HEALTH PLAN OF NEVADA
A UnitedHealthcare Company

11.2 CARDIOLOGY REFERRAL GUIDELINES
Contracted Group: Southwest Medical

Adult Cardiology Patients (18 Years and Older) Referral Guidelines

For Appointments:

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NOTE: A Cardiologist is available during clinic hours to discuss a case and make suggestions regarding work up.

The following diagnostics are needed prior to cardiology consultations:

Chest Pain
- ECG within 30 days
- Chest x-ray
- Lab work: CBC, Chemistry Panel, Lipid and Thyroid Panel, Hemoglobin
- Appropriate stress testing modality (only if patient has no known history of CAD or if pain is "low risk.")
- Echocardiogram (This test is only required if a new heart murmur is detected. This test is not required prior to consultation, if there is no detection of a new murmur and an echocardiogram was performed within the last year.)
- High risk chest pain (classic symptoms, risk factors, etc.) should be managed in UC or ER.

Congestive Heart Failure (CHF) with EF 40% or less
- Chest x-ray
- Lab work: CBC, Chemistry Panel, Lipid and Thyroid Panel, BNP CMP w/EGFR (#6200)and BNP within past 30 days
- EKG
- Echocardiogram within past 6 months

Congestive Heart Failure (CHF) with EF 41% or greater
- Chest X-ray
- Lab work: CMP w/EGFR (#6200) BNP within past 30 days
- EKG
- Echocardiogram within past 6 months

New onset CHF patients without history of left ventricular dysfunction should be sent to UC/ER

Arrhythmia (Tachycardia / Bradycardia / Afib/ Aflutter)
- Documentation of arrhythmia-ECG, Holter, Event Monitor, or telemetry showing arrhythmia or previous Cardiologist Office Note documenting arrhythmia, etc.

- Lab work: CBC, Chemistry Panel, Lipid and Thyroid Panel
- Echocardiogram within past year
- Holter Monitor/Event Recorder-if not previously done (included in requested documentation)

Heart Block (same as above)

- Medication List
- Lab work: CBC, Chemistry Panel, Lipid and Thyroid Panel
- EKG
- Echocardiogram
- Holter Monitor

If high degree heart block and patient is symptomatic, send to emergency room.

Evaluation of Coronary Artery Disease Guidelines

Identification of patients with Coronary Artery Disease. The initial screening and diagnostic work-up of patients suspected of having Coronary Artery Disease is to be performed by the Primary Care Physician (PCP). Cardiology consultation is to be obtained only after the screening and therapeutic measures below have been accomplished. (Telephone consultation is appropriate at any time with on-call cardiologist)

Evaluation for Cardiac Risk Factors without Established Disease

- Individual screening of patients by PCP for initial complete history and physical examination.

- Initial evaluation consists of ruling in or out the factors listed below:

  - Smoking
  - Hypertension
  - Diabetes mellitus
  - HDL <35mg.dl
  - LDL >130mg/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, and siblings
  - Presence of atherosclerosis elsewhere (PVD)

- Diagnostic evaluations to include:
  - Yearly lipid panel evaluation
  - Referral for stress testing if indicated.

- Therapy:
  - Treatment of the positive treatable risk factors.
  - 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.

Evaluation of Episodic Chest pain (not ongoing):

Initial history and physical examination to be performed by PCP. Evaluation to include the following:

- High risk chest pain (classic symptoms, risk factors, etc.) should be managed in UC or ER.

- Evaluation of precipitating and relieving factors, presence or absence of aggravation by breathing or motion of ribs and/or shoulders.
- Evaluation of cardiac risk factors
- Presence or absence of atherosclerosis by history and physical exam.

Diagnostic evaluations to include (conducted and treated by PCP):
- Laboratory evaluation to include CBC, Renal Panel, TSH, Lipid Panel, Hemoglobin
- Current EKG
- Referral for non-invasive testing, if indicated, to include:
  - Appropriate stress testing modality
  - Echocardiography, if murmur or left ventricular dysfunction suspected

Therapy:
- Treatment with Aspirin, beta-blockers, nitrates and ACE Inhibitors as indicated.
- Cardiology referral is appropriate at this point if the stress test is positive for ischemia.
- Referral **must** include copies of above-generated data, *except data previously generated by outside Cardiology group*.

Evaluation of Known Atherosclerosis:
- Routine follow up of patients with previous CABG, MI or PTCA or Stent >6 months old, if stable, is to be conducted by the PCP.
- PCP evaluation consists of:
  - Referral for appropriate stress test when indicated.
  - Yearly lipid panel.
- Therapy:
  - Treatment with Aspirin, beta-blockers, ACE-Inhibitors, nitrates and calcium channel blockers (patient's intolerant to beta-blockade) as indicated.
  - Treatment of lipids according to ACC/AHA guidelines (LDL <100mg/dl).
  - Treatment of hypertension according to JNC-8 guidelines (BP<140/90).
  - Cardiology referral is appropriate if clinical status changes.

