Assessment of patients who present with signs and symptoms suggestive of new onset heart failure or exacerbation of chronic heart failure requires a comprehensive approach as outlined on these cards. Use your “cash” card to insure appropriate assessment of all patients.

### POTENTIAL CAUSES OF HEART FAILURE:

<table>
<thead>
<tr>
<th>Coronary artery disease</th>
<th>Chest irradiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>√ ischemia</td>
<td>√ Fluid overload from noncardiac causes</td>
</tr>
<tr>
<td>√ acute myocardial infarction</td>
<td>√ Obstructive sleep apnea</td>
</tr>
<tr>
<td>Hypertension</td>
<td>- Exposure to cardiotoxic agents</td>
</tr>
<tr>
<td></td>
<td>(e.g. neoplastic agents)</td>
</tr>
<tr>
<td>Diabetes</td>
<td>- Current or past illicit drug use</td>
</tr>
<tr>
<td>Valvular heart disease</td>
<td>- Current or past alcohol abuse</td>
</tr>
<tr>
<td>Rheumatic fever</td>
<td>- Sexually transmitted diseases</td>
</tr>
<tr>
<td>Collagen vascular disease</td>
<td>- Bacterial or parasitic infection</td>
</tr>
<tr>
<td>Thyroid excess of deficiency</td>
<td>- Pheochromocytoma</td>
</tr>
<tr>
<td>Family history of heart disease</td>
<td>- Persistent atrial fibrillation</td>
</tr>
</tbody>
</table>

### PRECIPITATING CAUSES OF DECOMPENSATED HEART FAILURE:

<table>
<thead>
<tr>
<th>Excessive dietary sodium intake</th>
<th>Comorbidities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medication nonadherence</td>
<td>√ fever/infection/sepsis</td>
</tr>
<tr>
<td>Uncontrolled hypertension</td>
<td>√ thyroid dysfunction</td>
</tr>
<tr>
<td>Myocardial ischemia or infarction</td>
<td>√ anemia</td>
</tr>
<tr>
<td>Dysrhythmias</td>
<td>√ renal insufficiency</td>
</tr>
<tr>
<td>Adverse drug effects</td>
<td>√ pulmonary diseases</td>
</tr>
<tr>
<td>√ NSAIDs</td>
<td>√ sleep apnea</td>
</tr>
<tr>
<td>√ Glitizones</td>
<td>√ nutritional deficiencies</td>
</tr>
<tr>
<td>√ Some calcium channel blockers (felodipine and amlodipine are safe), antidysrhythmics (Vaughn Williams Class I)</td>
<td></td>
</tr>
</tbody>
</table>
**SIGN OF HEART FAILURE:**
- Tachycardia
- Third heart sound (S3)
- Increased jugular venous pressure
- Positive hepatojugular reflex
- Bilateral crackles
- Peripheral edema not due to venous insufficiency
- Laterally displaced apical impulse
- Weight gain
- Abdominal distention (Note: These signs are generally associated with congestion; not all patients with acute heart failure are congested).

**SYMPTOMS OF HEART FAILURE:**
- Dyspnea on exertion
- Dyspnea at rest
- Orthopnea
- Paroxysmal nocturnal dyspnea
- Fatigue
- Decreased exercise tolerance
- Unexplained cough, especially at night
- Acute confusion or delirium
- Abdominal or gastrointestinal symptoms (e.g. nausea, bloating, abdominal pain, anorexia)
- Decreased food intake
- Decline in functional status

**LABORATORY AND DIAGNOSTIC TESTS ON INITIAL EVALUATION OF HEART FAILURE:**
- Complete blood count
- Urinalysis
- Serum electrolytes including calcium and magnesium
- Blood urea nitrogen
- Serum creatinine
- B-type natriuretic peptide
- Fasting lipid panel
- Fasting blood glucose
- Liver function tests
- Drug levels of relevant medications (e.g., digoxin)
- Thyroid panel
- 12-lead electrocardiogram
- Chest radiograph
- Two-dimensional echocardiography
- Radionuclide imaging (consider)
- Cardiopulmonary exercise testing (consider)
- Cardiac catheterization (consider)
- Myocardial biopsy for suspected myocarditis (consider)

**ASSESSMENT QUESTIONS:**

**Symptoms**
- What symptoms prompted you to seek medical care? When did they begin?
- Did your symptoms begin suddenly or gradually worsen over time?
- What makes the symptoms better/worse?
- Do the symptoms occur continuously or only with certain activities?
- Do symptoms improve with rest?
- Do you have any pain now? Did you recently have pain? Rate on a 0-10 scale.
- Has your heartbeat felt any different than usual? E.g., “race,” “flutter,” or “skip?”

**Breathing**
- Have you felt short of breath? Do you wake up short of breath at night?
- Can you speak as much as you like before getting short of breath?
- What makes your breathing easier?
- Do you cough? Is it worse than usual?
- Do you cough throughout the day or mostly in the morning?
- Do you cough up any secretions?
- Do you use oxygen at home?

**Sleep**
- Have symptoms kept you from sleeping?
- Do you sleep in bed or in a chair?
- Are you able to lie flat in bed?
• How many pillows do you use to sleep? Is this more or less than usual?
• Have you recently slept more or less than usual? Do you feel rested?
• Ask spouse/significant other if patient snores or intermittently stops breathing during sleep.

**Diet**
• Have you recently eaten more salty foods or drank more water than usual?
• How often do you eat out?
• How often do you weigh yourself?
• Have you gained or lost weight recently?
• Have you experienced any swelling? Is swelling present all day or only evenings?
• How far up your legs do you have edema?
• Have you felt bloated or had edema?
• Are your clothes, belt, rings, and shoes tighter than 1 week or 1 month ago?
• Have you had nausea or abdominal pain?

**Medications**
• Have you taken all prescribed meds?
• Did you run out of any medications?
• Have you had diarrhea/vomiting that may have affected absorption of medications?
• Have you taken extra diuretic meds?
• Have you changed the dose of any med?
• Did any physician/NP recently prescribe different medications for you or change the dose of your medications?
• Do you take any over-the-counter medications or herbal supplements?

**Activity**
• How far can you walk?
• Can you dress, bathe, prepare food, climb stairs without stopping to rest?
• What activities could you do recently but not now because of worsened symptoms?
• Have you decreased your activity level?

**Other**
• Do you have difficulty remembering information or feelings of confusion?
• Have you had other health problems that may make your heart failure worse?