GO PUBLIC!

SANTA CLARA VALLEY MEDICAL CENTER
Hospital & Clinics

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Cardiology Referral Guidelines

Cardiology Clinic Location: Valley Specialty Center 3rd floor
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Cardiology Clinic Fax: (408) 885-7509

This information is designed to aid practitioners in making decisions about appropriate medical care. These guidelines should not be construed as dictating an exclusive course of treatment. Variations in practice may be warranted based on the needs of the individual patient, resources, and limitations unique to the institutional type of practice.

E-CONSULT DISCLAIMER:

E-consults are based on the clinical data available to the reviewing provider, and are furnished without benefit of a comprehensive evaluation or physical examination. All advice and recommendations must be interpreted in light of any clinical issues, or changes in patient status, not available to the reviewing provider. The ongoing management of clinical problems addressed by the e-consult is the responsibility of the referring provider. If you have further questions or would like clarifications regarding e-consult advice, please contact the reviewing provider. If needed, the patient will be scheduled for an in-office consultation.

All URGENT consultations require provider-to-provider communication. If your patient has a medical emergency, please direct them to the closest emergency room for expedited care.

Please note these guidelines important for ALL referrals:

- **All patients need a primary care provider** who makes a referral, asks specific questions of the consultant, and can accept the patient back after consults.
- **Prior** to referral, ALL patients need an ECG.
- **Prior** to referral (unless urgent), outside records (including cath film on CD) should be obtained and either sent or faxed to Cardiology clinic at 408 885-7509 or uploaded under the **Media** Section on Healthlink.
- For any **urgent questions,** please call attending covering for **Cardiology Urgent Outpatient Questions on AMION** prior to placing a referral

Examples of common incomplete or inappropriate referrals

1. "Chest pain, please evaluate", but no ECG or stress test is done.
2. "Recent CABG, needs cardiology follow-up"
3. "Stent last year, please make recommendations"
4. "Heart murmur" (with no description of murmur or symptoms and no echo done).
5. "HTN, please evaluate and treat."
6. "Palpitations, please evaluate and treat."

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ATRIAL FIBRILLATION

1. **Background**
    a. There is growing prevalence of atrial fibrillation with the aging population

2. **Pre-referral evaluation and treatment**
    a. Consider reversible causes of atrial fibrillation (alcohol, toxin, stimulant use or abuse, excess caffeine, undiagnosed OSA, poorly controlled HTN, obesity)
    b. Associated cardiac conditions (heart failure, valvular disease, coronary artery disease, etc)
    c. Decision for anticoagulation. Please refer to Protime Clinic if patient meets indication for systemic anticoagulation and agrees to be initiated on Coumadin (reference: CHADS2 score and CHA2DS2-VASc and HASBLED online calculators)
    d. Rate vs rhythm control strategy
    e. Control HTN according to guidelines
    f. Control lipids according to guidelines
    g. Weight loss if obese
    h. Refer to sleep test if high suspicion for undiagnosed OSA
    i. Other lifestyle modifications if known triggers identified

3. **Indications for referral**
    a. It is reasonably to refer patients with atrial fibrillation for initial cardiology consultation. Once management strategy and patient's condition stabilize, patient may be returned to PCP for longitudinal care
    b. **Please refer patient to ED for any urgent evaluation (e.g. atrial fibrillation with rapid ventricular response)**
    c. Reference: 2014 AHA/ACC/HRS guideline for the management of patients with atrial fibrillation: **http://content.onlinejacc.org/article.aspx?articleid=1854230**

4. **Please include the following with your referral**
    a. Labs: CBC, chem panel, TSH/FT4 and urine tox (if indicated)
    b. TTE
    c. Holter monitor/rhythm monitoring if unclear diagnosis or unclear afib burden

EVALUATION FOR CARDIAC RISK FACTORS *WITHOUT* ESTABLISHED DISEASE

1. **Background**
    a. Individual screening of patients by PCP for initial complete history and physical examination

2. **Pre-referral evaluation and treatment**
    a. Initial evaluation consists of ruling in or out the factors listed below:
        - Smoking
        - Hypertension
        - Diabetes Mellitus
        - HDL < 35 mg/dl
        - LDL > 130 mg/dl
        - Family history:
            Male, first-degree relative, MI at age < 55 years
            Female, first-degree relative, MI at age < 65 years
            First degree relative = birth father or mother, siblings
        - Presence of atherosclerosis elsewhere (PVD)
    b. Yearly lipid panel evaluation
    c. Referral for stress testing if indicated
    d. Please treat positive treatable risk factors

