Washington DC VAMC Heart Failure Program H2H Initiative

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DC VAMC HF Program

- Inpatient Rounding – Daily
  - Attending, NP, Residents, students
  - Meet with each inpatient medicine team
- HF education- HF NP's, nursing staff - NEW
- Outpatient Clinic
- HF Education Class - NEW

VSSC DATA DC VAMC

FY 10 Q4

Unique Heart Failure Patients Not Receiving Palliative Care (Measure Population)	Total	VA Admissions for Heart Failure		Heart Failure Patients Readmitted (All Cause) within 30 Days of Discharge		Heart Failure Patients Deceased in the Past Year		Heart Failure Patients Deceased within 30 Days of Admission	
VHA	211,186	16,646	7.9%	4,072	24.5%	19,380	9.2%	700	4.2%
V05	4,335	470	10.8%	116	24.7%	391	9%	16	3.4%
(V05) (688) Washington, DC	1,289	184	14.3%	38	20.7%	121	9.4%	5	2.7%

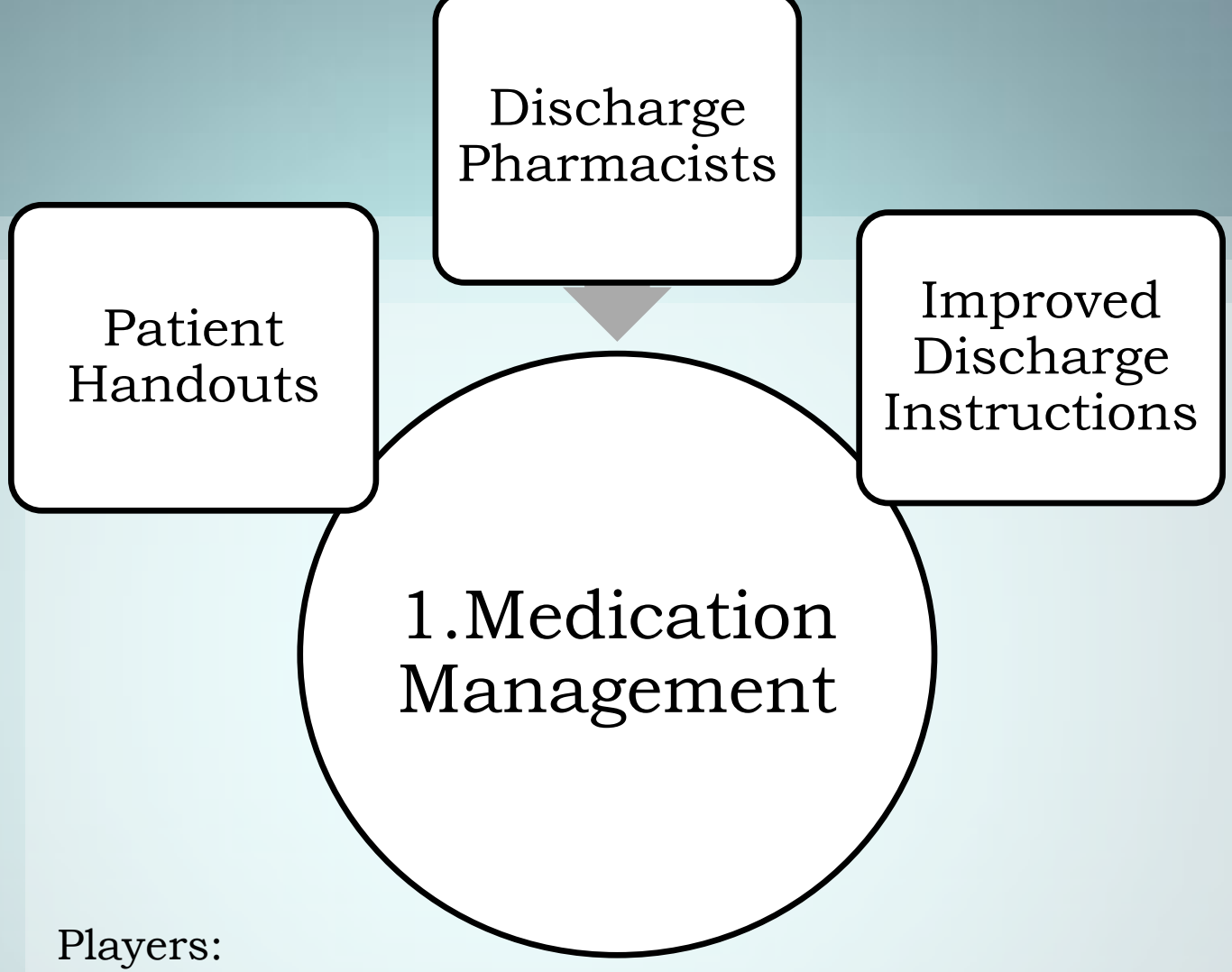
FY 11 Q2

Unique Heart Failure Patients Not Receiving Palliative Care (Measure Population)	Total	VA Admissions for Heart Failure		Heart Failure Patients Readmitted (All Cause) within 30 Days of Discharge		Heart Failure Patients Deceased in the Past Year		Heart Failure Patients Deceased within 30 Days of Admission	
VHA	212,088	16,636	7.8%	3,959	23.8%	18,874	8.9%	646	3.9%
V05	4,241	457	10.8%	110	24.1%	362	8.5%	14	3.1%
(V05) (688) Washington, DC	1,254	187	14.9%	39	20.9%	108	8.6%	5	2.7%

3 Question Framework

- **Medication Management Post-Discharge:** Is the patient familiar and competent with his or her medications and is there access to them?
- **Early Follow-Up:** Does the patient have a follow up appointment scheduled within a week of discharge and is he or she able to get there?
- **Symptom Management:** Does the patient fully comprehend the signs and symptoms that require medical attention and whom to contact if they occur?

Question 1



Players:

1. Hospitalists
2. Resident Teams
3. Case Management
4. Heart Failure Team

Inpatient Education

Name: _____ Date: _____

Congestive Heart Failure

You have congestive heart failure. Please follow these instructions:

1. You have an appointment at the CHF clinic on _____
2. Please weigh yourself at the same time every day. Keep a record/log of your daily weight. Bring this record to your next doctor's appointment.
3. Stay as active as possible. Increase activities gradually, making sure not to become too tired or short of breath.
4. Do not add salt to cooking or meals. Follow prescribed diet as discussed with dietitian.
5. Call the Medical Advice Line if:
   - —Your slippers/shoes become too tight.
   - —You have a 3-pound weight gain over ONE day or 5 pounds over ONE week.
   - —Become short of breath after walking a short distance.
   - —Frequently become light-headed or dizzy.
   - —Need to use more pillows to sleep or breathe.
   - Have abdominal (belly) swelling.
   - —Lack appetite

Your New York Heart Classification (NYHA) for CHF is:

- □ Class I: no limitation of activities; you suffer no symptoms from ordinary activities.
- □ Class II: Slight, mild limitation of activity; you are comfortable with rest or with mild exertion.
- □ Class III: marked limitation of activity; you are comfortable only at rest.
- □ Class IV: Should be at complete rest, confined to bed or chair; any physical activity brings on discomfort and symptoms occur at rest.

American Heart Association
Fighting Heart Disease and Stroke

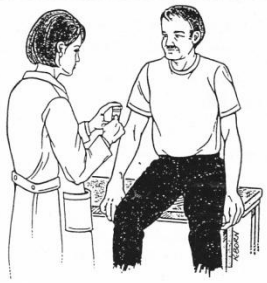
What Is Congestive Heart Failure?

If you have congestive (kun-JES-tiv) heart failure, you're not alone. Some 2-3 million Americans are living with it today. In fact, it's one of the most common reasons people 65 and older go into the hospital. It can take years for heart failure to develop, so if you don't yet have it but are at risk for it, you should make lifestyle changes now to prevent it!

Does your heart stop?

When you have heart failure, it doesn't mean that your heart has stopped beating. It means that your heart isn't pumping blood as it should. The heart keeps working, but the body's need for blood and oxygen isn't being met.

