

(place patient label here)

Patient Name: \_\_\_\_\_



PROVIDER ORDERS

Order Set Directions:

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Diagnosis: \_\_\_\_\_

Allergies with reaction type: \_\_\_\_\_

**Cardiovascular Surgery – Preoperative**

Version 6 5/22/17

**General**

Order for Surgery: \_\_\_\_\_

Date of Surgery: \_\_\_\_\_

\*\*\*Obtain the Written Authorization for Ordered Surgery\*\*\*

**Patient Placement**

**Patient Status**

Admit to inpatient

**Activity**

- Up ad lib
- Out of bed with assistance
- Other: \_\_\_\_\_

**Nursing Orders**

- Initiate pre-operative anesthesia protocol
- Peripheral venous cannula insertion/management place to peripheral IV's
- Glucose, blood, point-of-care measurement 3 times a day, before meals and morning before surgery
- Urinary catheter initiation/management PLACE IN OR
- Hibiclens shower in evening before surgery and in morning of surgery (after surgical clip); scrub chest with hibiclens for at least one minute
- Surgical preparation, hair removal, use electric clippers only: neck to navel, nipple to nipple and bilateral legs ankle to groin (inside only) morning of surgery
- Notify provider if patient has angina (Surgeon and Cardiologist)
- Notify provider with all abnormal lab values
- Notify provider if capillary blood glucose is greater than 180 mg/dL x 2 consecutive results
- Notify provider if patient has latex allergy
- Give scheduled beta blocker in the morning prior to surgery hold if heart rate less than 50 bpm and notify anesthesia
- Other \_\_\_\_\_

**Respiratory**

- Oxygen Delivery RT/RN to determine: Titrate to keep oxygen saturation greater or equal to 92%
- Education, incentive spirometry
- Bedside spirometry evaluation O2 saturation on room air
- Pulmonary function tests

**Diet**

- Heart Healthy Diet
- Controlled Carbohydrate Diet
- NPO after midnight the day of surgery
- Other: \_\_\_\_\_

**IV Fluids**

Sodium Chloride 0.9% IV

- 75 milliliter/hour continuous intravenous infusion IF no other maintenance fluids are ordered, Begin at 0600 for 0800 surgery, all surgery times begin at 0800

Lactated Ringers IV

- 75 milliliter/hour continuous intravenous infusion IF no other maintenance fluids are ordered, Begin at 0600 for 0800 surgery, all surgery times begin at 0800

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**Perioperative Antibacterial Prophylaxis**

chlorhexidine gluconate 0.12% mouthwash (PERIDEX)

- 15 milliliter orally (swish and spit) 2 times a day (Give AM of surgery)

**Reminders: Penicillin Allergy**

- Penicillin allergy unknown reaction or known anaphylactic reaction: If patient believes they are penicillin allergic- discuss signs/symptoms of anaphylaxis to determine if cephalosporins are safe. If has had symptoms of anaphylaxis (loss of consciousness, shock, difficulty breathing, airway closure from laryngeal edema, hypotension with onset less than 1 day after taking penicillin) or unable to determine the reaction type: DO NOT USE CEPHALOSPORINS.
- Penicillin allergy known non-anaphylactic reaction: If patient reaction to penicillin is rash, hives, swelling, skin redness, itching or GI symptoms with onset of greater than 1 day- MAY USE CEPHALOSPORINS.

**INITIATE GROUP 1 Surgical Pre-op Antibiotic Prophylaxis Protocol**

- After provider initiation of the group 1 protocol, nursing is to select appropriate antibiotics from the group 1 protocol choices below:

**No Cephalosporin Allergy and No Anaphylaxis to Penicillin:**

ceFAZolin (ANCEF)

- 2 gram intravenously once 0-60 minutes prior to surgical incision and repeat dose every 4 hours if surgical case is greater than 4 hours
- 3 gram intravenously once (Select for patients greater than 120 kilogram) 0-60 minutes prior to surgical incision and repeat dose every 4 hours if surgical case is greater than 4 hours

**Cephalosporin Allergy OR Anaphylaxis to Penicillin OR unable to determine reaction type to Penicillin:**

clindamycin (CLEOCIN)

- 900 milligram intravenously once 0-60 minutes prior to surgical incision and repeat dose every 6 hours if surgical case is greater than 6 hours

**INITIATE MRSA/MSSA Treatment Protocol**

- After provider initiation protocol, nursing is to select from the protocol options below:

MRSA positive yes no

MSSA positive yes no

**IF MRSA or MSSA screen is positive: SELECT**

mupirocin (BACTROBAN) 2% nasal ointment

- 0.5 gram in each nostril 2 times a day for 5 day = 10 total doses Begin day of surgery and/or give dose just prior to surgery

**MRSA positive screen or history of MRSA without pre-op screen: SELECT in addition to above antibiotics**

- Select for all positive pre-op MRSA screen results prior to mupirocin (BACTROBAN) treatment regardless of post mupirocin (BACTROBAN) MRSA screen results  
vancomycin (VANCOCIN)
  - 15 milligram/kilogram intravenously once (2 gram MAX) 0-120 minutes prior to surgical incision, no repeat dose needed Pharmacy to dose

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**Medications**

**Medications to hold before elective surgery:**

Pharmacy Communication

- Discontinue all ACE inhibitors, NSAIDS (DO NOT D/C ASPIRIN), metformin and diuretics 48 hours prior to surgery
- Discontinue clopidogrel or ticagrelor 5 days before surgery @ \_\_\_\_\_
- Discontinue effient 7 days prior to surgery @ \_\_\_\_\_
- Discontinue enoxaparin 1 day prior to surgery, after AM dose @ \_\_\_\_\_
- Discontinue arixtra 2 days prior to surgery @ \_\_\_\_\_
- Discontinue rivaroxaban 2 days prior to surgery @ \_\_\_\_\_
- Discontinue dabigatran 2 days prior to surgery if GFR (CrCl) greater than 50 ml/min @ \_\_\_\_\_
- Discontinue dabigatran 5 days prior to surgery if GFR (CrCl) less than 50 ml/min @ \_\_\_\_\_
- Discontinue apixaban 2 days prior to surgery @ \_\_\_\_\_

**Insulin Correction Level**

- insulin lispro (HUMALOG) Medium Dose Correction AC ONLY- DO NOT CORRECT AT HS:
  - 141 - 180 mg/dL 2 unit;
  - 181- 220 mg/dL 4 units;
  - 221 - 260 mg/dL 6 units;
  - 261 - 300 mg/dL 8 units;
  - 301-350 mg/dL 10 units;
  - greater than 350 mg/dL -Call Physician
- Initiate hypoglycemia protocol for glucose less than 70 mg/dL

**Antiarrhythmics – Prophylaxis: Beta-Blockers**

metoprolol tartrate (LOPRESSOR)

- 25 milligram orally 2 times a day Hold for heart rate less than 50 bpm- Give AM of surgery

metoprolol succinate (TOPROL-XL)

- 25 milligram orally once a day Hold for heart rate less than 50 bpm- Give AM of surgery

**Chest Pain**

nitroglycerin 0.4 mg sublingual tablet (NITROSTAT)

- 1 tablet sublingually as needed for chest pain May repeat every 5 minutes with max of 3 doses for a single chest pain episode within one hour; Hold for systolic blood pressure less than 90 mmHg. NOTIFY PROVIDER if given

morphine

- 2 milligram intravenously every 5 minutes as needed for chest pain not relieved by nitroglycerin (give up to MAX of 10 milligram); NOTIFY PROVIDER if given

- If patient is allergic to morphine: select meperidine

meperidine

- 10 milligram intravenously every 5 minutes as needed for chest pain (give up to MAX of 50 milligram)

**Analgesics: Non-opioids**

acetaminophen (TYLENOL)

- 650 milligram orally every 4 hours as needed for mild-to-moderate pain or fever greater than 101F

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**Antiemetics**

metoclopramide (REGLAN)

- 10 milligram orally every 4 hours as needed for nausea/vomiting
- 10 milligram intravenously every 4 hours as needed for nausea/vomiting

ondansetron (ZOFRAN)

- 4 milligram orally every 4 hours as needed for nausea/vomiting unrelieved by metoclopramide
- 4 milligram intravenously every 4 hours as needed for nausea/vomiting unrelieved by metoclopramide

**Bronchodilators : Inhalers**

- Select the following if patient has a history of smoking within the last 2 months
  - albuterol 90 microgram/inhalation aerosol (VENTOLIN)
    - 3 puff inhaled, with spacer every 4 hours, while awake
  - ipratropium 17 mcg/actuation aerosol inhaler (ATROVENT)
    - 3 puff inhaled, with spacer every 4 hours, while awake

