/kg/min	50 – 200 mcg/kg/min; Start 50 mcg/min; titrate by 50 mcg/kg/min every 5 min	Keep Heart rate LOWER than 120bpm and/or systolic blood pressure LOWER than 165mmHg
Fentanyl	1500 mcg / 150 ml NS	10 mcg/mL	Mcg/hr	50-300 mcg/hr, Start 50 mcg/hr, titrate by 50 mcg every 15 minutes	Keep Goal pain scale at less than or equal to 2 or at or lower

					than patient reported acceptable pain level.
Furosemide (Lasix)	100 mg /100 mL NS	1mg/mL	mg/hr	10 – 80 mg/hr; Start 10 mg/hr; titrate by 5mg/hr every hour	Keep urine output GREATER than 20ml/hr
Insulin	100 units / 100 mL NS	1 unit/mL	units/hr	0.5 – 20 units/hr	Titrate per protocol
Isoproterenol (Isuprel)	1 mg / 250 mL D5W	4 mcg/mL	mcg/min	2 – 10 mcg/min; Start 1 mcg/min; titrate by 1mcg/min every 10 min	Keep Heart rate GREATER than 60bpm
Labetalol (Normodyne)	200 mg / 200 mL D5W	1 mg/mL	mg/min	0.5 – 2 mg/min; Start 2 mg/min; titrate by 0.5 mg/min every 15 min up to 300mg in 24 hours	Keep Heart rate LESS than120bpm and/or systolic blood pressure LESS than165mmHg
Lorazepam (Ativan)	50mg/50 ml D5W	0.2 mg/mL	mg/hr	1 – 10 mg/hr; Start 2mg/hr titrate by 1 mg every 30 min	Titrate to RASS 0 to -2
Midazolam (Versed)	50 mg / 50 ml D5W	1 mg/mL	mg/hr	1 – 10 mg/hr; Start 2mg/hr; titrate by 1 mg every 15 min	Titrate to RASS 0 to -2
Milrinone (Primacor) (Premix)	20 mg / 100 mL D5W	200 mcg/mL	mcg/kg/min	0.25 - 0.75 mcg/kg/min **Start** 0.25 mcg/kg/min; **titrate** by 0.25 mcg/kg/min every hour	Keep Cardiac Index GREATER than 2.2 L/min per square meter
Morphine	100 mg / 100 mL NS	1 mg/mL	mg/hr	1 - 20 mg/hr; Start 2 mg/hr; titrate by 0.5 mg every 30 min	Keep Goal pain scale at less than or equal to 2 or at or lower than patient reported acceptable pain level.
Nicardipine (Cardene)	20mg/200 ml NS	0.1 mg/mL	mg/hr	2.5 – 15 mg/hr; Start 5mg/hr; titrate by 2.5 mg/hr every 15 min	Keep Systolic blood pressure LESS than 165mmHg
Nitroglycerin (Tridil)	50 mg / 250 mL D5W	200 mcg/mL	mcg/min	5 – 400 mcg/min; Start 5 mcg/min; titrate by 5 mcg/min every 5 min up to 20 mcg/min. If no response at 20 mcg/min, may increase by 10 mcg/min every 5 min	Keep Systolic blood pressure LESS than 165mmHg and/or titrate for chest pain relief
*Nitroprusside (Nipride)	50 mg / 250 mL D5W	200 mcg/mL	mcg/kg/min	0.25 – 10 mcg/kg/min; Start 0.25 mcg/kg/min; titrate by 0.25 mcg/kg/min every 5 min	Keep Systolic blood pressure LESS than 165 mmHg
*Norepinephrine (Levophed)	4 mg / 250 mL NS	16 mcg/mL	mcg/min	0.5 – 30 mcg/min; Start 2 mcg/min; titrate by 2 mcg/min every 5 min	Keep Systolic blood pressure GREATER than 90mmHg and/or Mean arterial pressure GREATER than 65mmHg
Oxytocin (Pitocin)	**20 units / 1000 ml NS**	**20,000 milli units/ml**	**milliunit/min**	**1 milliunit/min-10 milliunit/min; Max dose 20 milliunit/min**	**Titrate per protocol-see Women and Newborn Services Unit Specific Procedure**
*Phenylephrine (Neosynephrine)	50 mg / 250 mL NS	200 mcg/mL	mcg/min	5 – 180 mcg/min; Start 10mcg/min;titrate by 20 mcg/min every 5 min	Keep Systolic blood pressure GREATER than 90mmHg

					and/or Mean arterial pressure GREATER than 65mmHg
Propofol (Diprivan)	1000 mg / 100 mL (10 mg/mL)	10 mg/mL	mcg/kg/min	5-80 mcg/kg/min ;Start at 10 mcg/kg/min; titrate by 5 mcg/kg/min every 10 min	Titrate to RASS 0 to -2
Vecuronium (Norcuron)	100 mg / 100 mL NS	1 mg/mL	mcg/kg/min	Normal range 0.8 - 1.7 mcg/kg/ min; Start 0.8 mcg/kg/min; titrate by 0.1 mcg/kg/hr every 10 min	Goal train-of-four 2:4 or Bedside Shivering Assessment Scale Score of 0

* Indicates that these drug infusions can be mixed in a higher concentration strength for fluid restricted patients

Tri-City Medical Center
Oceanside, California

Administrative Policy Manual
District Operations

ISSUE DATE: NEW

SUBJECT: Nondiscrimination of Patients in Health Programs and Activities Policy

REVISION DATE(S):

POLICY NUMBER: NEW

Department Approval:	**03/17**
Administrative Policies and Procedures Committee Approval:	**03/17**
Medical Executive Committee Approval:	**04/17**
Professional Affairs Committee Approval:	
Board of Directors Approval:	

A. **PURPOSE:**

1. It is the policy of Tri-City Healthcare District **(TCHD) to advance equity and reduce health disparities by protecting some of the populations that have been most vulnerable to discrimination in the health care context. TCHD does** not ~~to~~ discriminate on the basis of race, color, national origin, sex, age or disability **in admission to, participation in, or receipt of the services and benefits under any of its programs and activities, whether carried out by TCHD directly or through a contractor or any other entity with which TCHD arranges to carry out its programs and activities.**
2. ~~Tri-City Healthcare District~~**TCHD** has adopted an internal grievance procedure providing for prompt and equitable resolution of complaints alleging any action prohibited by Section 1557 of the Affordable Care Act and its implementing regulations. Any ~~person~~ **patient** who believes ~~they~~**he/she** ~~someone~~ has been subjected to discrimination on the basis of race, color, national origin, sex, age or disability **while seeking admission to, participation in, or receipt of the services and benefits offered by TCHD,** may file a grievance ~~under~~ **pursuant to** this ~~procedure~~**Policy**. All grievances must be filed with ~~Yolanda Graves,~~ Patient Relations Specialist, **Tri-City Medical Center,** 4002 Vista Way, Oceanside, California 92056~~, (760) 940-3350~~, who has been designated as the Section 1557 Coordinator by ~~Tri-City Healthcare District~~**TCHD**.
3. It is against the law for ~~Tri-City Healthcare District~~**TCHD** to retaliate against anyone who opposes discrimination, files a grievance, or participates in the investigation of a grievance.