Heart failure can get worse if it's not treated. It's very important to do what your doctor tells you to do. When you make healthy changes, you can feel a lot better and enjoy life much more!



If you have heart failure, one of the most important things you can do is follow doctor's orders. That means taking your medicine, eating right and keeping track of your weight.

What can happen?

- Heart does not pump enough blood.
- Blood backs up in veins.
- Fluid builds up, causing swelling in feet, ankles and legs. This is called "edema" (eh-DEEM-uh).
- Body holds too much fluid.
- Fluid builds up in lungs, called "pulmonary congestion" (PUL-mon-ar-ee kon-JEST-chon).
- Body does not get enough blood, food and oxygen.

What are the signs?

- Shortness of breath, especially when lying down
- Tired, run-down feeling
- Swelling in feet, ankles and legs
- Weight gain from fluid buildup
- Confusion or can't think clearly

Inpatient Education

Registered Dietitians
Department of Veterans Affairs

High Salt/Sodium Foods to Avoid

Some foods have too much salt…


Ham


Bacon


Cold Cuts (Bologna & Salami)


Hot Dogs & Sausages


Cheese


Fast Foods


Sardines

Nutrition & Food Service - VAMC Washington DC – 2009


Waffles & Pancakes

(frozen or mix)


Canned Soup & Vegetables


Frozen Dinners & TV Dinners

Pickles, Olives & Relish

Salted Chips, Pretzels, Nuts & Popcorn

Salted Crackers


Biscuits

Ketchup

Page 2

Provider Education

Preventing Hospital Readmission

Decompensated Heart Failure: Goals of Treatment

- Early improvement of symptoms
- Early hemodynamic improvement
- **Effective** removal of fluids
- Renal protection
- Early discharge
- Reduced rehospitalizations
- Reduced early and late mortality

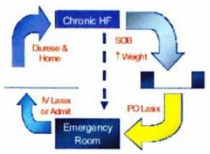
REMEMBER: 50% PATIENTS ARE DISCHARGED WITH WT GAIN OR LITTLE TO NO WT LOSS. BE SURE TO ADEQUATELY DIURESE!

Inpatient HF Performance Measures

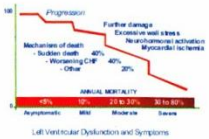
- Discharge Instructions:
  - Address activity level, diet, discharge medications, follow-up appointment, weight monitoring and what to do if symptoms worsen
- Evaluation of LV function:
  - Documentation that LV function was assessed before arrival, during stay or is planned after discharge
- ACEI/ARB :
  - Patients with LV systolic dysfunction and without both ACE inhibitor and ARB contraindication are prescribed ACEI or ARB at time of discharge
- Tobacco cessation counseling:
  - Patients with a history of smoking are given counceling during hospital stay

Be sure to document completely. Complete Discharge Note A and B prior to discharge

The Vicious Cycle of Heart Failure Management



Heart Failure Progression and Mortality



Causes of Readmission

- 24% Medication non-compliance
- 24% Diet non-compliance
- 16% Inappropriate therapy
- 19% Failure to seek care
- 17% Other

2/3 READMISSIONS PREVENTABLE!!

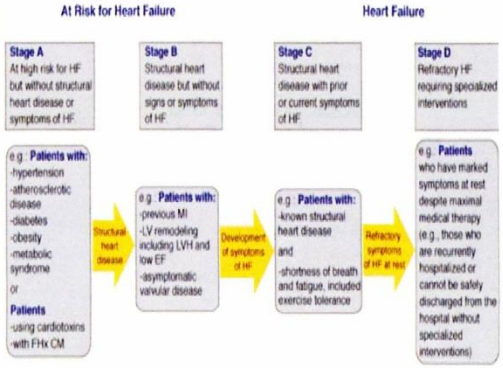
Drugs that worsen HF

- NSAID's: May cause sodium retention, peripheral vasoconstriction and renal failure and decrease effectiveness of ACEI and diuretics
- Prednisone: Can increase BP and cause edema.
- Calcium channel blockers: May worsen HF, with exception of amplodipine.
- TZD's
- Some decongestants: Can increase BP. Patients should avoid antihistamines with a "D".

