**PERI-OPERATIVE CARDIAC RISK REDUCTION PROTOCOL**

**Physicians:** Check all boxes that apply. Sign and date after completion of each section.

**Procedure Date:**

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### Major Non-Cardiac Procedure
(e.g., Thoracic, abdominal, major vascular, or joint replacement surgery):

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### PRE-OPERATIVE EVALUATION AND MANAGEMENT

**Assessment**

#### Cardiac Risk Reduction Indications:
- Known coronary artery disease
- Atherosclerotic vascular disease
- Diabetes (insulin treated)
- Serum creatinine > 2 mg/dL
- Cardiologist recommendation

#### Contraindications to Beta Blockers:
- History of adverse reaction/allergy to beta blocker
- Second or third degree AV heart block
- Acute bronchospasm (Caution with asthma or COPD)
- Congestive heart failure exacerbation
- Heart rate (HR) < 55 bpm
- Systolic blood pressure (SBP) < 100 mm Hg
- Acute hemodynamic instability

**Recommendations**

- If patient not on a beta blocker, initiate metoprolol.
  - If HR > 70 bpm, start metoprolol 50 mg PO BID.
  - If HR 60-70 bpm, start metoprolol 25 mg PO BID.
- If patient unable to take oral agents, give metoprolol IV.
  - If HR > 70 bpm: metoprolol 5 mg IVPB over 5 minutes.
  - If HR 60-70 bpm: metoprolol 2.5 mg IVPB over 5 minutes.
  - Repeat IV metoprolol q 10 minutes prn HR > 55 bpm.
- If patient already on a beta blocker, optimize therapy.
  - Continue outpatient agent OR change to metoprolol. Titrate to HR 55-70 bpm.
- If patient has contraindication to beta blocker, consider clonidine or alternative strategies.
  - Suggested regimen: Oral clonidine 0.2 mg night before surgery and morning of surgery AND clonidine patch (0.2 mg/24 hours) applied the night before surgery and to be worn for one week.

### ACTION/PLAN

- Patient meets inclusion criteria for protocol. Beta blocker initiated or continued.
- Patient not identified to require perioperative cardiac risk reduction. Protocol is not required.
- Patient has contraindication to beta blockers.
- Clonidine initiated. (Contraindication to beta blocker.)
- Patient instructed to discontinue beta blocker s/he was taking.

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### PERI-OPERATIVE MANAGEMENT (Holding Area, Operating Room, PACU)

If cardiac risk reduction protocol has NOT been initiated, anesthesiologist initiates protocol.

#### Recommendations

- Monitor HR and BP 15 minutes after IV beta blocker.
- If HR not at target 55-70 bpm,
  - in OR, order metoprolol or esmolol
  - in PACU, order metoprolol. (Give oral, if possible. If IV metoprolol ordered, dose every 6 hours).
- Hold beta blocker if HR < 55 bpm or SBP < 100 mm Hg.

### ACTION/PLAN

- Intraoperative beta blocker ordered in Holding Area and/or OR.
- Intraoperative beta blocker not indicated.
- Postoperative beta blocker ordered in PACU
- Postoperative beta blocker not indicated or held in PACU.

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### POST-OPERATIVE MANAGEMENT (Inpatient Unit, Discharge)

Continue beta blockers for minimum of 7 days post surgery (up to 30 days).

#### Recommendations

- Stop IV and switch to oral metoprolol if patient not NPO.
- Optimize oral metoprolol dose with target HR 55-70 bpm.
- Hold beta blocker if HR < 55 bpm or SBP < 100 mm Hg.

### ACTION/PLAN

- Inpatient postoperative beta blocker ordered.
- Postoperative beta blocker held.
- Outpatient prescription for beta blocker given to patient.
- No outpatient beta blocker prescription.

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Name: ____________________  MD Signature: _____________________  Date: ____________________