B. **POLICY:**

1. Notice of Nondiscrimination is posted on the Tri-City Medical Center website homepage.
2. Notice of Nondiscrimination is posted (in English and Spanish) in patient care areas and registration areas.
3. Grievances must be submitted to the Section 1557 Coordinator within 60 days of the date the person filing the grievance becomes aware of the alleged discriminatory action.
4. A complaint must be in writing, containing the name and address of the person filing it. The complaint must state the problem or action alleged to be discriminatory and the remedy or relief sought.
5. The Section 1557 Coordinator or her/his designee shall conduct an investigation of the complaint. This investigation may be informal, but it will be thorough, affording all interested persons an opportunity to submit evidence relevant to the grievance. The Section 1557 Coordinator will maintain the files and records of ~~Tri-City Healthcare District~~**TCHD** relating to such grievances. To the extent possible, and in accordance with applicable law, the Section 1557 Coordinator will take appropriate steps to preserve the confidentiality of files and records relating to grievances and will share them only with those who have a need to know.

6. The Section 1557 Coordinator will issue a written decision on the grievance, based on a preponderance of the evidence, no later than 30 days after its filing, including a notice to the complainant of their right to pursue further administrative or legal remedies.
7. The person filing the grievance may appeal the decision of the Section 1557 Coordinator by writing to the Chief Executive Officer and/or his/her designee within 15 days of receiving the Section 1557 Coordinator's decision. The Chief Executive Officer and/or his/her designee shall issue a written decision in response to the appeal no later than 30 days after its filing.
8. The availability and use of this grievance procedure does not prevent a person from pursuing other legal or administrative remedies, including filing a complaint of discrimination on the basis of race, color, national origin, sex, age or disability in court or with the U.S. Department of Health and Human Services, Office for Civil Rights. A person can file a complaint of discrimination electronically through the Office for Civil Rights Complaint Portal, which is available at: https://ocrportal.hhs.gov/ocr/portal/lobby.jsf, ~~or~~ by ~~mail or~~ phone at **1 (800)368-1019 (TDD 1 800 537-7697) or by mail at**: U.S. Department of Health and Human Services 200 Independence Avenue, SW, Room 509F, HHH Building, Washington, D.C. 20201. Complaint forms are available at: http://www.hhs.gov/ocr/office/file/index.html. Such complaints must be filed within 180 days of the date of the alleged discrimination.
9. ~~Tri-City Healthcare District~~**TCHD** will make appropriate arrangements to ensure that individuals with disabilities and individuals with limited English proficiency are provided with free auxiliary aids and services or language assistance services, respectively, if needed to participate in this grievance process. Such arrangements may include, but are not limited to, providing qualified interpreters, written information in other formats (i.e. large print, audio, accessible electronic formats) , or assuring a barrier-free location for the proceedings. The Section 1557 Coordinator will be responsible for such arrangements.

C. **RELATED DOCUMENT(S):**

1. Administrative Policy: Diversity 471
2. Language Assistance Poster
3. Notice of Nondiscrimination Poster (English)
4. Notice of Nondiscrimination Poster (Spanish)
5. Patient Care Services (PCS) Policy: Patient Rights & Responsibilities
6. PCS Policy: Communication with Sensory Impaired and/or Persons with Language Barrier

D. **REFERENCES:**

1. Section 1557 of the Patient Protection and Affordable Care Act, **2010**

Tri-City Medical Center
Oceanside, California

Administrative Policy Manual
District Operations

ISSUE DATE: NEW

SUBJECT: Policy/Procedure Approval – Patient Care Services And Department Specific

REVISION DATE(S):

POLICY NUMBER: 8610 - NEW

Department Approval:	03/17
Administrative Policies and Procedures Committee Approval:	03/17
Medical Executive Committee Approval:	04/17
Professional Affairs Committee Approval:	
Board of Directors Approval:	

A. **PURPOSE:**
1. To define Tri-City Healthcare District's (TCHD) process for the approval of policies/procedures.

B. **POLICY:**
1. All policies/procedures must be reviewed or revised every three years, according to regulatory requirements or as required by change in regulation, research, or organizational processes (for example standardized procedures must be reviewed or revised every two years).
   a. Developed in collaboration with the medical staff:
      i. If relevant to medical staff activities and/or direct patient care.
   b. Developed in collaboration with nursing if relevant to nursing services.
   c. Consistent with professional references, applicable regulations, legal requirements, accreditation standards, and the mission and philosophy of the organization.
2. The electronic policy management system will be used for all policies and procedures.
3. Policies are submitted to the Board of Directors for final approval.
4. Procedures are submitted to the Board of Directors or Administration for final approval based on regulatory requirements.
   a. Procedures affecting nursing services will be submitted to the Board of Directors
5. Staff shall be notified of any new policies/procedures or significant revisions. Education shall be provided as appropriate.
6. A hard copy of all current policies/procedures must be available in the department for downtime.

C. **PROCESS FOR PATIENT CARE SERVICES (PCS) MANUAL APPROVAL:**
1. Approval Process:
   a. Content Expert
   b. Clinical Policies and Procedures Committee (CPP)
   c. Nurse Executive Committee (NEC)
   d. Medical Staff/Department Division if relevant to medical staff activities or direct patient care
   e. Pharmacy and Therapeutics ~~(P&T)~~ Committee **(P&T)** if **policies** contain medication, medication administration or ~~if~~ standardized procedure
   f. Interdisciplinary Practice Committee if a standardized procedure (IDPC)
   g. Medical Executive Committee (MEC)
   h. Professional Affairs Committee (PAC)
   i. Board of Directors (BOD)

2. The approval process PCS policies/ procedures will be initiated and coordinated through ~~the Clinical Policies and Procedures Committee~~**CPP**.