Heart Failure Essentials

Definition: A complex clinical syndrome in which the heart is incapable of maintaining a cardiac output adequate to accommodate metabolic requirements and the venous return.

Stages in the Development of Heart Failure



New York Heart Association Functional Classification

Class I: No symptoms with ordinary activity

Class II: Slight limitation of physical activity. Comfortable at rest, but ordinary physical activity results in fatigue, palpitation, dyspnea, or angina

Class III: Marked limitation of physical activity. Comfortable at rest, but less than ordinary physical activity results in fatigue, palpitation, dyspnea, or anginal pain

Class IV: Unable to carry out any physical activity without discomfort. Symptoms of cardiac insufficiency may be present even at rest

Diagnosis of Heart Failure

Evaluation of the Cause of Heart Failure: The History

History to include inquiry regarding:

- Hypertension
- Diabetes
- Dyslipidemia
- Valvular heart disease
- Coronary or peripheral vascular disease
- Myopathy
- Rheumatic fever
- Mediastinal irradiation
- History or symptoms of sleep-disordered breathing
- Exposure to cardiotoxic agents
- Current and past alcohol consumption
- Smoking
- Collagen vascular disease
- Exposure to sexually transmitted diseases
- Thyroid disorder
- Pheochromocytoma
- Obesity

Family history to include inquiry regarding:

- Predisposition to atherosclerotic disease (Hx of MIs, strokes, PAD)
- Sudden cardiac death
- Myopathy
- Conduction system disease (need for pacemaker)
- Tachyarrhythmias
- Cardiomyopathy (unexplained HF)

Methods Used in the Diagnosis of Heart Failure

- Electrocardiogram; Please be sure current EKG in CPRS
- Chest x-ray
- Echocardiogram: Within 1 year
- Labs to include:
  - BNP, Chem, CBC, urinalysis, lipids, BUN, creat, LFTs
- Consider :
  - Thyroid studies, ferritin

BNP < 100 HF unlikely
BNP >100 but < 500 use of clinical judgement
BNP > 500 HF likely

Diagnosis of Congestive Heart Failure: Clinical Challenge

- Symptoms and signs of heart failure, like shortness of breath and edema, have a broad differential diagnosis
- Physical exam is neither sensitive nor specific for CHF and, even in good hands, there are often errors
- Chest X-ray findings have limited accuracy for CHF
- One-third to one-half of patients with CHF have normal systolic function

Medications for Heart Failure

Treatment Approach for the Patient with Heart Failure

Stage A	Stage B	Stage C	Stage D
At high risk, no structural disease	Structural heart disease, no sx's	Structural heart disease with prior/current symptoms of HF	Refractory HF requiring specialized interventions
Goals • Treat HTN • Tobacco cessation • Treat lipids • Regular exercise • Discourage etoh and drugs • Control metabolic syndrome **Drugs** ACEI or ARB in appropriate patients	**Goals** • All measures under Stage A **Drugs** • ACEI or ARB in appropriate patients • Beta-blockers in appropriate patients **Devices in selected patients** • ICD's	**Goals** • All measures under Stage A and B **Drugs for routine use** • Diuretics for fluid retention • ACEI/ARB • Beta-blockers **Drugs in selected patients** • Aldosterone inhibitor • Digitalis • Hydralizine/nitrate **Devices** • ICD • BiV Pace	**Goals** • Appropriate measures under Stage A ,B , C • Decisions re: appropriate level of care **Options** • Compassionate end-of-life care/hospice • Extraordinary measures - transplant - chronic inotropes - permanent mechanical support - experimental treatment

ACE Inhibitors/ARB's

- ALL patients with EF =40% should receive ACEI or ARB, unless contraindicated.
- Use cautiously in chronic renal failure
- Begin at low dose and anticipate need for uptitration.

Suggested Dosing:

Agent	Initial	Target
Lisinopril	2.5-5mg QD	20-40mg QD
Fosinopril	5-10mg QD	40mg QD
Enalapril	2.5mg BID	10-20mg BID
Captopril	6.25mg TID	50mg TID
Valsartan	40-80mg QD	160mg BID

Clinical Trials:
SOLVD, SAVE, CONSENSUS, HOPE, CHARM, Val-HeFT

Beta-Blockers

- Do not initiate until less congested .
- Start low; go slow.
- Anticipate uptitration as outpatient.
- Consider bisprolol in reactive airway disease, more cardioselective
- Patients may feel worse before they feel better.

