

# Heart Failure Patient Education and Symptom Management

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# HFSA Guidelines (2006)

- 8.1 Patients with HF and their family members/caregivers should receive individualized education and counseling that emphasizes self care (Strength of Evidence = B)

# CMS Guidelines for Inpatient HF Education (prior to Discharge)

- Diet instruction
- Activity instruction
- Medication instruction
- Importance of daily weight monitoring
- Smoking cessation
- Recognition of signs and symptoms of HF and knowledge of what to do

# ACC/AHA Guidelines for HF Education (outpatient)

- Wt monitoring
- Diet
- Symptom management
- Physical Activity
- Smoking Cessation
- Medication instruction
- Avoiding/Minimizing NSAIDS
- **Referral to telemedicine, home care, or HF disease management program**

# HFSA Guidelines for HF Education (outpatient)

- Definition of HF/Cause of pt's HF
- Treatment of HF
- How to recognize symptoms
- Education on Medications
- Risk Factor modification
  - Smoking cessation
  - **Patient's target BP**
  - **Maintenance of normal HGA1C**
- Diet Recommendations
- Activity/Exercise
- **Importance of treatment adherence and behavioral strategies to promote adherence**

# Signs and symptoms of heart failure

- The patient will be able to recognize the signs and symptoms of HF and will know when it is appropriate to call their provider
  - Fluid retention with weight gain
  - Shortness of breath-at rest, with activity, lying flat
  - Waking up breathless at night
  - Fatigue and loss of energy
  - Swelling of feet, legs, or abdomen
  - Dizziness or fainting
  - Change in appetite/Early satiety/Abdominal bloating
  - Frequent coughing

# Dyspnea

## (shortness of breath)

- PND/orthopnea-screen for sleep apnea, COPD ,examine for elevated filling pressures (volume overload)
- Rales/crackles in bases-not common in chronic patients, consider, pulm fibrosis
- Egophony in bases-pleural effusion

# Persistent coughing or wheezing

- Treat heart failure first
- exclude acid reflux, post nasal drip, COPD exacerbation/asthma as causes
- May produce white or pink blood-tinged mucus (post nasal drip/sinus congestion can also be a side effect of vasodilators-ACE/BB/hydralazine/nitrates).
- ACE –cough is dry hacking, happens day and night
  - Treat HF
  - Consider lowering dose (cough threshold)
  - switch them to an ARB

# EDEMA

- Buildup of excess fluid in body tissues (edema)
  - Can happen with calcium channel blockers (nondihydropyridines-Diltiazem/Verapamil contraindicated)
  - Dihydropyridines-amlodipine, felodipine-okay with HTN but still have LE edema
  - Steroids, nsaid, gabapentin, tramadol
- Feet, ankles, legs, scrotum and abdomen with weight gain.
- Can happen with third spacing (low albumin)-however, they are vascularly depleted

# Fatigue

- The body diverts blood away the limbs to keep blood flowing to the brain and heart so they fatigue easier

# Sleep apnea

- Occurs in up to 50% of patients with heart failure
- Untreated causes elevated BP's/difficult to treat htn and heart filling pressures making hf symptoms worse
- Apnea/hypopnea index  $> 5$ /hr and symptoms of OSA/CSA:
  - Wake up feeling unrested
  - Daytime somnolence/catnapping
  - Breathing cessation during sleep
  - Excessive snoring
  - Nocturia
  - Restless sleep

# Abdominal symptoms

- The digestive system receives less blood due to HF
- Hepatic congestion with ascites can decrease/alter absorption of medications
- Also have decreased parasympathetic activity (due to increased SNS)
  - indigestion
  - abdominal bloating
  - nausea
  - early satiety
  - loss of appetite (can mean dehydration often times)

# Confusion

- Decreased perfusion to the brain
  - low bp
  - volume depletion
  - severe heart failure
  - Hyponatremia (due to volume overload and/or an activated RAAS) or volume depletion from overdiuresis

# Tachycardia

- Increased heart rate (revved up SNS and RAAS)
- Extrasystolic beats (ectopy)
- Cardiac arrhythmias –SVT, afib, aflutter, PVC's, VT, V-fib come from dilated unstable chambers of the heart
- Beta Blockers and ACE/ARB's stabilized heart chambers, reverse remodeling of the heart chambers and thus decrease risk for SCA by deactivating the SNS and RAAS

# Diuretic Resistance

- Furosemide less bioavailable than torsemide and is shorter acting
- Switch to bumetanide or torsemide
- Treat hypokalemia (consider aldactone)
- Avoid dietary salt (increases aldosterone levels)
- Find their threshold

# Additional HF education bullets

- Avoid grapefruit and grapefruit juice
- What about discussion regarding devices/ need for device in the future and what to do at end of life?
- Hold diuretics and ACE/ARB on days you have vomiting and/or diarrhea

# Adherence Defined

“The extent to which a person’s behavior – taking medication, following a diet, and/or executing lifestyle changes corresponds with agreed recommendations from a health care provider.”