Evaluation of Active Chest Pain:

Evaluation conducted by PCP reveals current symptoms with or without EKG changes (this is not an appropriate office-to-office outpatient referral).

- Diagnostic Evaluation
- Current EKG
- Therapy
  - Chest Pain (ongoing or resolved) with EKG changes
    - Arrange EMS transfer to Emergency Room.
    - Arrange for evaluation by HPN Hospitalist and/or covering cardiologist.
    - Protocol for starting medical regiment pending cardiology consultation to consist of Aspirin, Heparin, IV nitroglycerin, SL NTG, beta blocker as indicated. IIb/IIIa antagonists, clopidogrel or similar, and/or thrombolytics at discretion of consulting cardiologist.
    - CPK/MB every eight (8) hours, three (3) times, or Troponin I every eight (8) hours, three (3) times.
    - Appropriate Stress Testing if first two (2) CPK/B or Troponin I determinations are normal and chest pain has resolved or is considered low risk.

- TIMI Risk stratification by SMA or Network Hospitalists according to established protocol is to be conducted. Patients TIMI Risk Scored ≤ 2 may be discharged for 24 to 48 hour outpatient stress testing per established guidelines. TIMI Risk Score > 2 should be admitted.
- Cardiology referral is appropriate for cardiac evaluation.
- Cardiac Catheterization if high risk features (dynamic ECG changes, positive biomarkers, high risk non-invasive study).

- Chest pain (stable) with no EKG changes
  - Referral to Urgent Care (and/or ER) for work up and observation
  - Repeat EKG
  - Chest x-ray
  - CPK/MB or Troponin I every eight (8) hours, three (3) times.
  - If Bio Markers abnormal – arrange for admit to hospital – admit to HPN internist.
  - TIMI Risk stratification by SMA or Network Hospitalists according to established protocol is to be conducted. Patients TIMI Risk Scored ≤ 2 may be discharged for 24 to 48 hour outpatient stress testing per established guidelines. TIMI Risk Score > 2 should be admitted.
  - Therapeutic trial to include Aspirin, SL NTG, beta-blocker, ACE-Inhibitors and calcium channel blockers (patient's intolerant to beta-blockade) and/or nitrates as indicated.

Evaluation of Congestive Heart Failure Guidelines

Identification of patients with Congestive Heart Failure: the initial screening and diagnostic work up of patients suspected of having the syndrome of Congestive Heart Failure is to be performed by the patient's primary care physician (PCP). Cardiology consultation is to be obtained only after the screening and therapeutic measures below have been accomplished, if the diagnosis of Congestive Heart Failure is substantiated. (Telephone consultation is appropriate at any time with on-call Cardiologist.)

Evaluation for Congestive Heart Failure

Patients presenting to PCP with signs and symptoms of new onset CHF without prior history should be transferred via EMS for inpatient work-up.
Patients with history of congestive heart failure with suspected exacerbation should undergo initial screening by PCP as follows:
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 all extremities, presence or absence of peripheral edema. Document physical examination at every visit.
Diagnostic evaluation to include:

- EKG
- Referral for Echocardiography (to evaluate segmental wall motion abnormality, left ventricular dysfunction and/or valvular heart disease).
- Chest x-ray.
- Laboratory testing: T4, TSH, CBC, Chemistry Panel and Urinalysis. Digoxin level if indicated and BNP.
- Referral for Holter monitor if indicated.
- Referral for stress testing if indicated (ischemia suspected).
- Therapy
  - In patients with acute CHF exacerbation, stop all unnecessary medications and negative inotropes; i.e., diltiazem, verapamil.
  - Control blood pressure aggressively. ACE-Inhibitors and ARBs are first line therapy.
    - ACE inhibitors to be titrated to highest dose tolerable for cardiac afterload reduction.

- ➢ Diuretics to be utilized to control fluid overload ONLY. Carefully evaluate electrolyte renal function and hydralazine levels. Note fluid depletion, as ACE inhibitors decrease need for diuresis.
- ➢ Long acting nitrates if needed to further reduce afterload and preload.

NOTE: Laboratory evaluations to be obtained at least every six (6) months to include: Electrolytes, Renal Panel (BUN, Creatinine), obtained one (1) week and one (1) month after change in chronic dose of diuretic.

- ➢ Potassium supplements replacement therapy as indicated.

- Ensure that all patients have anatomic diagnosis for their congestive heart failure.
- Patient educational program to include dietary, exercise, risk factor modification, heart failure management and monitoring techniques to be done by PCP or referral to appropriate specialist, i.e., Dietician).