- Suggested Dosing

Agent	Initial	Target
Carvedilol	3.125mg BID	25mg BID
Metoprolol SA	12.5mg QD	200mg QD
Bisoprolol	1.25mg QD	10mg QD

Clinical Trials: MERIT-HF, US Carvedilol Trial, COPERNICUS, CIBIS-II

Diuretics in CHF

- **Loop Diuretics:** First line (furosemide, bumetanide, torsemide, and ethacrynic acid)
- Possible sulfa allergy to all but ethacrynic acid
- IV administrations ensures absorption (**oral lasix is about 50% bioavailable**)
- Offer no mortality benefit in heart failure, only used for **symptom control**
- **Thiazide Diuretics:** Supplement loop diuretics. Typically given 30 min prior to loop diuretic.
- Thiazides should be used to manage HTN.

Suggested Dosing

Agent	Minimum	Maximum
Furosemide	40mg BID	240mg/day
Bumetanide	1-2mg BID	8mg/day
Torsemide	10mg BID	100mg/day
Metolazone	2.5mg po QD or BID	10mg/day
HCTZ	12.5mg QD	100mg/day

Aldosterone Antagonists

- Generally well-tolerated
- Shown to reduce heart failure-related morbidity and mortality
- Generally reserved for patients with NYHA III-IV HF
- Side effects include hyperkalemia and gynecomastia.

Suggested Dosing

Agent	Initial	Target
Spironolactone	12.5-25mg QD	100mg/day
Eplerenone	25mg QD	50mg QD

Potassium and creatinine levels should be closely monitored, especially in elderly.