Sabate E, ed. *Adherence to long-term therapies: evidence for action*. Geneva, World Health Organization, 2003. Represents a merged version of Haynes, 1979 Rand, 1993

# Major Predictors of Poor Adherence

- Presence of psychological problems, especially depression
- Cognitive impairment
- Treatment of asymptomatic disease
- Inadequate f/u or discharge planning
- Side effects of treatment
- Patient's lack of belief in benefit of tx
- Patient's lack of insight into illness
- Poor provider-patient relationship
- Presence of barriers to care
- Missed appointments
- Complexity of treatment
- Cost of treatment/copayment/both

# Are they really non-adherent?

- or are WE failing to teach, reinforce, individualize the treatment plan according to their personal goals, expectations, beliefs and lifestyle?
- Too quick to “label the patient”
  - what if they are illiterate
  - what if they cannot understand what you are saying
  - Complex regimens are confusing
- Did we work on mutual goal-setting or are we just telling them what they ought to be doing?

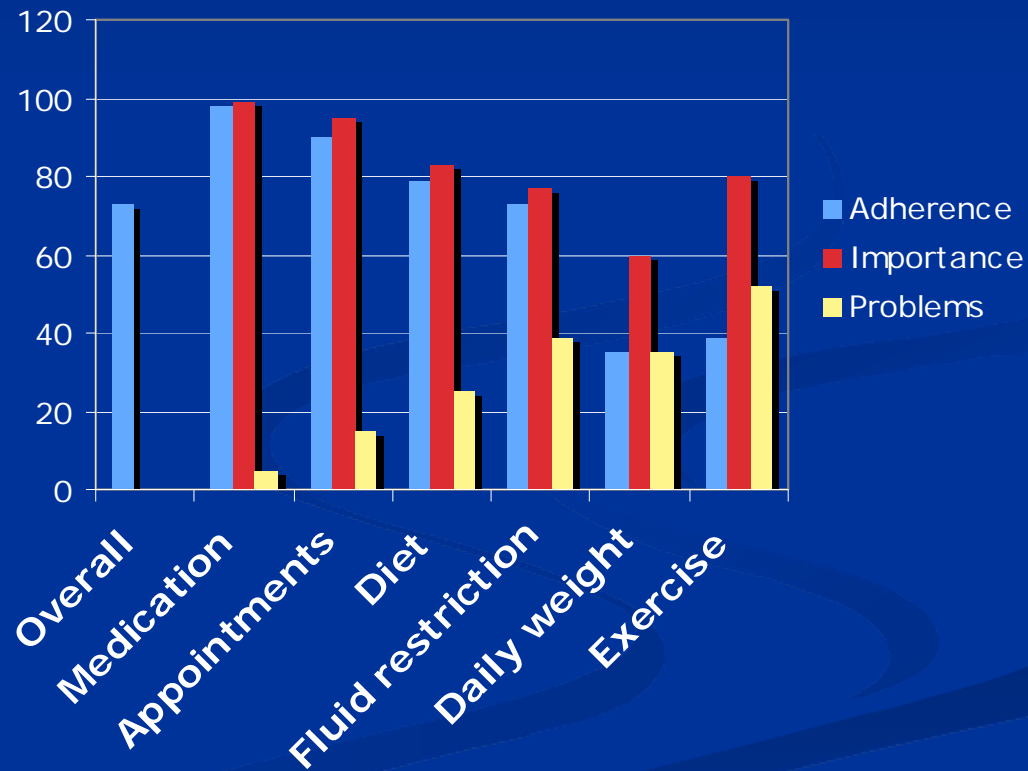
# ASK YOUR PATIENT about ADHERENCE and their PERCEPTIONS

- Ask patient's about adherence and ask them about their perceptions
  - Are you finding it difficult to weigh yourself daily or follow a low sodium diet?
  - Do you know why we ask you to weigh yourself daily?
  - How many times did you miss your medications this week?
    - MEDICATION RECONCILIATION
  - When is the last time you used cocaine?
  - How many alcoholic drinks would you say you have had over the past week?
  - How many cigarettes do you smoke a day?
  - Do you know why sodium is so bad for you?