D. **PROCESS FOR DEPARTMENT SPECIFIC ~~MANAUL~~ MANUAL APPROVAL:**

1. Approval Process:
   a. Content Expert
   b. Department Director/Management Team
   c. Medical Director for clinical areas with a Medical Director when appropriate
   d. Medical Staff Department/Division/Committee or Chair for clinical areas when appropriate
   e. Department Manual Coordinating Committee
   f. ~~Pharmacy and Therapeutics Committee~~**P&T** if contains medication~~,~~ **or** medication administration
   g. ~~Medical Executive Committee (~~MEC~~)~~ if relevant to Medical Staff activities or direct patient care
   h. Final Approval
      i. Policies and nursing procedures: ~~Professional Affairs Committee (~~PAC~~)~~ and ~~Board of Directors (~~BOD~~)~~
      ii. Procedures: Administration
2. Each Department is responsible for maintaining their own department specific manual.
   a. Makes revisions in the electronic policy management system to policies/procedures using tracked changes.
      i. Issue Date should be first Board of approval date.
      ii. Revision dates should reflect the Board of approval dates every additional time the policy/procedure goes to the Board for approval.
   b. Obtain Medical Staff and/or Department/Division Chair approval for policies/procedures related to Medical Staff activities or direct patient care.
3. The Department Manual Coordinating Committee will coordinate approval at P&T, IDPC, MEC, PAC, the BOD and Administration.

Tri-City Medical Center
Oceanside, California

MEDICAL STAFF

ISSUE DATE: NEW

SUBJECT: Medical Staff Funds

REVISION DATE(S):

POLICY: ~~AP&P~~ 8710 - 572

Department Approval Date:	03/17
Medical Staff Department Approval Date:	n/a
Pharmacy and Therapeutics Approval Date:	n/a
Medical Executive Committee Approval Date:	03/17
Professional Affairs Committee Approval Date:	
Board of Directors Approval Date:	

A. **POLICY:**

1. It is the policy of Tri-City Medical Staff that monies collected by the medical staff are those funds generated by medical staff dues and fines as established by the Medical Executive Committee.

B. **PROCEDURE:**

1. Medical Staff Fund Account:
   a. A separate bank account under the Tri-City Medical Center federal tax identification number in a bank specified by the Medical Executive Committee is maintained for the Tri-City Medical Staff Fund.
2. Disbursements:
   a. Disbursements are recorded by the Medical Staff Services Department (MSSD) in the Medical Staff Fund Check and Deposit Register. Each disbursement check requires one original signature. The (a) Chief of Staff (b) Past Chief of Staff, or (c) the MSSD Manager, at the written, verbal or e-mail request of either the Chief of Staff or the Past Chief of Staff, shall sign checks for Medical Staff Fund expenditures pursuant to this Policy.
   b. Medical Staff Fund expenditures under $5,000 may be made at the discretion of the Chief of Staff. Expenditures over $5,000 must be approved by the Medical Executive Committee. Disbursements must be supported by receipts and must comply with legal requirements. All invoices/receipts over $5,000 must be accompanied by documentation of Medical Executive Committee approval. Checks are prepared within 5 days of receipt of an invoice/receipt or authorization by the Chief of Staff/Past Chief of Staff.
3. Receipts:
   a. All Medical Staff Funds collected must be in the form of a check or credit card. Cash will not be accepted. All monies received are recorded in the Medical Staff Fund Cash Receipt Journal by the MSSD. A receipt for payment to the Fund is provided to the ~~payor~~**payer** upon request. Monies received are deposited weekly by Medical Staff Services.
4. Bank Statement Reconciliation:
   a. Bank Statements are reconciled to the Medical Staff Fund Cash Receipt Journal and the Check and Deposit Register on a monthly basis by Medical Staff Services. Bank reconciliations must be dated and signed by the Tri-City Medical Center's Chief Financial Officer and reviewed, dated, and signed by the Chief of Staff.
5. Accounting Reports to Medical Executive Committee:
   a. Quarterly accounting reports of fund activity are to be prepared by Medical Staff Services and reviewed and presented to the Medical Executive Committee by the Chief

of Staff. The Medical Executive Committee will make the accounting reports available to Tri-City Medical Center's Chief Financial Officer for review upon request.

6. Appropriate Use of Medical Staff Funds:
   a. The Medical Staff Funds will be used for activities reasonably related to a proper function of the Medical Staff and the amount expended must be reasonable for the activity conducted. Examples of appropriate use of funds include: stipends to Medical Staff officers and committee members, as detailed in Medical Staff policies; supplies for discharging medical staff functions; education of medical staff services personnel; and medical staff educational materials and conferences; independent legal counsel, when authorized under the Medical Staff Bylaws. Any expenditure other than as listed in this paragraph, and in particular any proposed payment of money to any Medical Staff member, or to any other physician, must first be presented to the Medical Center's Chief Operating Officer for review in order to assure that State and Federal laws regarding private inurement, payments for referrals, and "kickbacks" are not violated. The use of the funds shall be consistent with, and shall not jeopardize, the hospital's designation as a tax-exempt organization.

Tri-City Medical Center
Oceanside, California

OUTPATIENT INFUSION CENTER ~~- OCEANSIDE POLICY MANUAL~~

ISSUE DATE: 2/13 **SUBJECT: EMERGENCY EVACUATION**

REVISION DATE:

Department Approval Date(s):	**02/16**
~~MEDICAL/DEPARTMENT:~~	**~~3/13~~**
~~DIRECTOR APPROVAL:~~	**~~3/13~~**
Division of Oncology Approval Date(s):	**03/17**
Pharmacy and Therapeutics Approval Date(s):	**n/a**
Medical Executive Committee Approval Date(s):	**n/a**
Professional Affairs Committee Approval Date(s):	
Board of Directors Approval Date(s):	**03/13**

A. **PURPOSE:**

1. To establish evacuation procedures in the event of a fire, earthquake, **active shooter,** bomb threat or any situation that places employees, ~~and~~ patients **and others** in imminent danger in the Center.

B. **POLICY:**

1. All staff will be trained in emergency evacuation procedure.

C. **PROCEDURE:**

1. In the event of a fire, earthquake, bomb threat, or any situation that places employees ~~and~~, patients **and others** in imminent danger, the Center personnel will:
   a. Calm patients and assure their safety.
   b. Remove the patients who are in immediate danger first.
   c. Using the designated emergency exits, evacuate all patients to the designated area as instructed by the appropriate authority.
   ~~c.~~**d. In the event of an Active Shooter situation the staff should follow the "Run, Hide, Fight model.**
   ~~d. Using the designated emergency exits, evacuate all patients to the designated area as instructed by the appropriate authority.~~
   e. The Center's manager/charge person will account for all employees and patients and report to the hospital safety officer or representative and/or fire department staff, if present.