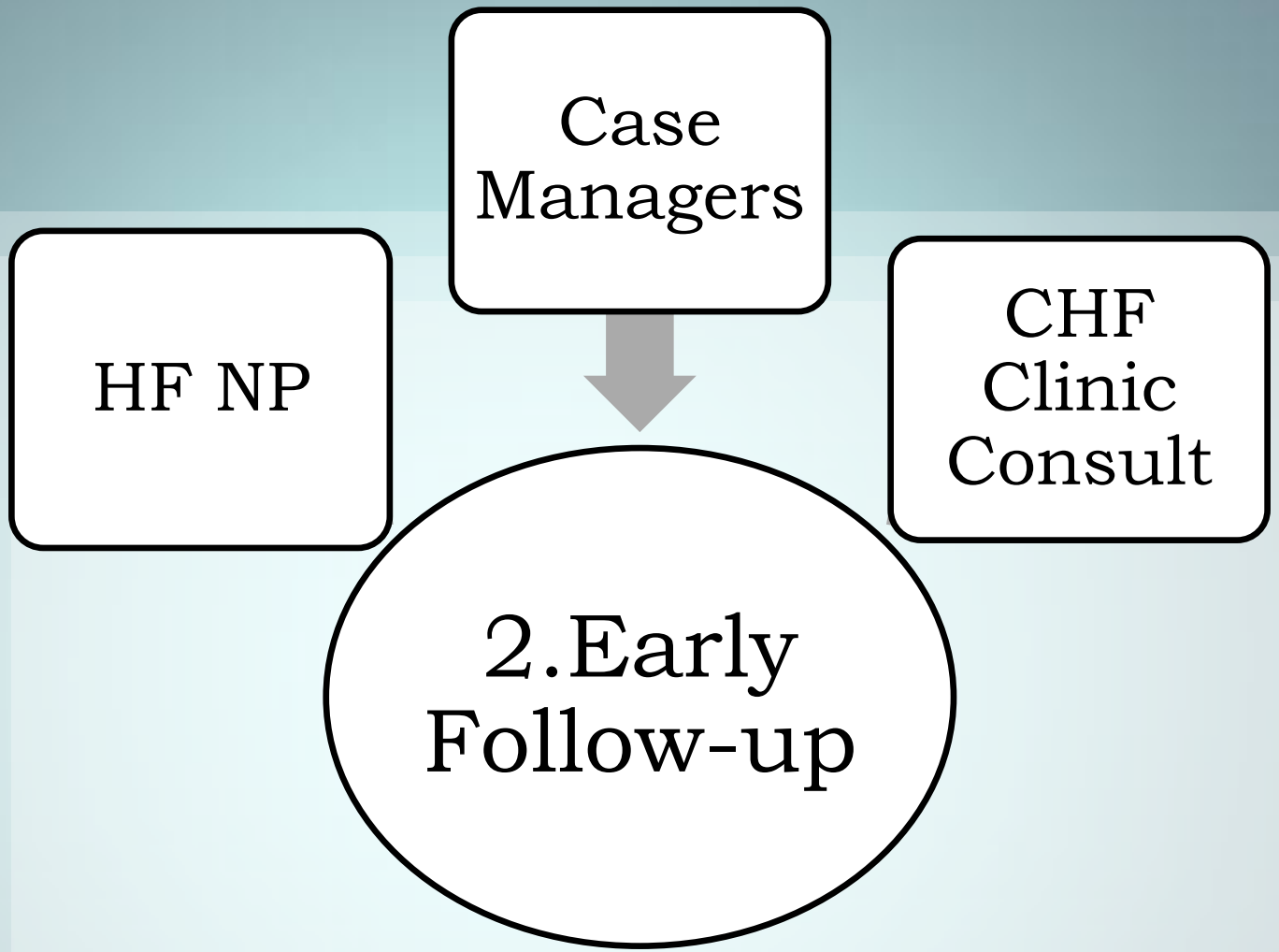
Vasodilators: ISDN/Hydralizine

- Generally well-tolerated. Do not produce hypotension in themselves. Low BP often indicative of hypovolemia.
- Shown to reduce heart failure-related morbidity and mortality , especially in African Americans.
- Concomitant use of sildenafil, vardenafil could result in symptomatic hypotension.