♦ Referral Guideline (to Cardiology)

Referral to SMA cardiology for patients with CHF exacerbation is appropriate if patient's symptoms are stable and oxygenation is appropriate.

- Patients with left ventricular dysfunction once evaluation has been completed as above and therapy with ACE inhibitors (if not contraindicated) is instituted. (Referral must include copies of all pertinent, generated data.)
- Patients with rest symptoms that may need immediate hospitalization and stabilization should be seen at Urgent Care Observation Unit or transferred to hospital via EMS.
- Referral of patients with normal left ventricular systolic function but abnormal diastolic function and hypertension and documented CHF is appropriate.
- Referral of patients without rest symptoms without work up as defined above is not appropriate.
- Referral of patients without documented CHF by methods above, normal left ventricular function and COPD is not appropriate.

Evaluation of Cardiac Dysrhythmias Guidelines

Identification of patients with Cardiac Arrhythmias: The initial screening and diagnostic work up of patients suspected of having the syndrome of Cardiac Arrhythmias is to be performed by the patient's primary care physician (PCP). Cardiology consultation is to be obtained only after the screening and therapeutic measures below have been accomplished, if the diagnosis of cardiac arrhythmias is substantiated. (Telephone consultation is appropriate at any time.)

Evaluation for Palpitations

♦ Individual screening of patients for initial complete history and physical to be completed by PCP.
- Near syncope episodes
- Syncope episodes
- Arrhythmia

Diagnostic evaluation to include:
- Medication review (AV nodal blocking agents, Beta agonists/sympathomimetics)
- Lifestyle Review (activity level, hydration status, caffeine intake, tobacco use, illicit drug use, stimulant or diet medication use, etc.)
- EKG
- Holter Monitor/Event Recorder
- CBC, Thyroid panel, Chemistry panel, Toxicology screen if suspected drug use
- Echocardiogram if EKG abnormal and/or murmurs heard
- Treadmill stress test if history of atherosclerosis.

- Therapy
  - Treatment of the positive treatable risk factors and/or symptomatology.
  - Cardiology referral is appropriate for malignant arrhythmias only. Referral is not warranted for benign arrhythmias or palpitations unassociated with symptomatology.
- Referral guideline (to Cardiology)
  - Patient with palpitation associated with syncopal episode and/or malignant arrhythmias is appropriate.
  - APCs do not warrant treatment or referral.
  - PVCs, whether unifocal or multifocal, couplets regardless of frequency in patients without atherosclerosis or left ventricular dysfunction (as defined by history, treadmill and/or echocardiography) are not generally treated and do not warrant referral.
  - If no arrhythmias are seen, referral is not warranted, nor is treatment.

Evaluation for Atrial Fibrillation

- Individual screening of patients for initial complete history and physical to be conducted by PCP.
- Diagnostic evaluation to include:
  - Chest x-ray
  - EKG
  - Echocardiogram
  - Thyroid Panel, Chemistry Panel
- Therapy
  - Treatment of contributable underlying disease states
  - Initiation of Beta-blocker or Channel Blocker to control rate.
  - Initiation of anticoagulation based on **CHA_2DS_2-VASc score**
    - No risk factors – Aspirin 81 to 325 mg daily
    - One risk factor – Aspirin 81 to 325 mg daily, warfarin (INR 2.0 to 3.0, target 2.5) or NOAC. If no contraindication exists.
    - More than 1 risk factor – warfarin (INR 2.0 to 3.0, target 2.5, but if mechanical valve target INR greater than 2.5 is goal) or NOAC
  - Cardiology referral is appropriate once evaluation has been completed as above and therapy initiated.
  - Referral **must** include copies of all pertinent, generated data at the time of referral.

Evaluation for Paroxysmal Supraventricular Tachycardia (SVT)

- Individual screening of patients for initial complete history and physical to be conducted by PCP.
- Diagnostic evaluation to include:
  - EKG and/or Holter monitor/Event Recorder with documented arrhythmia
  - Echocardiogram
  - Thyroid Panel, Chemistry Panel, Medication/Supplement review
  - Referral for treadmill stress test if coronary risk factors present, or if patient complains of exercise-induced arrhythmias.
- Therapy
  - Treatment of contributable underlying disease states.
  - Initiation of calcium channel blockers (Verapamil or Diltiazem) or beta-blockers.
  - Cardiology referral is appropriate once evaluation has been completed as above and therapy initiated.
  - Referral **must** include copies of all pertinent, generated data at the time of referral.
    Referral Guidelines (to Cardiology)
  - Cardiology referral is appropriate when:
    - Recurrent episodes occur after treatment

- Pre-excitation is present on EKG (refer prior to initiation of therapy).
- Left ventricular dysfunction is present.