D. **RELATED DOCUMENT(S):**

1. **Emergency Operations Procedure: CODE SILVER Person with Weapon or Active Shooter**

Tri-City Medical Center
Oceanside, California

OUTPATIENT INFUSION CENTER ~~– OCEANSIDE POLICY MANUAL~~

ISSUE DATE: 2/13 **SUBJECT: FIRE ALARM/EVACUATION PLAN**

REVISION DATE:

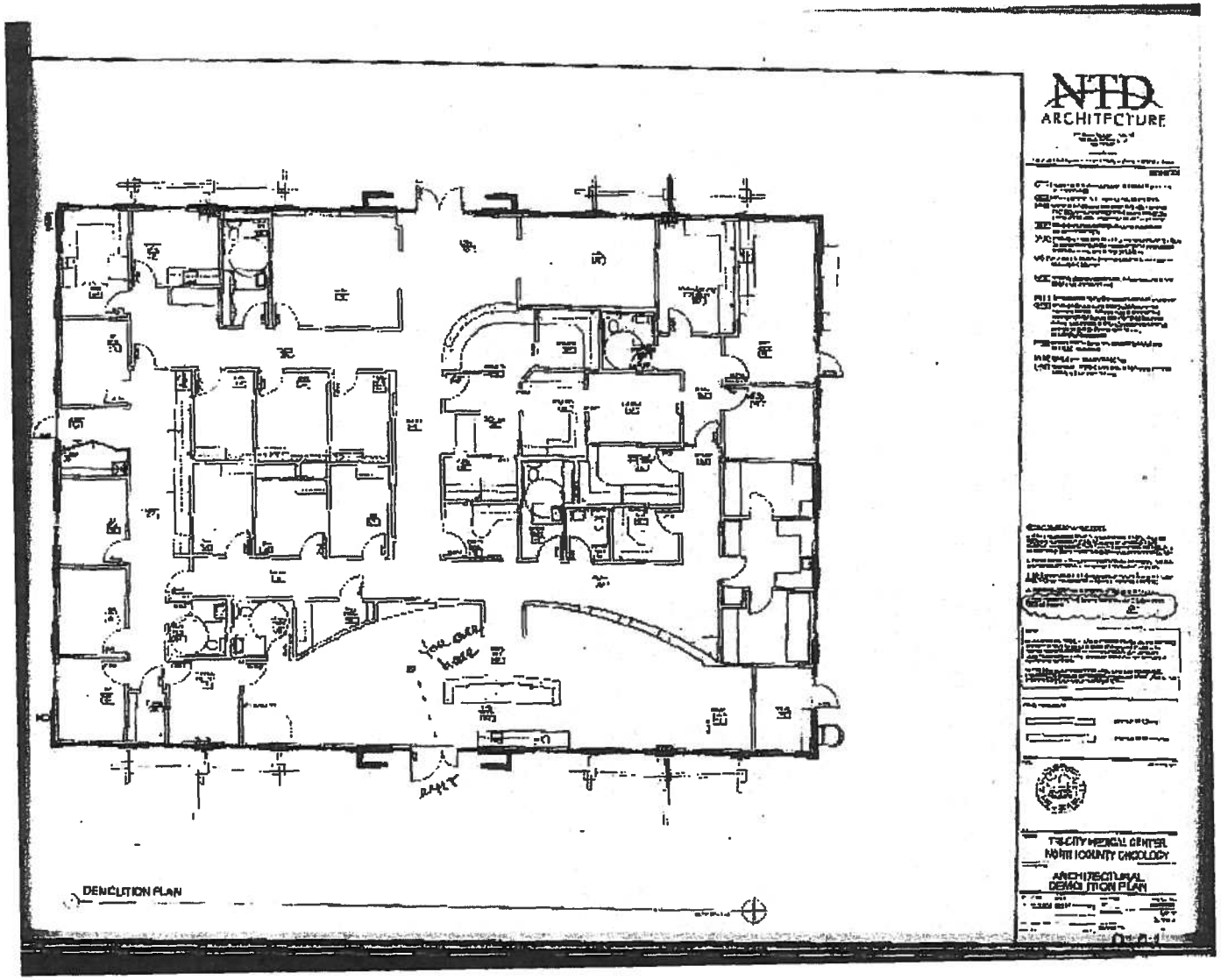
Department Approval Date(s):	**06/16**
~~MEDICAL/DEPARTMENT:~~	**~~3/13~~**
~~DIRECTOR APPROVAL:~~	**~~3/13~~**
Division of Oncology Approval Date(s):	**n/a**
Pharmacy and Therapeutics Approval Date(s):	**n/a**
Medical Executive Committee Approval Date(s):	**n/a**
Professional Affairs Committee Approval Date(s):	
Board of Directors Approval Date(s):	**03/13**

A. **PURPOSE:**
1. To safely remove patients **and others** from Center in the event of a fire or fire alarm.

B. **POLICY:**
1. When a fire occurs in the center the procedure outlined in the policy will be followed.

C. **PROCEDURE:**
1. Should evacuation of the patients be necessary, Center personnel will:
   a. Reassure patients**/others to** ~~and~~ maintain a calm atmosphere
   b. Prepare patient(s) for transport to the designated safe location per policy
   c. Follow department evacuation procedures and routes according to ~~TCMC~~ **TCHD** Code Red procedure – **Rescue, Alarm, Contain, and Extinguish** (R.A.C.E.)
      ~~c.~~**i. Refer to Evacuation Map posted in department.**
   d. Perform system emergency shut-down as indicated
   e. Upon completion of evacuation of all patients to the designated safe area, the Center Clinical Manager or RN Supervisor will contact the hospital **Safety Officer or** command center for appropriate head count of patients.
   ~~f. See Evacuation Map~~

D. REFERENCES:
1. Evacuation Map


NTD
ARCHITECTURE
DEMOLITION PLAN
TRI-CITY MEDICAL CENTER
NORTH COUNTY ONCOLOGY
ARCHITECTURAL
DEMOLITION PLAN

Tri-City Medical Center	Distribution: Women's & Children's Services, NICU
PROCEDURE:	**MEDICATION ADMINISTRATION, NICU**
Purpose:	To outline the nursing responsibilities in admin
Supportive Data:	Medications are administered by a registered knowledgeable about the medication and tech patient, based on type of medication and scop of each discipline.

