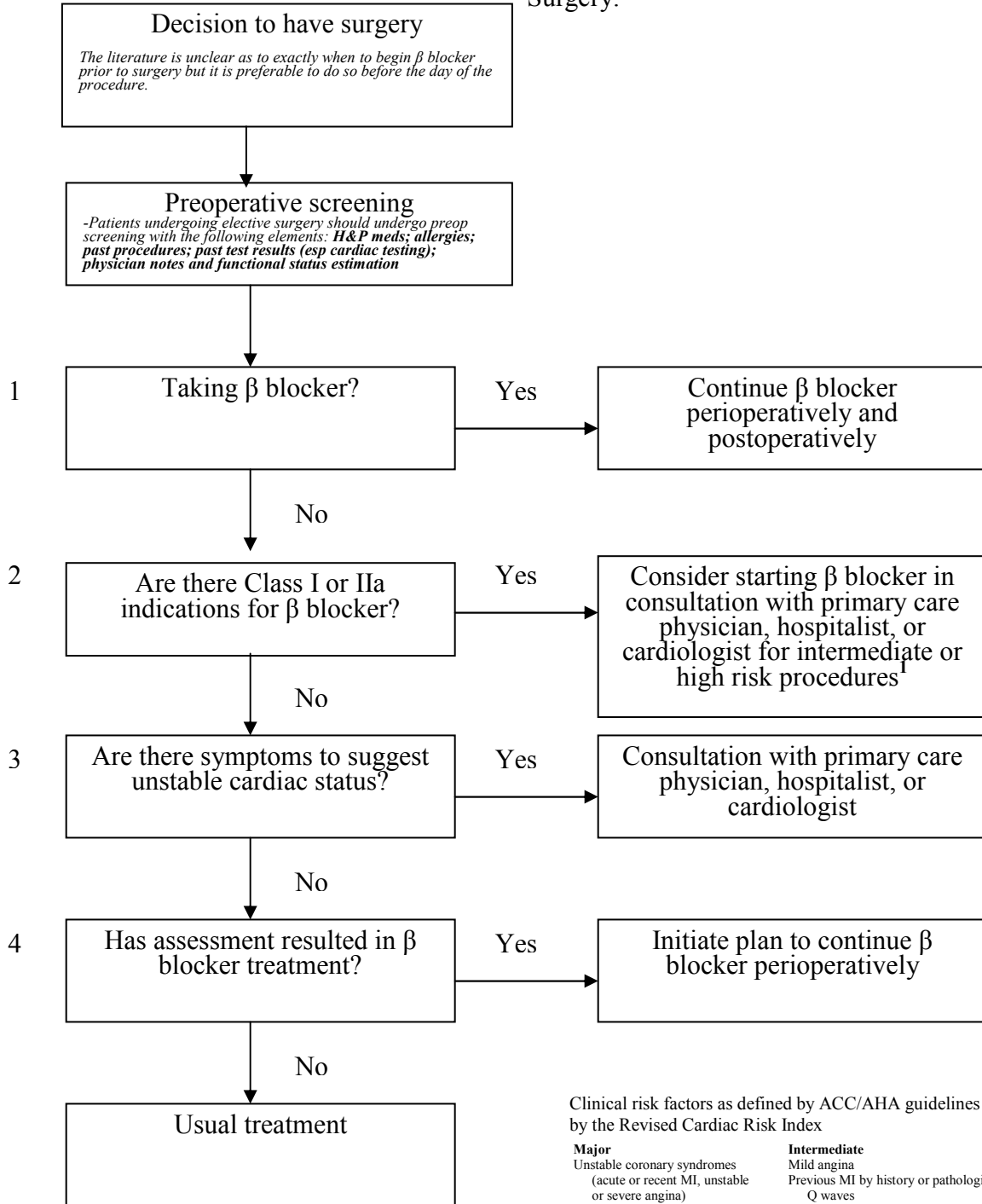


Universal prescription is not indicated

## HQIP Community-Wide Guidelines for Perioperative Beta Blocker ( $\beta$ blocker) Prescription: Proposal for Patients Undergoing Noncardiac Surgery.



Clinical risk factors as defined by ACC/AHA guidelines or 3 or more risk factors as defined by the Revised Cardiac Risk Index

**Major**

Unstable coronary syndromes (acute or recent MI, unstable or severe angina)  
Decompensated heart failure  
Significant arrhythmias (high-grade av block, symptomatic ventricular arrhythmias in the presence of underlying heart disease, supraventricular arrhythmias with uncontrolled ventricular rate  
Severe valvular disease

**Intermediate**

Mild angina  
Previous MI by history or pathologic Q waves  
Compensated or prior heart failure  
Diabetes mellitus (particularly insulin-dependant)  
Renal insufficiency

**Minor**

Advanced age  
Abnormal ECG (left ventricular hypertrophy, LBBB, ST-T abnormalities)  
Rhythm other than sinus (e.g., atrial fibrillation)  
Low functional status (e.g., inability to climb one flight of stairs with a bag of groceries)  
History of stroke  
Uncontrolled systemic hypertension

<sup>1</sup> Not necessarily recommended for low risk procedures

**\*Class I Recommendations:**

1/ "Beta blockers should be continued in patients undergoing surgery who are receiving beta-blockers to treat angina, symptomatic arrhythmias, hypertension, or other ACC/AHA Class I guideline indications." **Class I Recommendation; (Level of Evidence: C)**

2/ "Beta blockers should be given to patients undergoing vascular surgery at high cardiac risk owing to the finding of ischemia on preoperative testing." **(Level of Evidence: B)**

**\*\*Class IIa Recommendations:**

1/"Beta blockers are probably recommended for patients undergoing vascular surgery in whom preoperative assessment identifies coronary heart disease." (As per above risk factors and/or prior CABG/coronary angioplasty/other coronary revascularization; positive stress test and angiographic evidence of coronary atherosclerosis – even if mild and non-obstructive) **(Level of Evidence: B)**

2/ "Beta blockers are probably recommended for patients in whom preoperative assessment for vascular surgery identifies high cardiac risk as defined by presence of multiple risk factors.\*" **(Level of Evidence: B)**

3/"Beta blockers are probably recommended for patients in whom preoperative assessment identifies coronary artery disease or high cardiac risk as defined by the presence of multiple clinical risk factors\* and who are undergoing intermediate or high risk procedures as defined in these guidelines." **(Level of Evidence: B)**

**Notes:**

1) Decisions to initiate  $\beta$  blocker therapy should be individualized for every patient with physician oversight

2)  $\beta$  blockers should ideally started several days before the planned procedure. If this is not possible, they may be started on the day of surgery under the guidance of anesthesiology. Initiating beta blockers at extubation or postoperatively may be acceptable

3) For patients who are on beta blockers preoperatively, it is not recommended that beta blocker be changed. However, for those starting beta blocker therapy there appears to be benefits for long acting formulations such as atenolol or bisoprolol over shorter-acting agents such as metoprolol.

4) It is generally recommended that beta blockers be used to titrate the heart rate of 50 to 70 BPM per physician. Beta blocker therapy should not be discontinued postoperatively except by the patient's primary physician or cardiologist.