This worksheet is merely a guideline for the physician who understands preop evaluation well, and suggested actions should be individualized to meet risk/benefit for each patient, including adjusting doses for age/renal excretion. This worksheet is not intended to serve as a chart note.

The left side of the page includes system based assessments (cardiac, pulmonary, etc.) and the corresponding interventions are on the right side of page. Much like a traffic light, each section has red for stop, yellow for proceed to next step, and green to “go” ahead with surgery. If the assessment is “red”, the appropriate interventions should be selected from the red options. If the assessment is “green,” the appropriate interventions should be selected from the green options. The guideline management should be converted to very specific orders based on your own clinical judgment.

Here is what we decided at last night’s Hospitalist meeting regarding inpatient preop evaluations:
1) The primary Medicine Team will complete the Preop assessment using the attached worksheet and document a note in the chart, consulting Team H for an opinion when necessary.
2) The primary Medicine Team will use their own discretion to determine if a patient undergoing a minor procedure needs this level of formal preop evaluation, but should consider looking at the Hematological section.
3) The primary Medicine Team will initiate a consult to Team H whenever a patient will transfer to surgery with anticipated need for ongoing perioperative medical management. Primary Medicine Team will handoff appropriate synopsis & active issues for patient to Team H.
4) Team H will provide a follow-up level initial evaluation for patient previously on primary Medicine Team or previously seen in our Preop Clinic within 3 years.
**UCI HOSPITALIST PROGRAM**

**CARDIAC:**

Prior cardiac workup: LV EF =

Y N

- Chest pain or suspected angina?
- CABG? Date:
- PCI? Date: Bare metal stent Drug eluting stent
- Orthopatia, PND, leg edema or suspected HF?
- Palpitations, dizziness, syncope or suspected arrhythmia?
- Atrial fibrillation? CHADS score =
- Pacemaker? Type:
- History of prosthetic heart valve or endocarditis?
- BP chronically >180/100?

ACC-AHA Risk Assessment

RCRI Criteria =

- Proposed intra-abdominal surgery or high risk surgery
- Known CAD (MI, Q waves on EKG, abnormal stress test/cath, angina)
- Compensated HF: Hx orthopatia, edema
- Stroke (ischemic CVA or TIA)
- Diabetes requiring insulin
- Renal insufficiency with creatinine >2 mg/dL

Emergent surgery?

- Major cardiac contraindications?
- Recent MI (<3-6 months)
- Class III-IV angina
- Decompensated HF (<1 week)
- Critical AS (AV area<1 cm², AV grade>60), MS
- Significant arrhythmia (hemodynamically unstable)
- High grade AV block, high vent rate, etc.

Minor surgery? (proposed minor surgery or if contraindicated)

- ADLs: dress, eat
- Walk around house, get out of bed
- Walk 2 blocks, light housework, walk downstairs
- Vacuum, scrub, light yard work, carry 10 lbs.
- Climb 1 floor stairs, walk >4 blocks, dance
- Mow lawn, carry >20 lbs, >9 holes golf
- Heavy yard work, carry >60 lbs, walk 1 mile or uphill
- 30 mins aerobic exercise, sports, swim, jog

Coronary intervention (PCI/CABG) <5y w/o new symptoms?

- Favorable cardiac cath or non-invasive stress test <2y?
- RCRI= 0-1?
- RCRI= 1-2 or vascular surgery?
- KUB>1 or vascular surgery?

**PULMONARY:**

Y N

- SOB, DOE, acute cough, abnormal lung exam, or hypoxemia?

- Surgery high risk for perioperative pulmonary complications?

- Major patient-specific pulmonary risk factors?

- Acute pulmonary embolism (<4 weeks)
- Severe pulmonary HTN [PA>70 mm Hg]
- Acute respiratory symptoms with chronic lung disease

- Other patient-specific pulmonary risk factors?

- Age >60 years old ≤1 MET activity Active smoker
- COPD Acute delirium
- Albumin <3.5 mg/dL OSA or (+) STOP BANG

**INTERMEDIATE risk (2-7% CV events)**

- RCRI 1-2

**LOW risk (<2% CV events)**

- Minor procedure without major cardiac contraindications
- PCI/CABG<5y w/o new Sx
- Favorable cath/non-invasive stress test <2y w/o new Sx
- RCRI 0-1

**HIGH risk (>9% CV events)**

- Major cardiac contraindication
- RCRI ≥3

**Medically optimized (with above) and**

- Bedside FTFs to evaluate undiagnosed suspected lung dz/ SOB
- Treat exacerbated chronic lung dz w/Beta agonist inhaler/neb
- Treat exacerbated chronic lung dz w/Anticholinergic inhaler/neb
- Treat exacerbated chronic lung dz w/inhaled steroid
- Delay surgery (if possible) to treat exacerbated chronic lung dz
- Delay surgery (if possible) to treat pneumonia
- Delay surgery for high risk of periop pulmonary complications
- Perioperative incentive spirometry 10x/h
- Aspiration precautions and postop NGT suction for ileus, N/V