**Vitamin and Mineral Supplements**

ferrous sulfate (FERATAB)

- 325 milligram orally 3 times a day

vitamin C

- 2000 milligram orally once the night before surgery

**Magnesium Supplements**

- If creatinine is greater than 2.5; order alternative for magnesium sulfate
  - magnesium sulfate
    - 5 gram intravenously once for 3 hour Begin 2 hours before surgery

**Lipid-Regulating Agents**

- Select only if patient is not currently on a Statin
  - atorvastatin (LIPITOR)
    - 80 milligram orally once a day, at bedtime

**Xanthine Oxidase Inhibitors**

allopurinol (ZYLOPRIM)

- 300 milligram orally once a day

**Platelet Inhibitors: Salicylates**

aspirin

- 325 milligram orally once a day

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**Laboratory**

- Order the following preoperative laboratory and diagnostic tests after review of medical records, history and physical exam, and procedure type ONLY if not included in anesthesia protocol

**Labs to be obtained now if not done in the past 7 days unless otherwise indicated:**

- MRSA/MSSA by PCR for all patients who will receive prophylactic antibiotics -May be obtained up to 30 days prior to surgery
- Hemoglobin A1c (HbA1c)
- CBC/AUTO DIFF
- Calcium level, serum, ionized
- PTT
- PT (protime and INR)
- UA/ Culture if indicated
- Comprehensive metabolic panel
- Blood gas study arterial, on room air
- Platelet aggregation
- Verify now aspirin
- Verify now P2Y12 (plavix)
- Magnesium (Mg) level, serum
- Phosphorus level, serum
- Type and screen -obtain with pre-op labs on all outpatients Special instructions: Open heart case

**Blood Bank**

- ALL blood products are leukoreduced, this attribute does not need to be ordered.
- If patient antibody screen is POSITIVE; obtain type and crossmatch the DAY BEFORE surgery
- If patient antibody screen is NEGATIVE; obtain type and crossmatch the DAY OF surgery
- Type and screen -obtain with pre-op labs on all outpatients Special instructions: Open heart case

**PACKED CELL (TYPE & CROSS) [BBK]**

- Quantity: \_\_\_\_\_
- Quantity: 4 for all re-op procedures
- If product is for OR, when (if known) \_\_\_\_\_
- Additional Instructions for Blood Bank: if antibody screen is positive, crossmatch day prior to surgery

**Platelets (BBK)**

- Quantity: \_\_\_\_\_
- If product is for OR, when (if known) \_\_\_\_\_
- Special Instructions for Blood Bank: Notify surgeon if less than 2 pheresis are available

**FFP (BBK)**

- Quantity: \_\_\_\_\_
- If product is for OR, when (if known): \_\_\_\_\_
- Special Instructions for Blood Bank: \_\_\_\_\_

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**Radiology and Diagnostic Tests**

- 12-lead ECG -Within 7 days of surgery; Reason for exam: age greater than 40
- CT, chest, without contrast routine Reason for exam: \_\_\_\_\_
- US carotid doppler routine Reason for exam: \_\_\_\_\_
- ECHO, transesophageal To be done during OR; Reason for exam: valvular function diagnostics

**Consults**

- Provider to provider notification preferred.
  - Consult other provider \_\_\_\_\_ regarding \_\_\_\_\_  
Does nursing need to contact consulted provider? [ ] Yes [ ] No
  - Consult to cardiology \_\_\_\_\_ regarding: \_\_\_\_\_  
Does nursing need to contact consulted provider? [ ] Yes [ ] No
  - Consult to pulmonology \_\_\_\_\_ regarding: \_\_\_\_\_  
Does nursing need to contact consulted provider? [ ] Yes [ ] No
  - Consult to nephrology \_\_\_\_\_ regarding: \_\_\_\_\_  
Does nursing need to contact consulted provider? [ ] Yes [ ] No
  - Consult to care coordination to evaluate request for pre-op dental evaluation and home care
  - Consult to dentistry \_\_\_\_\_ regarding: \_\_\_\_\_  
Does nursing need to contact consulted provider? [ ] Yes [ ] No
  - Consult to anesthesiology regarding \_\_\_\_\_  
Does nursing need to contact consulted provider? [ X ] Yes [ ] No Nursing to notify anesthesia when all other consults are completed

Provider Signature: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_