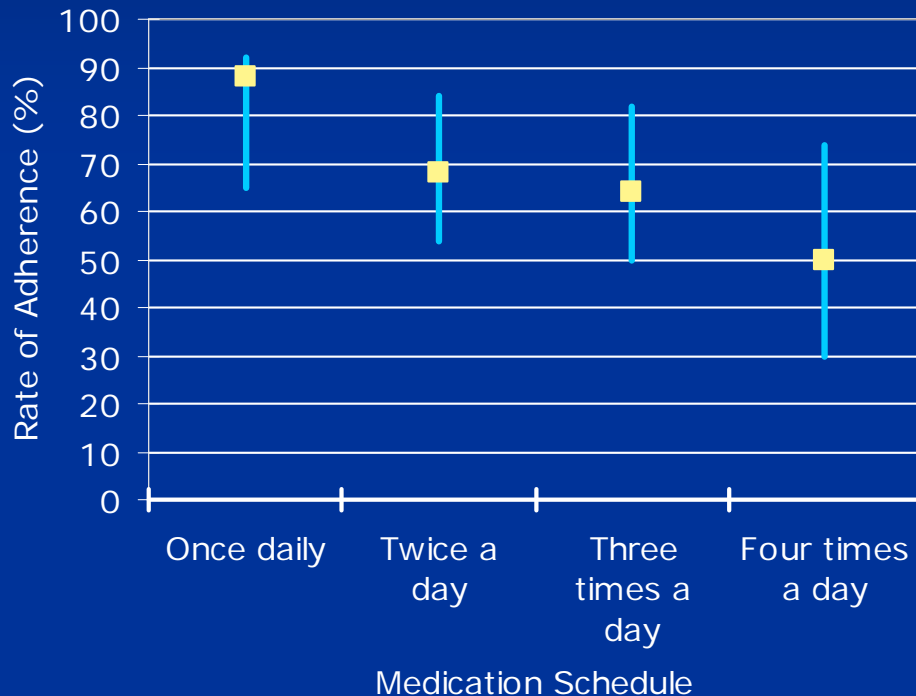
# Strategies for Improving Adherence

## ■ Examine health beliefs

- Assess risk perception
- Reinforce benefits of treatment
- Provide opportunities for increased self-efficacy
- Assist in overcoming barriers



# Strategies for Improving Adherence



## ■ Simplify the Regimen

- Utilize a pill box
- Improve dosing schedules
- Identify cues to remind patient to take medication (alarm, family)
- Consider patient's lifestyle

# Strategies for Improving Adherence

## ■ Improve Communication

- Limit instructions to 2 or 3 major points during each discussion
- Use simple, everyday language especially when explaining diagnosis and giving instructions
- Strongest predictor of patient trust in the healthcare provider is the provider's communication style
  - Active listening
  - Provision of clear, thorough information
  - Shared decision making
  - Adequate time for questions

# Strategies for Improving Adherence

- Impart knowledge and self-management skills
  - Review important aspects of self-management (e.g. sodium restriction, daily weights)
  - Ensure that patients know what to do if symptoms worsen and who to call
  - Involve patient's family/friends/social support
  - Provide tools (e.g. weight log, medication list)
  - Supplement oral teaching with written materials and instructions
  - Reinforce concepts discussed

# Strategies for Improving Adherence

## ■ Eliminate Bias

- Early focus on demographic characteristics and adherence has demonstrated no clear relationship between adherence and:
  - Race
  - Sex
  - Educational experience
  - Intelligence
  - Marital status
  - Occupation status
  - Income
  - Ethnic/cultural background

# Strategies for Improving Adherence

- Utilize a multidisciplinary team
  - Shared medical clinics
  - Pharm.D's, Psychologists, Nutritionist, Exercise physiologists
  - Improves adherence
  - Results in greater satisfaction for providers

# Assessing self-care

- Assess patient comprehension of self-care instructions
  - Have patients explain their role in self-care
- Assess adherence of self-care instructions
  - Have patients describe self-care plan
  - Have patients bring fluid, food, medication, activity, BP/P logs to visits
  - Check adherence and response to treatment using telephone or home visits

# Monitoring daily weights



- All HF patients should have scales
- Emphasize that **NOT ALL SCALES ARE ALIKE** and they should base weight changes on their home scale only
- Concept of maintaining dry (euvolemic) weight
- Teach patient about dry wt zone
- Teach PRN use of diuretics to those who are adherent and stable