**Medically optimized (with above)**

**IF MANAGEMENT WILL CHANGE, THEN RECOMMEND:**

Cardiology consult if major surgery w/high cardiac risk
- Non-invasive stress test or CT coronary angiogram
- Echocardiogram if suspecting critical AS/MS clinically
- CXR, BNP, and/or Echo for suspected undiagnosed HF
- Optimize decompensated HF w/Beta-blocker, ACE/ARBl
- and diuretics PRN (hydralazine & nitrate alternate to ACE/ARB)

EKG, telemetry or Holter to evaluate suspected arrhythmia
- Optimize significant arrhythmia:

- CK and/or troponin @ 48h & 72h postop for high cardiac risk
- CABG? Date: Minimize perioperative fluids & use hypotonic fluid (if possible)
- PCI? Date: Bare metal stent Drug eluting stent Proceed without coronary intervention due to surgical urgency and medically optimize:

- Treat BP until clinically acceptable range
- Optimize decompensated HF w/Beta-blocker, ACE/ARBl
- and diuretics PRN (hydralazine & nitrate alternate to ACE/ARB)

- Optimize significant arrhythmia:

- PCI/CABG? Date: Minimize perioperative fluids & use hypotonic fluid (if possible)
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UCI HOSPITALIST PROGRAM

INFECTION:

YN
Emergent or urgent surgery?
Acute infection suspected (fever, leukocytosis, dysuria, etc.)?
Immunosuppressive Tx x 2 wk (systemic steroid, DMARD, chemo)?
Weight loss < 2 wk, fasting > 3d, or malnourished?

ENDOCRINE:

YN
Emergent or urgent surgery?
Hyperthyroid with tachyarrhythmia or signs of thyroid storm?
Hypothyroid with TSH > 30 or myxedema coma?
Systemic steroid @ > 20 mg/d Prednisone equiv for > 3 wk < past yr?
DKA or hyperosmolar hyperglycemic non-ketotic syndrome?
DM with Hgb A1c > 7.5 or FBS > 200?

LIVER:

YN
Platelet count < 30,000 for minor surgery or < 50,000 for major surgery?

Childs-Pugh:

<table>
<thead>
<tr>
<th>Points</th>
<th>Ascites</th>
<th>Encephalopathy</th>
<th>Bilirubin</th>
<th>Albumin</th>
<th>INR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>None</td>
<td>None</td>
<td>&lt; 2 mg/dl</td>
<td>&gt; 3.5</td>
<td>&lt; 1.7</td>
</tr>
<tr>
<td>2</td>
<td>Mild-Med</td>
<td>Stage I-II</td>
<td>2-3 mg/dl</td>
<td>2.8-3.5</td>
<td>1.7-2.3</td>
</tr>
<tr>
<td>3</td>
<td>Severe</td>
<td>Stage III-IV</td>
<td>&gt; 3 mg/dl</td>
<td>&lt; 2.8</td>
<td>&gt; 2.3</td>
</tr>
</tbody>
</table>

5 - 6 points = Class A with 2 year mortality < 15% and low surgical risk
7 - 9 points = Class B with 2 year mortality of 40% & moderate surgical risk
10 - 15 points = Class C with 2 year mortality > 60% and high surgical risk

HEMATOLOGICAL:

<table>
<thead>
<tr>
<th>Surgical Bleeding Risk</th>
<th>Thrombosis Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>MVR, THA, TKA, DES&lt;1y, BM stent&gt;90d, PCI&lt;14d, atrial fibrillation, CHADS&gt;3, DVT/PE&lt;6m, intracardiac clot, EF&lt;20%, active CA, hypercoaguable dz</td>
</tr>
<tr>
<td>Low</td>
<td>DES&gt;1y, BM stent&gt;90d, PCI&gt;14d, DVT/PE&gt;6m, CHADS&lt;3, isolated CVA/TIA/ASA/AFib, newer model AVR, no hypercoaguable risk factor</td>
</tr>
</tbody>
</table>

YN
High bleeding risk surgery?
Hx major bleeding with past surgery?
Hx mucocutaneous bleeding (epistaxis, GI bleed, menorrhagia)?
Easy bruising > 2 cm, easy bleeding?
Hx or FHx of coagulopathy?
Platelets < 80K for CNS surgery, < 50K for major or < 30K for minor surgery?
Antiplatelet or anticoagulant use < 7 days & emergent/urgent surgery?

DELIRIUM:

YN
Acute delirium, abnormal cognitive exam, or Hx perioperative delirium?
Hx EtOH abuse, dementia, chronic psychiatric illness, or polypharmacy?
Age > 60 with acute infection, severe metabolic disorder, or hypoxia?

RENAI:

YN
Renal failure, Stage I - V on dialysis

FINAL RECOMMENDATIONS:

YN
Medically optimized to proceed with surgery?

DISCLAIMER: Individualize management based on patient’s risk/benefit and adjust doses for age/renal clearance. NOT CHART COPY.