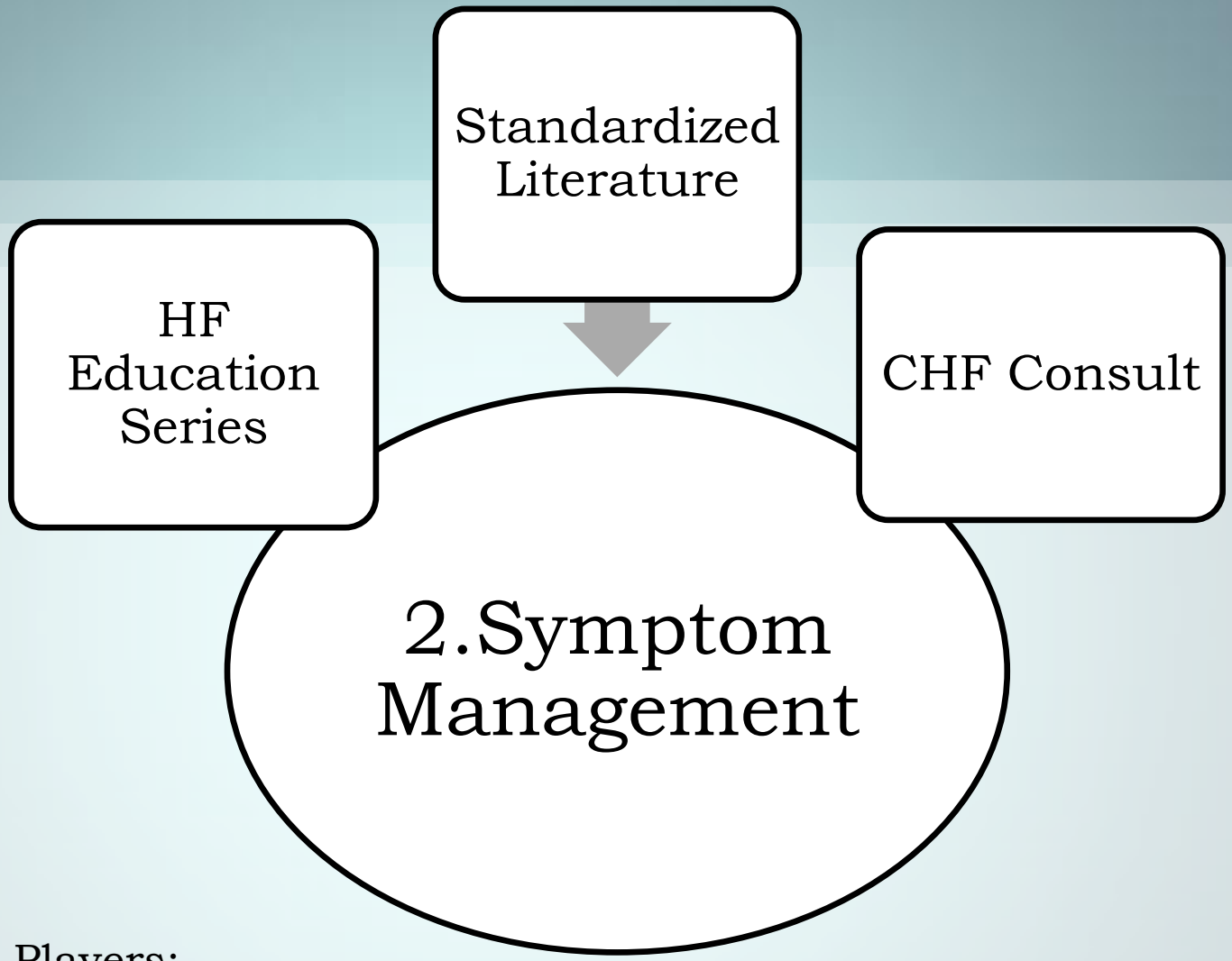
Suggested Dosing

Agent	Initial	Target
Isosorbide Dinitrate	20mg TID	40mg TID
Hydralizine	25mg TID	75mg TID

Question 2



Question 3

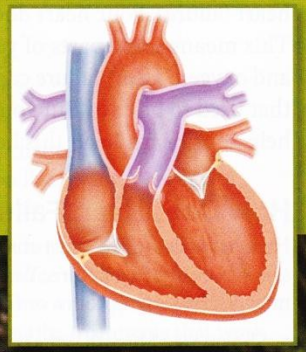


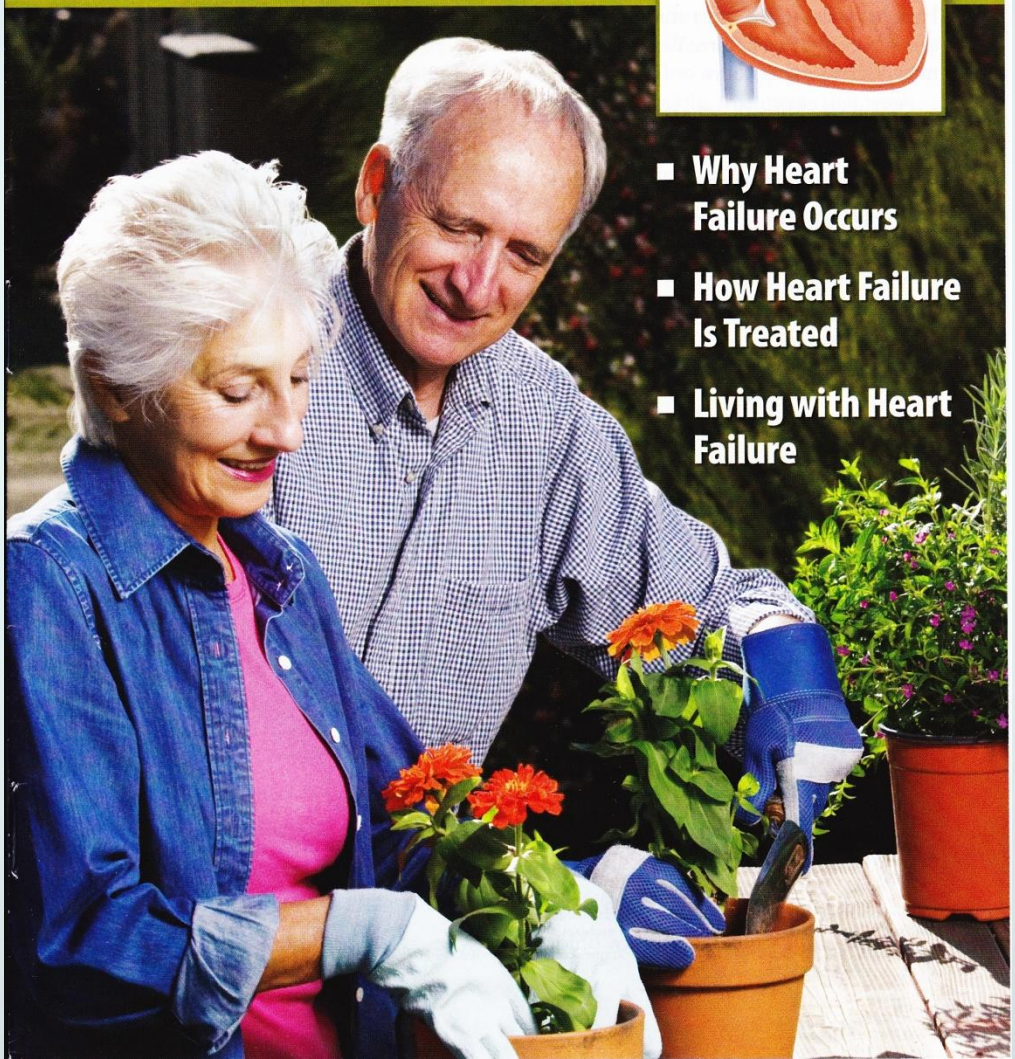
Players:

1. Hospitalists
2. Nursing staff
3. Case Management
4. Heart Failure Team

KRAMES
PATIENT EDUCATION

Understanding Heart Failure





- Why Heart Failure Occurs
- How Heart Failure Is Treated
- Living with Heart Failure

Outpatient Education

Patient Flyers

Living With Heart Failure: Your Keys to Success

*If you have been told that you have **Congestive Heart Failure**, please join us for an informative series of classes to learn about Heart Failure and how to take better care of yourself. Self-care is the **key** to improving the health of heart failure patients. Family and friends welcome to attend.*

Tuesdays 11 a.m. Room 1C117

Cardiac Rehabilitation

Topics to include:

Week 1 – Taking Control of Heart Failure - Overview
Week 2 - Low Sodium Diet for Heart Failure
Week 3 – Medications for Heart Failure
Week 4 – Balancing rest and Activity

By attending you will receive a free Heart Failure Kit. Classes start August 24th, 2010!

See your primary care provider for a referral to the class. Or, call Ms. Reece, Cardiology NP at 202-745-8000 ext 7583 with questions.

Provider Flyers

Living With Heart Failure: Your Keys to Success

What is it? This is a series of informative, interactive classes for patients with heart failure, developed by Ms. Gannuscio and Ms. Reece and taught by Ms. Reece, NP, dietician and cardiac rehab nursing staff.

Who should attend? All patients diagnosed with heart failure in need of education, especially poor social supports, med compliance issues, repeated hospitalizations, brand new diagnosis.

When and where? Tuesdays 11 a.m. Room 1C117, Cardiac Rehabilitation

Topics to include:

Week 1 – Taking Control of Heart Failure - Overview
Week 2 - Low Sodium Diet for Heart Failure
Week 3 – Medications for Heart Failure
Week 4 – Balancing rest and Activity

How to refer? Complete Card Heart Failure Consult Request. In box "Specific question to be addressed by the consult" type in **Enroll in Living with Heart Failure Education Classes**, or call Ms. Reece ext 7582 or Ms. Gannuscio ext 7297

All enrolled patients will receive a **Heart Failure Kit** that includes printed material in addition to scale, BP cuff and pill box if they do not already have one.

Opportunities

- Increased awareness for staff
- Opportunities to collaborate
- VSSC readmission flat
- ER admits
- Ensuring appointments for CHF Clinic
- Increasing participation in HF Education Classess