DELETE – no longer required, follow Patient Care Services Medication Administration Policy and Online Clinical Skills

~~A. **PROCEDURE:**~~

~~1. Verify the order with the patient's medical record, including calculation of appropriate dose.~~
~~2. Perform hand hygiene.~~
~~3. Obtain medication and read the label to verify with the order. Check for expiration date; if expired, do not administer. As applicable, bring medication to room temperature before administration.~~
~~4. Prepare if applicable, draw up the medication in the designated area of the medication cart.~~
~~a. Reconstitute powered medications using the manufacturer's recommendations or reference manual for type and amount of fluid to dilute with.~~
~~b. Draw up the correct amount of medication into the syringe and cap syringe.~~
~~c. For medications prepared in the NICU, utilize the printed medication identification label with:~~
~~i. Patient label: apply printed patient label~~
~~ii. RN: record RN's initials~~
~~iii. Drug: record medication name~~
~~iv. Amt: record the total amount of the unit of measure of drug in syringe~~
~~v. Diluent: record the diluent used~~
~~vi. Amt: record the volume of mLs of diluent~~
~~vii. Total Volume in Syringe: record the total mLs in syringe~~
~~viii. Date/Time Prepared: record the date and time medication prepared~~
~~ix. Date/Time Expires: record the date and time medication expires~~
~~5. Take the medication to the patient's bedside. Confirm patient identity using two identifier system. Refer to Patient Care Services "Identification, Patient" (IV.A) policy.~~
~~6. Don appropriate protective wear.~~
~~7. Discard the used supplies in the appropriate receptacle.~~
~~8. Remove gloves and perform hand hygiene.~~
~~9. Ensure that comfort is provided for the patient as necessary during procedure.~~

~~B. **INTRAVENOUS INFUSION**~~

~~1. Gather equipment:~~
~~a. Non-sterile gloves~~
~~b. Prescribed medication~~
~~c. Chlorhexidine swab, if applicable~~
~~2. Connect prefilled medication syringe to syringe infusion tubing.~~
~~3. Carefully apply pressure to syringe plunger, allowing tubing to fill with medication.~~
~~4. Place syringe into syringe pump module (follow product instructions). Be sure syringe is secured.~~
~~5. Connect syringe infusion tubing to main IV line wipe off needleless port on main IV line with alcohol prep pad and insert tip of syringe infusion tubing.~~
~~6. Set pump to deliver medication within time recommended.~~
~~7. After medication has infused, flush syringe infusion tubing with normal saline or other appropriate fluid.~~

Review Revision Date	~~Clinical Policies & Procedures~~	Perinatal Collaborative Practice	~~Medical Department Review~~Division of Neonatology	Department of Pediatrics	Pharmacy & Therapeutics Committee	Medical Executive Committee	Professional Affairs Committee	Board of Directors Approval
11/06, 05/08, 4/09, 6/11, 07/16	~~7/07, 4/09~~	01/17	8/07, 01/17	02/17	**03/17**	**08/07, 04/17**	9/07, 6/09	9/07, 6/09, 8/12

C. **INTRAMUSCULAR**
1. Gather equipment:
   a. Non-sterile gloves
   b. Prescribed medication
   c. Syringe, appropriate size
   d. Needle, appropriate gauge
   e. Alcohol wipe
   f. Gauze
2. Cleanse the injection site with alcohol and allow to dry.
3. Insert needle quickly at a 90 degree angle. Aspirate to check for blood; if present, remove needle and start over after replacing sterile needle.
4. Slowly inject medication
5. Withdraw needle and apply pressure over site with a dry gauze until any oozing, if present, has subsided.

D. **SUBCUTANEOUS**
1. Gather equipment:
   a. Non-sterile gloves
   b. Prescribed medication
   c. Syringe, appropriate size
   d. Needle, appropriate gauge
   e. Alcohol wipe
   f. Gauze
2. Evaluate patient's subcutaneous tissue; choose the most appropriate site considering the adequacy and condition of subcutaneous tissue and duration of therapy.
3. Cleanse the site with alcohol and allow to dry.
4. Grasp the site and elevate the tissue.
5. Insert the needle quickly at a 45 to 90 degree angle. Aspirate to check for blood. If present, remove the needle and start over after replacing sterile needle.
6. Slowly inject the medication.
7. Withdraw the needle and apply pressure over the site with a dry gauze until any oozing, if present, has subsided.

E. **RECTAL**
1. Gather equipment:
   a. Non-sterile gloves
   b. Prescribed medication
   c. Water-soluble lubricant
2. Lubricate the prepared suppository with a water-soluble lubricating jelly.
3. Gently insert the apex of the suppository (pointed end) past the internal anal sphincter using the little finger.
4. Hold the patient's buttocks together until the patient relaxes or loses the urge to push.

F. **EYE**
1. Gather equipment:
   a. Non-sterile gloves
   b. Prescribed medication
   c. Gauze or cotton ball
2. Eye drop administration
   a. Hold cotton ball or clean gauze in non-dominant hand on patient's cheekbone just below lower eyelid.
   b. With cotton or gauze resting below lower lid, gently press downward with thumb or forefinger against bony orbit. Never press directly against patent's eyeball.
   c. With dominant hand resting on patient's forehead, hold filled medication eye dropper approximately 1 to 2 cm above conjunctival sac.

d. Instill prescribed number of medication drops into conjunctival sac.
e. If patient blinks or closes eye, or if drops fall on outer lid margins, repeat procedure.
f. If excess medication is left on eyelid, gently wipe it form inner to outer canthus.

3. Eye ointment administration
   a. Holding ointment applicator above lower lid margin, apply a thin ribbon of ointment evenly along inner edge of lower eyelid on conjunctiva from inner to outer canthus.
   b. If excess medication is left on eyelid, gently wipe it form inner to outer canthus.

G. EAR

1. Gather equipment:
   a. Non-sterile gloves
   b. Prescribed medication
2. Position patient in side-lying position with ear to be treated facing up. Stabilize patient's head.
3. Pull the pinna down and back.
4. If cerumen or drainage occludes outermost portion of ear canal, wipe out gently with cotton-tipped applicator.
5. Instill prescribed drops holding dropper 1 cm above ear canal.
6. Keep in side lying position for several minutes.
7. If ordered, insert a portion of cotton ball into outermost part of canal. Remove cotton after 15 minutes.

H. NASAL

1. Gather equipment:
   a. Non-sterile gloves
   b. Prescribed medication
   c. Dropper, if applicable
   d. Gauze
2. If needed, use a bulb syringe to suction patient's nose prior to medication administration.
3. Position patient in the supine position with the head tilted back.
4. Instill the ordered number of drops into each nostril, being careful not to touch the sides of the nostril.

I. ENTERAL

1. Gather equipment:
   a. Non-sterile gloves
   b. Stethoscope
   c. Prescribed medication (either unit dose packaging or pharmacy pre-filled syringe)
   d. Syringe(s)
   e. Sterile water as applicable
2. Uncap and verify feeding tube placement. (Refer to Nasogastric/Orogastric Tube, Insertion and Maintenance of).
3. Instill the medication into the gastric tube by slowly and steadily pushing on the plunger.
4. Follow instilled administration of medication with applicable flush:
   a. Medications administered at non-feeding times; use 0.5 mL air to clear the tube.
5. Recap the gastric tube.

