IHI Expedition:
Effective Implementation of Heart Failure Core Processes

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Christine McMullan, MPA, CPHQ, Director
February 2, 2012

These presenters have nothing to disclose

WebEx Quick Reference

- Welcome to today’s session!
- Please use Chat to “All Participants” for questions
- For technology issues only, please Chat to “Host”
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Today’s Agenda

- Mentor Hospital Guest Speaker
  - Stephanie Calcasola, MSN, RN-BC
- Questions and Answers
- Homework Discussion
  - Peg Bradke/Chris McMullan
- Increasing reliability with discharge instructions
  - Peg Bradke/Chris McMullan
- Dietary Implications for Patients with HF/CHF
  - Suzette C. Smookler, MS, RD, CDN
- Questions and Answers
Peg Bradke, RN, MA

Peg M. Bradke, RN, MA, Director of Heart Care Services, St. Luke’s Hospital, coordinates services for two intensive care units, two step-down telemetry units, the Cardiac Catheter Lab, Electrophysiology Lab, Diagnostic Cardiology, Interventional/Vascular Lab, and Cardiopulmonary Rehabilitation. In her 25-year career, she has had various administrative roles in critical care areas. Ms. Bradke works with the Institute for Healthcare Improvement on the Transforming Care at the Bedside initiative and Transitions Home work. She is President-Elect of the Iowa Organization of Nurse Leaders.

Christine McMullan

Chris McMullan, MPA, CPHQ, is the Director of Continuous Quality Improvement at Stony Brook University Medical Center. She served as an adjunct faculty member at the Harriman Business School and School of Professional Development at Stony Brook University. She was Lead Faculty on the IHI Early Warning Systems: The Next Level of Rapid Response Expedition and a Faculty member on the IHI Sepsis Detection and Initial Management Expedition. She was a co-faculty member of the Hospital Association of New York State’s 2007 learning collaborative to prevent ventilator associated pneumonia. Ms. McMullan has held a variety of managerial positions in quality improvement and human resources.
Heart Failure Core Measures
Stephanie Calcasola, MSN, RN-BC
Director, Quality & Medical Management

Learning Objectives

• Define types of measures
• Discuss principles of reliability for sustained change
• Identify strategies improving heart failure core measures
- 680 Bed Tertiary Care Referral Center (~1M)
- Flagship of Baystate Health
- 42k Admissions/Year
- Annual Surgical Volume: 29,043
- Western Campus of TUFTS University School of Medicine
- Member CoTH, 9 Residency Programs/244 PGs
- 1200 Member Medical Staff, 206 Faculty MDs
- Level 1 Trauma Center
- IHI Mentor Hospital
- Magnet Facility (redesignated 2010)

Baystate Medical Center
baystatehealth.com
Quality Accomplishments

Baystate Health

Collaborative Work

Premier
IHI
NPSF
MA Coalition
MA DPH

HQID, QUEST
PREMIER
IHI FOR HEALTHCARE IMPROVEMENT
National Patient Safety Foundation
Massachusetts Coalition for the Prevention of Medical Errors
Commonwealth of Massachusetts Department of Public Health

PFAC
CUSP BSI
PCMH

Baystate Health
Types of Measures

**Clinical Quality Measures:** Measures used to assess the performance of individual clinicians, clinical delivery teams, delivery organizations, or health insurance plans in the provision of care to their patients or enrollees, which are supported by evidence demonstrating that they indicate better or worse care.

**Process:** A process of care is a health care-related activity performed for, on behalf of, or by a patient.
- supported by evidence that the clinical process
- the focus of the measure has led to improved outcomes.
- generally calculated using patients eligible for a particular service in the denominator, and the patients who either do or do not receive the service in the numerator.

http://www.ahrq.gov/

Types of Measures (2)

**Outcome:** An outcome of care is a health state of a patient resulting from health care.
- supported by evidence that the measure has been used to detect the impact of one or more clinical interventions.
- attributable to antecedent health care and should include provisions for risk-adjustment.
- Example: The risk-adjusted rate of in-hospital hip fracture among acute care inpatients aged 65 years and over, per 1,000 discharges.

http://www.ahrq.gov/
What is a Core Measure?