# HFSA Recommended Components of a HF Disease Management Program

- Comprehensive education and counseling individualized to patient needs
- Promotion of self care, including self-adjustment of diuretic therapy in appropriate patients (or with family member/caregiver assistance)
- Emphasis on behavioral strategies to increase adherence
- Vigilant follow-up after hospital discharge or after periods of instability
- Optimization of medical therapy
- Increased access to providers
- Early attention to signs and symptoms of fluid overload
- Assistance with social and financial concerns

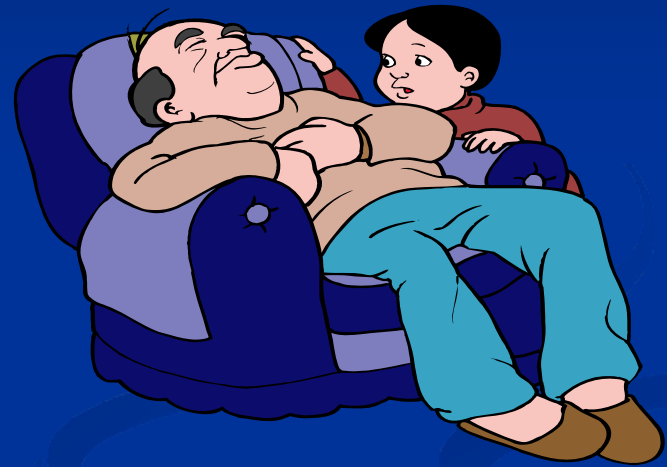
# Effects of Disease Management

		<u>Odds Ratio</u>
Mortality:	All-cause	0.80*
	HF specific	0.37*
Hospitalization:	All-cause	0.70*
	HF	0.56*