J. TOPICAL

1. Gather equipment:
   a. Non-sterile gloves
   b. Prescribed medication
2. Assess condition of patient's skin. Wash site thoroughly, rinse and dry, unless ordered otherwise.
3. Ascertain amount of topical agent required for application by assessing affected area.
4. Spread agent evenly over the targeted skin surface, using long even strokes. Cover area if necessary per medication directions.

K. **DOCUMENTATION:**

1. Document the administration of the medication in the patient's medical record using handheld Caremobile device (See Patient Care Services: "Medication Administration" (**IV.I**) policy).

L. **REFERENCES:**

1. Bowden V.R. & Greenberg C.S. (2011). Pediatric nursing procedures. 3rd Ed. Philadelphia, PA: Lippincott/Williams & Wilkins.
2. Perry A.G. & Potter P.A. (2009). Clinical nursing skills & techniques, 7th Ed. St. Louis, Missouri: Elsivier/Mosby.

Phenol lozenge (Cepastat®): Recommendation for formulary removal

Requestor: Oska Lawrence, PharmD, BCPS, BCCCP (Pharmacy Clinical Manager)

Declared conflicts of interest: None

Situation: Cepastat® is no longer available from pharmacy's wholesale distributor

Background: Phenol is a topical anesthetic which can be administered as a lozenge to provide relief for sore throat.

Assessment: Benzocaine-menthol lozenges (Cepacol®) is available as a formulary alternative, exhibiting similar topical anesthetic properties. A camphor-phenol topical spray is also available as an alternative.

Recommendation(s):

- Remove phenol lozenge (Cepastat®) from TCMC Formulary
- Maintain benzocaine/menthol lozenge (Cepacol®) as the preferred anesthetic lozenge on formulary

Hyoscyamine/atropine/scopolamine/phenobarbital (Donnatal®): Recommendation for formulary removal

Requestor: Oska Lawrence, PharmD, BCPS, BCCCP (Pharmacy Clinical Manager)

Declared conflicts of interest: None

Situation: In 2015 Concordia Pharmaceuticals acquired the rights to Donnatal and significantly increased the cost of the drug following previous FDA approval to market it as a branded product. Donnatal usage at TCMC is very low and is a source of increased drug cost expenditure due to inventory outdating.

Background: Donnatal® is a combination product containing belladonna alkaloids and a barbiturate. It is used to treat dyspepsia and bowel spasm. It is frequently added to "GI cocktails" and given to differentiate cardiac from esophageal chest pain.

Assessment: A recent systematic review has demonstrated that the addition of Donnatal® to liquid antacids, does not provide additional benefit over the antacid alone in the setting of dyspepsia. In 2016, GI cocktails containing Donnatal® were ordered 40 times. 10 administrations occurred in the ED for general dyspepsia. One administration in the ED was for GI spasm, but treatment was deemed ineffective. The remaining administrations occurred in the inpatient setting. A cursory review of these cases indicated that it was ordered for general dyspepsia as well.

It was determined that in Cerner, a physician searching for a "GI cocktail" is presented with the Donnatal®-containing option as the first choice, likely leading to its order instead of a plain Donnatal®-Free GI cocktail. Donnatal® tablets were not ordered for any patient in 2016.

- A 118mL bottle of Donnatal®, sufficient to compound ~10 "GI cocktails" costs $334
  - 40 Donnatal® cocktails = $1200 in 2016
  - 40 plain GI cocktails without Donnatal® (Mylanta, Lidocaine) = $8

- A 100 count bottle of Donnatal® costs $894. No use in 2016 Current supply due to expire in 2017.

Recommendation(s):

- Recommend removal of Donnatal® elixir and tablets from the TCMC Formulary.
- Regular GI cocktail (viscous lidocaine + liquid antacid) will remain available for use
- Formulary alternatives for GI spasm include dicyclomine and hyoscyamine

TRI-CITY MEDICAL CENTER		
PHARMACY AND THERAPEUTICS COMMITTEE		
Request for Formulary **Status Evaluation:**	**Admission {X }**	**Deletion { }**
Date: 1/18/2017	**Requestor: Dr. Kyaw**	
Trade Name: Ure-Na	**Generic Name: Urea**	
Dosage form(s): Oral powder for solution		
Indication: Euvolemic or hypervolemic hyponatremia		
Efficacy: **See references**		
Safety: Literature does not demonstrate any known risk of serious adverse effects		
Propensity for medication error: Low		
Abuse potential: None		
Sentinel event potential: None		
Black box warning: None		
Cost comparison with similar Formulary products: **Ure-Na: $4 per day** **Tolvaptan: $369-738 per day** **Conivaptan: $1124 for first 24 hours**		
Other considerations:		
Recommendation: To be used for hyponatremia when patient deemed euvolemic or hypervolemic.		
Process/Plan to monitor Patient Responses: Monitor serum sodium during use		
References: 1. Ure-Na ™ [AMCP Dossier]. Phoenix, AZ: Nephcentric; 2016. 2. Decaux G, Andres C, Kengne F, et al. Treatment of euvolemic hyponatremia in the intensive care unit by urea. Critical Care 2010, 14:R184 3. Soupart A, Coffernils M, Couturier B, et al. Efficacy and tolerance of urea compared with vaptans for long-term treatment of patients with SIADH. Clinical Journal of the American Society of Nephrology. 2012 7:742-747 4. Sterns, R, Emmett M, Forman J. Overview of the treatment of hyponatremia in adults. In: UpToDate. Waltham, MA. 5. Spasovski G, Vanholder R, Allolio B, et al. Clinical practice guideline on diagnosis and treatment of hyponatraemia. 2014. 170, G1-G4		

Conflict of Interest Disclosure Statement (Please check all that apply)

Serving the public interest shall remain the primary focus of all hospital committee activities. Any circumstances that might potentially be viewed as a conflict of interest in serving the public must be identified.

__I am a consultant or have served on an advisory board for the company that makes/distributes this drug.

__I have research funded by the company that makes/distributes this drug.

__I own stock/stock options for the company that makes/distributes this drug.

__I am a speaker for the company that makes/distributes this drug.

__Other: _____

✓None of the above

Submitted by (Signature) Naing Kyaw Date: 1/23/17

Print Name: Naing Kyaw Phone: _____

DELETE - Orders are in Cerner. Approved for retirement by PPO Committee 2/13/17. Approved at MEC 4/17 for deletion.