3. **Indications for referral**
    a. Cardiology referral is appropriate if the stress test is positive for ischemia or the patient's history is strongly suggestive of angina in the presence of a negative stress test
    b. Please refer patient to ED for any urgent evaluation

4. **Please include the following with your referral**
    a. Updated labs
    b. Referral to appropriate stress testing modality

HEART FAILURE

1. **Background**
    a. Cardiology consultation is to be obtained after the diagnosis of heart failure is substantiated and initial therapeutic maneuvers initiated in the PCP's office

2. **Pre-referral evaluation and treatment**

a. Individual screening of patients by PCP for initial history and physical examination including: neck veins, carotids, lungs, heart with specific note of presence or absence of S3 or S4 gallops and murmurs, abdominal organ size and tenderness, check pulses in all extremities, presence or absence of peripheral edema. Review med/toxin history.
b. Labs including: CBC, BMP, TSH/FT4 reflex, hemoglobin A1C, lipid panel, BNP, urine tox screen
c. Baseline ECG
d. CXR PA/LAT
e. Transthoracic echocardiogram
f. Stress test if underlying myocardial ischemic suspected
g. Holter/other rhythm monitoring evaluation if arrhythmias suspected

3. **Indications for referral**
    a. Referral to cardiology is appropriate after anatomical basis of heart failure is established by any of the tests including transthoracic echocardiogram, stress perfusion image, LV angiogram on cardiac cath and/or cardiac MRI.
    b. Referral to cardiology for patients with heart failure exacerbation is appropriate if patient's symptoms are stable
    c. **Please refer patient to ED for any urgent evaluation**
    d. Reference: ACCF/AHA 2013 guideline for the management of heart failure: **https://circ.ahajournals.org/content/128/16/e240.full.pdf+html**

4. **Please include the following with your referral**
    a. See section 2: labs, ECG, CXR PA/LAT, TTE, Stress test/Holter monitor as indicated

INTERMITTENT CHEST PAIN

1. **Background**
    a. Initial history and physical examination to be performed by PCP:
        i. Evaluation of precipitating and relieving factors, presence or absence of aggravation by breathing or motion of ribs and/or shoulders
        ii. Evaluation of cardiac risk factors
        iii. Presence or absence of atherosclerosis by history and physical exam

2. **Pre-referral evaluation and treatment**

a. Laboratory evaluations: CBC, BMP, TSH, lipid panel and hemoglobin A1C
b. Current EKG
c. Non-invasive testing, if indicated:
    i. Appropriate stress testing modality
    ii. Echocardiography, if murmur or left ventricular dysfunction suspected
d. Initiate treatment with aspirin, beta-blockers, nitrates and ACE inhibitors as indicated
e. ER precautions to be given to the patient

3. **Indications for referral**
    a. If the stress test is positive for ischemia or if the patient's history is strongly suggestive of angina in the presence of a negative stress test
    b. Patient with active angina chest pain should have initial stabilization (ECG, BP management, ASA and SL NTG as needed)
    c. Please refer patient to ED for any urgent evaluation

4. **Please include the following with your referral**
    a. Updated labs
    b. Referral to appropriate stress testing modality
    c. Referral to transthoracic echocardiogram

KNOWN ATHEROSCLEROSIS/CORONARY ARTERY DISEASE

1. **Background**
    a. Routine follow up of revascularized patients with previous CABG, MI or PTCA/stent placement for > 6 months old, if stable, is to be conducted by the PCP with the following exceptions:
        i. Left Main stenting or suboptimal PCI results (patients who needs staged PCI)
        ii. CAD s/p PCI or CABG with decreased LV systolic function
        iii. Patients with T2DM, who underwent multiple PCIs or CABG