Referral **must** include copies of all pertinent, generated data at the time of referral.

Evaluation for Atrial Flutter

- Individual screening of patients for initial complete history and physical to be conducted by PCP.
- Diagnostic evaluation to include:
  - Chest x -ray
  - EKG and/or Holter monitor/Event Recorder documenting pre-excitation or arrhythmia
  - Echocardiogram
  - Thyroid Panel, Chemistry Panel
- Therapy
  - Treatment of contributable underlying disease states.
  - Initiation of Beta-Blockers or Ca 2+ Channel Blockers to Control Rate (refer pre-excitation to cardiology prior to initiating therapy if symptoms are minor)
  - Cardiology referral is appropriate once evaluation has been completed as above and therapy initiated.
  - Referral **must** include copies of all pertinent, generated data at the time of referral.

Evaluation for Ventricular Tachycardia

- Patients found in Ventricular Tachycardia need Hospitalization and cardiology consultation as inpatients.
- Individual screening of patients for initial complete history and physical to be conducted by ER physician once patient stabilized.
- Diagnostic evaluation to include:
  - EKG
  - Echocardiogram
  - Thyroid Panel, Chemistry Panel
  - Appropriate stress testing or angiography depending on presentation.
- Therapy
  - Treatment of contributable underlying disease states (revascularization if ischemic, correction of metabolic derangements, etc.)
  - Outpatient referral (after inpatient treatment and stabilization) must include copies of all pertinent, generated data at the time of referral.

Evaluation for Heart Block

- Individual screening of patients for initial complete history and physical to be conducted by PCP.
- Diagnostic evaluation to include:
  - EKG and/or Holter/Event Recorder monitor documenting arrhythmia
  - Medication list
  - Referral for Echocardiogram.
  - Thyroid Panel, Chemistry Panel.
- Therapy
  - First (1^{st}) Degree Heart Block
    - Asymptomatic 1^{st} degree block does not require treatment or consultation.
  - Second (2^{nd}) Degree Heart Block
    - Discontinue contributing medications if possible: Digoxin, verapamil, diltiazem, nifedipine, beta-blockers.

- Cardiology referral is appropriate if discontinuation of contributing medication does not correct problem.

- Referral **must** include copies of pertinent, generated data relevant to evaluation.
- Third (3rd) Degree Heart Block Referral
  - Discontinue contributing medications if possible: Digoxin, verapamil, diltiazem, nifedipine, beta-blockers.
  - If patient is symptomatic (syncope, lightheadedness, low blood pressure) immediate EMS transfer to the ER is appropriate.
  - Arrange admit to hospital.
  - Arrange for evaluation by covering cardiologist.
  - Permanent pacemaker insertion.
  - Cardiology referral for follow-up is appropriate.

Evaluation for Right Bundle Branch Block (Complete)

- Individual screening of patients for initial complete history and physical to be conducted by Primary Care Physician (PCP). Initial evaluation consists of the following:
  - Evaluation of coronary risk factors
  - History of pulmonary disease
  - History of congenital heart disease
  - Examination of neck veins, lungs, cardiac examination to include presence or absence of murmurs.
  - Abdominal examination including liver size.
  - Evaluation of extremities including pedal pulses and presence or absence of edema.
- Diagnostic evaluation to include:
  - EKG
  - Chest x-ray
  - Referral for Echocardiogram
  - Referral for treadmill stress test if ischemia is suspected.
- Referral Guidelines
  - Cardiology referral warranted if atrial septal defect or positive treadmill for ischemia found.
  - Referral **must** include copies of all pertinent, generated data with referral, *except data previously generated by CCN.*

Evaluation of Left Bundle Branch Block

- Individual screening of patients for initial complete history and physical to be conducted by PCP. Initial evaluation consists of the following:
  - Evaluation of coronary risk factors.
  - History of pulmonary disease.
  - History of congenital heart disease
  - Examination of neck veins, lungs, cardiac examination to include presence or absence of murmurs.
  - Abdominal examination including liver size.
  - Evaluation of extremities including pedal pulses and presence or absence of edema.
- Diagnostic evaluation to include:
  - EKG
  - Chest x-ray
  - Referral for Echocardiogram
  - Referral for Persantine Cardiolite if ischemia is suspected.
- Referral guidelines (Cardiology)

- Cardiology referral warranted if left ventricular ejection fraction <45% or if ischemia diagnosed by non-invasive testing.
- Referral **must** include copies of all pertinent, generated data with referral. .
- **Patients presenting with chest pain and new LBBB should be treated as acute MI until proven otherwise. Transfer of patients with ongoing chest pain and new LBBB via EMS to ER is appropriate.**