~~**ALLERGIES:**~~ _____

~~**STATUS:**~~ ☐ ~~INPATIENT~~ ☐ ~~OBSERVATION~~
~~**ADMIT TO:**~~ ☐ ~~ICU~~ ☐ ~~Telemetry~~ ☐ ~~Other:~~ _____
~~**CODE STATUS:**~~ ☐ ~~Full~~ ☐ ~~No Resuscitation for hospital duration*~~
*~~Requires notation in Progress Notes.~~

~~**LABS/DIAGNOSTICS/MEDICATIONS:**~~

☐ ~~**Heparin (lab orders only active if this box checked) (no heparin bolus for TIA, ischemic stroke, or baseline INR greater than 1.4). Round to nearest 50 units**~~
- ☐ ~~**Heparin per pharmacy**~~
- ☑ ~~CBC now if not previously ordered and Q 3 days while on Heparin~~
- ☐ ~~INR, aPTT now (if reason to believe it is elevated)~~
- ☑ ~~Draw aPTT Q 6 hours post Heparin infusion started until further notice~~
- ☑ ~~Occult blood PRN only to confirm subjective observation of blood in urine or stool~~
- ☐ ~~Draw platelet level 24 hours after Heparin initiated if patient has received unfractionated Heparin within the last 100 days, or those patients with uncertain exposure history~~
- ☐ ~~DVT/PE bolus with (80 units/kg IV total body weight; max of 9000 units) = _____ units and start infusion at 18 units/kg/hr = _____ units/hour.~~
- ☐ ~~Cardiac bolus with (65 units/kg IV total body weight; max of 5000 units) = _____ units and start infusion at 14 units/kg/hr = _____ units/hour.~~
- ☐ ~~Other:~~ _____

☐ ~~**Warfarin (lab orders only active if this box checked)**~~
- ☐ ~~**Warfarin per pharmacy**~~
- ☑ ~~INR now if no previous results within 3 days~~
- ☐ ~~INR daily while receiving warfarin (drawn with AM labs)~~
- ☐ ~~INR once weekly on _____ if INR is stable X 1 week~~
- ☐ ~~INR twice weekly on _____ and _____ if INR stable X 1 week~~
- ☑ ~~CBC now if not previously ordered and Q 3 days while on Warfarin~~
- ☑ ~~Occult blood PRN only to confirm subjective observation of blood in urine or stool~~
- ☑ ~~Contact prescribing physician if H/H decrease of 30% or greater from baseline, or platelet count decrease of 30% or greater from baseline, or Occult blood positive urine or stool~~
- ☐ ~~Give 5 mg warfarin PO Q PM at 17:00 x 3 days starting on _____ (date)~~
- ☐ ~~Give _____ mg warfarin PO Q PM at 17:00 x 3 days starting on _____ (date)~~
- ☐ ~~Give _____ mg warfarin PO at 17:00 x 1 dose on _____ (date)~~

☐ ~~**Dabigatran (Pradaxa) 150 mg PO Q 12 hours**~~
- ☐ ~~If CrCl is 15 – 30 mL/min, then give dabigatran (Pradaxa) 75 mg PO Q 12 hours~~
- ☐ ~~If CrCl is less than 15 mL/min, dabigatran is not recommended.~~

☐ ~~**Enoxaparin (Lovenox®) (lab orders only active if this box checked) Treatment of DVT / PE or unstable angina/non-Q-wave MI – Review CrCl prior to administering.**~~
- ☐ ~~**Enoxaparin per pharmacy**~~
- ☑ ~~Baseline serum creatinine if not already ordered~~
- ☐ ~~Give Enoxaparin (1 mg/kg) = _____ mg subcutaneous Q 12 hours starting at _____ (time) _____ (date)~~
- ☐ ~~If CrCl is less than 30 mL/min then give Enoxaparin (1 mg/kg) = _____ mg subcutaneous Q 24 hours starting at _____ (time) _____ (date)~~
- ☐ ~~Give Enoxaparin (1.5 mg/kg) = _____ mg subcutaneous Q 24 hours starting at _____ (time) _____ (date)~~

Nurse's – Initials

Affix Patient Label

Anticoagulants for Heparin Induced Thrombocytopenia (HIT)

☐ **Lepirudin Infusion 100mg/250mL Dextrose 5% Water (lab orders only active if this box checked) (Preferred agent for hepatic dysfunction; for pts that have previously received Lepirudin use Argatroban) Final concentration is 0.4mg/mL**

- ☐ **Lepirudin per pharmacy**
- ☑ INR, aPTT, Platelet count, Serum creatinine, bilirubin, albumin now if not previously ordered
- ☑ APTT 4 hours after Lepirudin infusion started, and Q 4 hours after a dose increase or decrease as timed studies
- ☑ After Lepirudin dose stabilized X 12 hours then aPTT QAM
- ☑ CBC Q 3 days while receiving Lepirudin
- ☐ For patients with HIT without acute thrombosis infuse Lepirudin 0.1mg/kg/hr = _____mg/hour = _____mL/hour.
- ☐ For patients with HIT with acute thrombosis infuse Lepirudin bolus dose of 0.2mg/kg total body weight (max of 22mg) = _____mg slow IV push over 30 seconds; then Lepirudin infusion at 0.1 mg/kg/hr = _____mg/hr = _____mL/hour
- ☐ For patients with CrCl 45 – 60 mL/min start Lepirudin infusion at 0.05 mg/kg/hr = _____mg/hr = _____mL/hour
- ☐ For patients with CrCl 30 – 44 mL/min start Lepirudin infusion at 0.01 mg/kg/hr = _____mg/hr = _____mL/hour
- ☐ For patients with CrCl 15 – 29 mL/min start Lepirudin infusion at 0.005 mg/kg/hr = _____mg/hr = _____mL/hour
- ☐ Other: _____

☐ **Argatroban Infusion 250mg/250mL Normal Saline (lab orders only active if this box checked) (preferred agent in renal dysfunction) Final concentration is 1000mcg/mL**

- ☐ **Argatroban per pharmacy**
- ☑ INR, aPTT, Platelet count, bilirubin, albumin now if not previously ordered
- ☑ aPTT 2 hours after argatroban infusion started, and Q 3 hours after a dose increase or decrease as timed studies
- ☐ After argatroban dose stabilized X 12 hours then aPTT QAM
- ☑ CBC Q 3 days while receiving argatroban
- ☐ For patients with CHF, multiple organ system failure, or severe anasarca or post cardiac surgery, start argatroban infusion of (0.5 – 1.2 mcg/kg/min) = _____mcg/kg/min = _____mcg/min = _____mL/hour
- ☐ For all other patients, start argatroban infusion at (1.6 mcg/kg/min) = _____mcg/min = _____mL/hour

OTHER ORDERS: _____

_____

_____

☐ Read Back all T.O./V.O.orders					
Nurse's – Signature	Date	Time	Physician's – Signature	Date	Time

Affix Patient Label

DELETE – no longer needed, orders entered in Cerner. Approved for retirement by PPO Committee 2/13/17. Approved at MEC 4/17 for deletion.