Core measures are derived from a set of quality indicators defined by the Centers for Medicare and Medicaid Services (CMS).
- shown to reduce the risk of complications
- prevent recurrences.
- help improve the quality of patient care by focusing on the actual results of care

National Clinical Focus Areas

- Heart failure
- Acute myocardial infarction
- Pneumonia
- Surgical Care Improvement Project
- Children's asthma care
- Pregnancy care

**Coming Soon**
- Stroke
- ED throughput
- Global immunizations
- COPD
Why are We Here Today?

#1 Reason ➔ The PATIENT

It isn’t about the numbers….

It’s about the right care at the right time every time the first time!

Heart Failure Core Measures

• **Complete discharge instructions** (6 components - All or none: one failed component is a failed discharge instruction measure)
  - Activity level
  - Diet/fluid
  - Medication reconciliation
  - Follow up with physician
  - Worsening symptoms
  - Weight monitoring

• Left ventricular function assessment
• ACE inhibitor or ARB prescribed at discharge (for LVSD)
• **Adult smoking cessation counseling**
Implementing Process Improvement

How to start

TEAM

Clinical champions ready, willing, and eager

GAME PLAN
- Reliability principles
- Interventions to provide failure free care over time

COACH (Quality)
- Provide support
- Measurement

Pt Centered Care

SCIENCE
- Evidence based practice

Strategies for Achieving Optimal Clinical Effectiveness

- Education of staff
  - Orientation and annual
- Enhanced electronic medical record rules
- Organizational transparency (eDashboard)
- Performance improvement collaboration
- Reporting and remediation
- Performance metrics for physicians and key leaders
- Governance and leadership oversight
Education of Staff
General orientation to new employees
• Safety
• Quality
Nursing orientation
• Quality
• Core measures
Annual competency training
• Web based learning module

Enhanced Rules in Electronic Medical Record
Forced EMR Order Functionality

**eDashboard**

Baystate Health
Keys to Success

- Persistence and Reinforcement/High Visibility
- Senior Leader Support
- Multidisciplinary Cooperation & Collaboration
- Willing to Try Changes and Take a Risk
- Develop Reliable Systems
- Incorporate into Workflow
- Make Changes Easy, Transparent and Meaningful

Make The Right Thing The Easy Thing!!!
Thank you

Stephanie.Calcasola@baystatehealth.org

Homework for February 2 call

Suzetter Smookler, Registered Dietitian will be joining us to present on Dietary Restrictions for the HF Patient

Please come prepared to share:

• What are you currently using for the Sodium Restriction?
• What issues are you having as you try to reduce the Sodium restriction with the new recommendations, going as low as 1500mg?
Discharge Instructions: Increasing Reliability

- Begin the discharge process upon admission—identify the primary care provider and establish contact; begin assessment of patient needs and start the referral process as appropriate.
- Engage patients with CHF and their families as active partners in care.
- Create standard CHF patient education materials designed according to plain language standards.
- Ensure that all patients and families are given written discharge instructions and understand these six aspects of care.

Discharge Instructions: Increasing Reliability

- Create reliable processes that ensure a proper handoff to the next caregivers, including prompt post-discharge support and follow-up.
- Use a standard medication form at discharge and conduct real-time medication reconciliation at discharge and real-time communication of medications and the discharge plan to the receiving provider.
Dietary Implications For Patients with Congestive Heart Failure (CHF)/Heart Failure (HF)

Suzette C. Smookler, MS, RD, CDN
Director Of Clinical Nutrition
Stony Brook University Medical Center

CHF/HF occurs when the heart is unable to maintain adequate circulation most frequently caused by:

- Atherosclerosis
- Uncontrolled Hypertension (HTN)
- Myocardial Infarction (MI)
- Rheumatic Fever
- Birth Defects
Objective: To provide Medical Nutrition Therapy (MNT) to manage the symptoms and improve the quality of life for CHF/HF Patients while maintaining optimal nutrition status.