\* $p < 0.003$

# Other behavioral strategies

- Sodium
- Alcohol
- Exercise
- Sick days
- Avoid sick contacts
- vaccines



# MetroHealth HF Education Curriculum

## Session 1

Definition of HF

Diagnosis

Types of HF

Treatment plan

Signs & symptoms

Daily wt. monitoring

Medications

When to seek care

Smoking cessation

## Session 2

2g sodium diet

Food groups

Label reading

Alternate seasonings

Recipes

## Session 3

SCD

AICD

Dyssynchrony

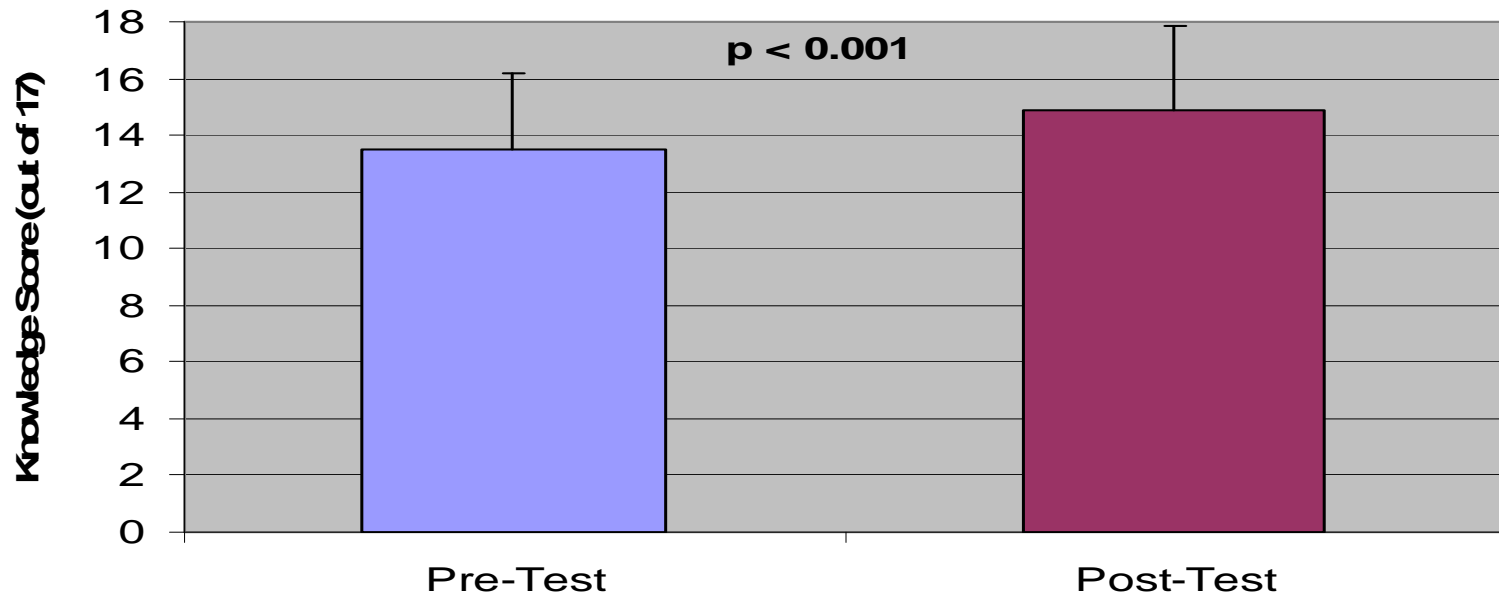
CRT

Device monitoring

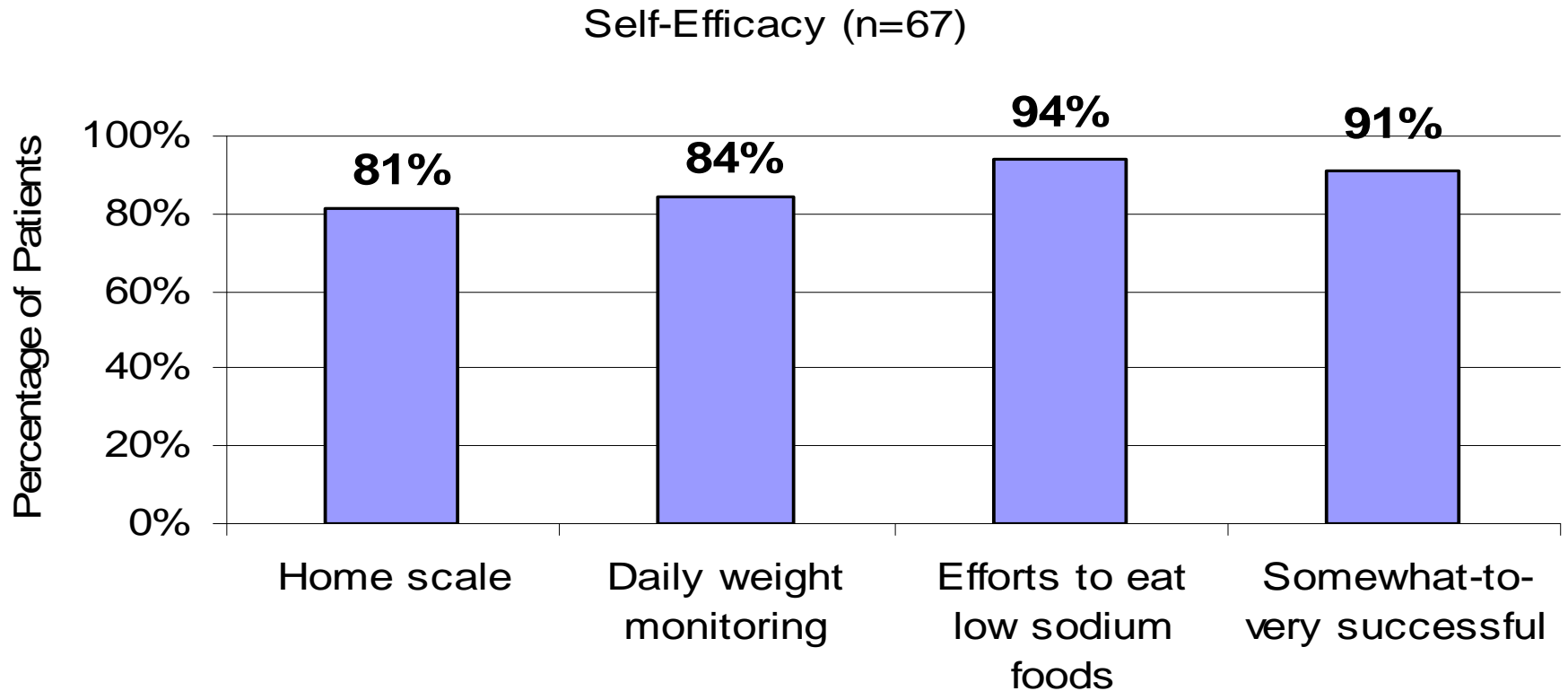
Activity & exercise

# MetroHealth HF Education Curriculum: Knowledge Gained

**Change in Knowledge Scores before and after HF Class intervention (n=67)**



# MetroHealth HF Education Curriculum: Self-Efficacy Scores



# Summary

- Patient education an integral part of chronic disease management
- Patient adherence key to maintaining functional capacity and keeping out of hospital
- Multiplicity of approaches
- Sustainability important, vigilant f/u