2. **Pre-referral evaluation and treatment**
    a. Referral for appropriate stress test when indicated
    b. Yearly lipid panel
    c. Treatment with aspirin, beta-blockers, ACE-inhibitors, nitrates and calcium channel blockers (if patient is intolerant to beta-blocker) as indicated

d. Treatment of lipids according to guidelines (high dose statin for anyone with coronary artery disease: atorvastatin 40mg or 80mg QHS or rosuvastatin 20mg or 40mg in those who can tolerate)
e. Treatment of hypertension (BP < 140/90)
f. Reference: 2014 ACC/AHA/AATS/PCNA/SCAI/STS focused update of the guideline for the diagnosis and management of patients with stable ischemic heart disease: **http://circ.ahajournals.org/content/130/19/1749**
g. ER precautions to be given to the patient

3. **Indications for referral**
    a. Refer if there are any active issues: chest pain, shortness of breath, unexplained fatigue or declining exercise tolerance suspicious for angina equivalent
    b. Patients with LM PCI or suboptimal PCI results, CAD s/p PCI or CABG with decreased LV systolic function and patients with T2DM who underwent multiple PCIs and/or CABG
    c. **Please refer patient to ED for any urgent evaluation**

4. **Please include the following with your referral**
    a. Updated labs
    b. Referral to appropriate stress testing modality if patient with active/worsening symptoms
    c. Referral to transthoracic echocardiogram if not performed previously

MURMUR

1. **Background**
    a. When murmurs are heard, they should be defined by the following characteristics: Timing, location, quality or pitch, intensities or loudness, ejection or non-ejection clicks
    b. Efforts are to be made in differentiating innocent vs pathological murmurs (note, all diastolic murmurs are pathological)

2. **Pre-referral evaluation and treatment**
    a. Innocent murmurs are murmurs produced by normal flow and usually have the following characteristics:
        - Intensity of grade 2/6 or less
        - Associated with normal heart sounds
        - Normal cardiac examination
        - No associated cardiac symptoms

- Change in intensity with body position (louder in supine position as larger venous return)
- Usually along the left sternal border

b. If provider is not sure whether murmur is pathological or innocent, if the patient is without symptoms, refer patient for TTE first. If TTE identifies pathology, please refer patient to Cardiology Clinic.
c. Treat underlying cause if murmur if innocent (correct anemia, treat thyroid disease, etc)

3. Indications for referral

a. Do not refer patient with innocent murmurs
b. Do not refer patients with mild physiological regurgitation
c. Mild valvular stenosis, once diagnosis is made and patient is either asymptomatic or with stable symptoms, patient will be discharged from Cardiology Clinic to PCP for ongoing care. May order a TTE every three years, sooner if change in clinical status.
d. Patients with prosthetic heart valves should be followed by Cardiology
e. **Please refer patient to ED for any urgent evaluation**

4. Please include the following with your referral

a. CBC, TSH, urine tox if indicated. Blood culture if indicated
b. Transthoracic echocardiogram

PALPITATIONS/UNKNOWN ARRHYTHMIA

1. Background

a. Most palpitations are benign if physical exam is normal, work-up is negative and patient has no personal or family history of malignant symptoms such as syncope or sudden cardiac death.
b. Premature atrial contraction (PAC), though recognized as a precursor of atrial fibrillation, does not warrant treatment or referral
c. Premature ventricular contraction (PVC), if less than 30/hr, non-sustained, and no associated with structural heart disease, is usually benign and does not warrant treatment or referral.

2. Pre-referral evaluation and treatment

a. Medication review (AV nodal blocking agents, beta agonists or sympathomimetics)
b. Lifestyle Review (activity level, hydration status, caffeine intake, tobacco use, illicit drug use, stimulant or diet medication use, menopausal etc.)

c. Labs include CBC, chem7, TSH/FT4 and urine tox if indicated
d. TTE
e. Holter monitor and/or other rhythm monitoring strategies
f. Exercise stress test if indicated
g. Treatment of the positive treatable risk factors and/or symptomatology

3. **Indications for referral**
    a. Refer to cardiology if associated with syncope/pre-syncope
    b. Refer to cardiology if positive family history of major arrhythmic event or death
    c. Refer to cardiology if associated with structural heart disease
    d. Refer to cardiology if arrhythmias (other than occasional PAC's or PVC's) are documented by ECG/holter/event monitor
    e. **Please refer patient to ED for any urgent evaluation (e.g. VT, frequent NSVT, etc)**

4. **Please include the following with your referral**
    a. Please see section 2 – labs, TTE, Holter monitor/other rhythm monitoring strategies, exercise stress test if indicated.

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- May 2017, content / formatting
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