Symptoms that MNT can address:
- Edema
- Shortness of breath (SOB)
- Fatigue

CHF/HF symptom treatment must be based on a complete nutrition assessment to optimize adequate intake while controlling symptoms through specific dietary restrictions.

Examples:
- Sodium restriction
- Fluids restriction
- Increase Protein Intake
- Increase Carbohydrates and Healthy Fats
- Include B6, B12, Folate, and Thiamine
Objectives for Nutritional Intervention

- Lessen demands on the heart and restore hemodynamic stability
- Eliminate or reduce edema
- Prevent cardiac cachexia, low blood pressure, weak pulse from potassium depleting diuretics, anorexia, nausea and vomiting.
- Encourage the use of omega-3 fatty acids with an intake of healthy fats
- Prevent pressure ulcers from reduced activity levels and poor circulation
- Promote the use of DASH diet (Dietary Approaches to Stop Hypertension) The goal of limiting sodium to 2 grams (2000 mg) is key to minimizing symptoms
- Maintain BP<140/90 mm Hg in all patients or <130/80 mm Hg in those with diabetes or chronic kidney disease
- Implement strategies to increase hemoglobin for anemia. It is important as there is increased risk of mortality in HF patients with anemia.

Objectives for Nutritional Intervention (continued)

The American Dietetic Association (Academy of Nutrition and Dietetics) recommendations for people with HF/CHF include:

- Sodium intake of less than 2 grams per day to improve clinical symptoms and quality of life
- Fluid intake to be limited to between 48 and 64 oz depending on fatigue and shortness of breath
- Protein needs in HF is significantly higher than those without. Clinically stable people should have at least 1.37 grams/kg protein to preserve their body composition or limit the effects of hyper catabolism. This has been clinically determined in HF patients as measured by negative nitrogen balance
- Consume folate through and/or a combination of B6, B12, and folate supplementation
Objectives for Nutritional Intervention (continued)

- Thiamine supplementation may be required as levels tend to be low. Cardiovascular problems maybe associated with beri-beri
- Increase soluble fiber to the diet from apples to oat bran is recommended
- Sunflower kernels, sesame seeds and wheat germ are high in phytosterols and should be used often

SODIUM INTAKE: Nutrition Challenge

- Typical American diet contains 4 – 7 grams of sodium/day
  - Highly processed foods
  - Fast foods
  - Heavy use of the salt shaker
- US Department of Health and Human Services and the CDC recommend ≤ 2.3 grams of sodium per day for healthy adults 51 years and older
- This recommendation for healthy adults is not very different than what is suggested for the HF/CHF? So what is a low sodium diet? 2 grams is only low when compared to the typical American diet, not to the standard.
- The challenge becomes limiting food that the typical person finds tasty when they have a diminished appetite. The very person who requires increased protein and energy loses their appetite with the risk of cardiac cachexia
Fluid Intake and Restrictions: Nutrition Challenge

- Fluid Restrictions will improve both symptoms and quality of life.
- Fluids should be restricted to between 48-64 ounces daily based on clinical symptoms such as shortness of breath and edema.
- Fluids include soups, gelatin, sherbet, ice cream, gravy and milk.
- The challenge becomes restricting the items that are the easiest to consume for the very ill person.

Vitamin/Mineral and Additional Supplements: Nutrition Challenge

EVIDENCED BASED RECOMMENDATIONS:

- Consume or supplement Thiamine, B1, Folate, B6 and B12
  - Thiamine often low due to the use of diuretics which causes beriberi
- Check hemoglobin levels for anemia
- Use Omega-3 fish oils
- Most will benefit from a multi vitamin and mineral supplement especially those with a poor appetite

IF THE PATIENT INQUIRES ABOUT TAKING OR USING L-Argine, carnitine, coenzyme Q10 or hawthorn supplements discuss limited available evidence and that the research remains inconclusive.
Appetite Issues: Nutrition Challenge

Patients with RIGHT VENTRICULAR CHF:

- Develop excess fluid volume and edema of the bowel which causes anorexia and nausea

Patients with LEFT VENTRICULAR CHF:

- Develop shortness of breath, spitting up froth and moist lung sounds which make eating difficult

From Research to Reality. A typical patient - Scenario 1

- Female from the local skilled nursing facility where there is a liberal approach to diet therapy based on quality of life values.
  - Height 60 inches and weighs 110 pounds (wet weight)
  - Edema
  - Poor dentition
  - Poor appetite
  - 77 years old
- She is hospitalized with acute CHF
- Physician orders:
  - a 2 gram sodium (2000 mgs) [Hopefully!]
  - 1200 ml fluid
  - Lasix 40 mg
  - Daily Weights. [A weight gain of 3-5 pounds must be addressed quickly.]
- Upon interview she like Italian Ice, Soup, Tea, Meat Loaf and Baked Macaroni and Cheese
- She is not interested in a Mechanical Soft or Puree diet. She reports that food has no taste.
- Will possibly drink a can of a commercial type supplement
From Research to Reality. A typical patient Scenario 1(continued):

- After 5 days she is stable for CHF but has lost 10 Lbs. (3-5 lbs. in water and the rest in body mass)
- Patient returns to the skilled nursing facility
  - 2.5 – 4.5 gms. Na
  - Little to no fluid restriction
  - Poor appetite

How soon will this patient be re-admitted based on diet therapy?

From Research to Reality. A typical patient - Scenario 2

- Same Female living at home
  - Height 60 inches and weighs 110 pounds (wet weight)
  - Edema
  - Poor dentition
  - Poor appetite
  - 77 years old
- She is hospitalized with acute CHF
- Physician orders:
  - a 2 gram sodium (2000 mgs) [Hopefully!]
  - 1200 ml fluid
  - Lasix 40 mg
  - Daily Weights. [A weight gain of 3-5 pounds must be addressed quickly.]
- Upon interview she likes Italian Ice, Soup, Tea, Meat Loaf and Baked Macaroni and Cheese
- She is not interested in a Mechanical Soft or Puree diet. Reports that food has no taste
- Will possibly drink a can of a commercial type supplement
From Research to Reality. A typical patient – Scenario 2 (continued):

- After 5 days she is stable for CHF but has lost 10 Lbs. (3-5 lbs. in water and the rest in body mass)
- Patient returns home
  - Customary food choices at home include canned soup, saltine crackers, and commercially prepared frozen dinners
  - Patient consumes more than 4 gms Na per day
  - Fluid intake is unlimited and provides ease of caloric consumption

How soon will this patient be re-admitted based on diet therapy?

Are there answers to managing the patient with HF through diet therapy?

- Individualized food service and education based on the patients condition.
- Close communication with physician, family, and care givers to limit that which worsen symptoms while encouraging protein and energy food consumption.

It may be worth while to study the number of readmissions to a hospital after 30 days when the patients have been discharged to LTC. If so, education and change of practice in LTC may need to be evaluated.

If patients are re-admitted from home, there is a need to evaluate who is shopping, cooking and preparing food.

**IN CONCLUSION:**

*In most cases a decision is made to provide adequate protein and calories, allowing the patient to eat what they want with the most palatability, fully understanding the consequences. This decision, after education is best made by the patient when possible*
Question 1: What types of ingredients contain sodium? There are many ingredients which contain sodium. Here are some examples:

- Processed meats (bacon, sausage, ham, hot dogs), poultry, prepared meals, canned meals
- Cheese, cheese products (cheese, cream, cheddar, mozzarella)
- Tomato sauce, tomato-based soups, sauces, ketchup
- Seasonings (salt, spices, herbs, soups, broths)
- Sodium-cured and smoked meats, cheese
- Processed sauces, dressings, condiments (ketchup, mustard)
- Seasonings (garlic, onion, paprika)
- Processed snacks (chips, crackers, pretzels)
- Sodium or potassium substitutes
- Water, other beverages (juices, sodas)

Question 2: What foods are usually high in sodium? No matter where you are in the country, the following foods are usually high in sodium:

- Processed foods (bacon, sausage, ham, hot dogs), poultry, prepared meals, canned meals
- Cheese, cheese products (cheese, cream, cheddar, mozzarella)
- Tomato sauce, tomato-based soups, sauces, ketchup
- Seasonings (salt, spices, herbs, soups, broths)
- Sodium-cured and smoked meats, cheese
- Processed sauces, dressings, condiments (ketchup, mustard)
- Seasonings (garlic, onion, paprika)
- Processed snacks (chips, crackers, pretzels)
- Sodium or potassium substitutes
- Water, other beverages (juices, sodas)

Question 3: How can I reduce sodium in my diet? It is important to follow the following guidelines:

1. Avoid highly processed foods
2. Read food labels
3. Choose fresh ingredients
4. Use herbs, spices, and seasonings
5. Use salt judiciously
6. Use low-sodium or no-sodium-added products
7. Use unsalted canned products
8. Use water or other beverages

Question 4: What are the three main causes of heart disease? The main causes of heart disease are:

1. High blood pressure
2. High cholesterol
3. Smoking

Question 5: What are the three main causes of kidney disease? The main causes of kidney disease are:

1. High blood pressure
2. High cholesterol
3. Smoking

Question 6: How can I add flavor to my food without using salt? Some suggestions include:

- Use fresh herbs and spices
- Use citrus juices
- Use vinegar
- Use ginger
- Use chili powder
- Use McGuire's

Question 7: What are the three main causes of diabetes? The main causes of diabetes are:

1. High blood pressure
2. High cholesterol
3. Smoking

Question 8: How can I reduce sugar in my diet? It is important to follow the following guidelines:

1. Avoid sugary drinks
2. Use water or other beverages
3. Use unsweetened teas
4. Use unsweetened juices
5. Use low-sugar or no-sugar-added products
6. Use unsweetened canned products
7. Use water or other beverages

Question 9: What are the three main causes of osteoporosis? The main causes of osteoporosis are:

1. High blood pressure
2. High cholesterol
3. Smoking

Question 10: How can I reduce weight? It is important to follow the following guidelines:

1. Avoid sugary drinks
2. Use water or other beverages
3. Use unsweetened teas
4. Use unsweetened juices
5. Use low-sugar or no-sugar-added products
6. Use unsweetened canned products
7. Use water or other beverages

In addition to the above suggestions, there are some other suggestions you may use:

- Use fresh herbs and spices
- Use citrus juices
- Use vinegar
- Use ginger
- Use chili powder
- Use McGuire's

Other terms which are often seen but without regulation are “Light in Sodium” “Reduced Sodium” “Unsalted” These are vague terms which do not meet requirements for a Sodium Restricted Diet.
SOiium

While Too Much Sodium Dangerous

- Too much dietary sodium can increase water retention and raise blood volume (increasing blood pressure). This can put extra strain on the heart and arteries and will stiffen the arterial walls over time. This can eventually damage the heart and kidneys.

Current Recommendations

- Intake should be less than 2400 mg per day.
- 1 tsp of salt is equal to 2400 mg of sodium.
- Recommendations for some people may be lower depending on underlying health conditions.

Low Sodium Eating Tips

- Look for low sodium sauces and dressings (200-240mg).
- When dining out, ask for no added salt and dressings on the side.
- Use salt-free spices such as Mrs. Dash.

- Make more meals from scratch and avoid prepackaged meals.

What Foods Are Considered High In Sodium?

- Deli meats, cheese products, soups, hot dogs, sausages, and other processed meats, prepackaged microwaveable meals, sauces, dressings, and most processed foods.
- Most restaurant foods are very high in sodium and should be limited or avoided.

What Foods Are Low In Sodium?

- Every food contains some sodium, but foods that are in their most natural state tend to be the lowest in sodium.
- Examples: apples, bananas, sweet potato, fresh / plain frozen vegetables, and 100% whole wheat bread.
Questions?
Expedition Wrap-up

• The listserv will remain active. To use the listserv, address an email to HFExpedition@ls.ihi.org

• A manual with instructions to receive Continuing Education Credits will be sent with the follow-up email for today’s session.

• Please take 5 minutes to complete the Expedition evaluation survey.