PROCEDURE: _____

DIAGNOSIS: _____

ALLERGIES: _____

ADMIT TO: ☐ Extended Recovery ☐ Inpatient ☐ Obse

LOCATION: _____

☐ _____ ACS ☐ Telemetry ☐ ICU ☐ Other: _____

CODE STATUS: ☐ Full ☐ No Resuscitation for hospital duration*

*Requires notation in Progress Notes.

ASSESSMENT: _____

☐ Q _____ hours for _____ hours, then: _____ hours

TELEMETRY:

☐ May interrupt telemetry monitoring for transport to tests/procedures without nurse

IV:

☐ Dextrose 5% in 0.45% normal saline X 1 L at _____ mL per hour.
☐ Add KCl 20 mEq/L to IV
☐ Saline lock when taking PO well

DIET:

☐ Low Fat
☐ As tolerated starting with clear liquids
☐ NPO

MONITOR I & O: _____

MEDICATIONS:

ANTIBIOTICS:

☐ Cefazolin (Ancef) 1 gram IVPB Q 8 hours x 2 doses post-operatively, to start at _____

FEVER: ***(Cumulative dose of Acetaminophen not to exceed 4 grams in 24 hours)***

☐ Acetaminophen 650 mg PO or per rectum Q 4 hours PRN fever greater than 38° C

PAIN MANAGEMENT: ***(Cumulative dose of Acetaminophen not to exceed 4 grams in 24 hours)***

☐ See Physician initiated Analgesic Pre-Printed Orders

For mild pain (pain level 1 - 3):

☐ Hydrocodone 10 mg / acetaminophen 325 mg (Norco) ½ (one-half) tablet PO Q 4 hours PRN mild pain, not to exceed 6 tablets / 24 hours

(Cumulative dose of Acetaminophen not to exceed 4 grams in 24 hours)

For moderate pain (pain level 4 - 7) (CHOOSE ONE):

☐ Hydrocodone 10 mg / acetaminophen 325 mg (Norco)1 tablet PO Q 4 hours PRN moderate pain **OR**
☐ Oxycodone 5 mg / acetaminophen 325 mg (Percocet) 1 tablet PO Q 4 hours PRN moderate pain

For severe pain (pain level 8 - 10):

☐ OxycoDONE 5mg / acetaminophen 325 mg (Percocet) 2 tablets PO Q 4 hours PRN severe pain, **AND/OR**
☐ Morphine 2 - 4 mg IV Q 2 hours PRN severe pain. Hold for respiratory rate less than 10.

CLASSIC BOWEL PROGRAM:

☐ Docusate sodium (Colace) 100 mg PO BID. Hold for loose stools.
☐ Milk of Magnesia (MOM) 30 mL PO daily PRN constipation.
☐ Bisacodyl (Dulcolax) 10 mg PR daily PRN constipation if Milk of Magnesia not effective

Nurse's – Initial_____

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LAPAROSCOPIC SURGERY ORDERS

NAUSEA / VOMITING:

- ☐ Prochlorperazine (Compazine) 5 – 10 mg IVP over 2 minutes Q 6 hours PRN N/V, **OR**
- ☐ Promethazine (Phenergan) 12.5 mg diluted with 9 mL normal saline slow IV Push Q 4 hours prn N/V, **AND/OR**
- ☐ Ondansetron (Zofran) 4 mg IVP Q 24 hours PRN N/V if above ineffective

OTHERS:

- ☐ Mylanta II 30 mL PO Q 4 hours PRN for heartburn

OTHER MEDICATIONS:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

ACTIVITY:

- ☐ Bed rest
- ☐ Elevate head of bed
- ☐ Keep Flat: _____ hours
- ☐ Out of bed with assistance
- ☐ Ambulate Q: _____ hours with assistance

TREATMENTS: FOLEY CATHETER TO GRAVITY DRAINAGE

- ☐ Remove catheter after _____ hours
- ☐ Straight catheter if unable to void Q _____ hours
- ☐ N/G Tube to intermittent suction
- ☐ Remove N/G tube when: _____

DRESSING:

- ☐ If bleeding at site, apply pressure and call physician
- ☐ Change dressings if soaked
- ☐ Monitor incision or puncture site for hematoma or bleeding

COMPRESSING DEVICES:

- ☐ Remove compression devices after _____ hours

DISCHARGE PLANNING:

- ☐ I will see patient prior to discharge
- ☐ Discharge when : _____
- ☐ Give prescriptions for medications: _____
- ☐ May shower on: _____ day following surgery / procedure
- ☐ Activity as tolerated
- ☐ Call Doctor _____ to arrange follow-up appointment in _____ days.

☐ Read Back all T.O./V.O.orders					
Nurse's – Signature	Date	Time	Physician's – Signature	Date	Time

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LAPAROSCOPIC SURGERY ORDERS

PROCEDURE: _____

DIAGNOSIS: _____

ALLERGIES: _____

STATUS: ☐ INPATIENT ☐ OUTPATIENT

CODE STATUS: ☐ Full ☐ No Resuscitation for hospital duration*
*Requires notation in Progress Notes.

MEDICATIONS:

~~**Given by RN or Radiological Technologist:**~~

☐ _____ mL Gadavist (gadobutrol) 1mmol/ml IV push per dosing chart

☐ _____ mL Other: _____

Body Weight	Body Weight	Total Volume (mL)
lb	Kg	1 molar Gadavist
22	10	1
33	15	1.5
44	20	2
55	25	2.5
66	30	3
77	35	3.5
88	40	4
99	45	4.5
110	50	5
132	60	6
154	70	7
176	80	8
198	90	9
220	100	10
242	110	11
264	120	12
286	130	13
308	140	14

GFR > 45	0.1 ml/kg (Standard Dose)
GFR 30 - 45	0.05 ml/kg (Half- Dose)
GFR < 30 or acute renal insufficiency:	Do not administer gadolinium **based contrast** without physician approval

☐ Read Back all T.O./V.O.orders	
Nurse's – Signature Date Time	Physician's – Signature Date Time

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MRI CONTRAST
MEDICATION ORDERS
Page 1 of 1

PHYSICIAN'S ORDERS