CHF TRANSITIONS:

Optimizing the Patient Care Journey from the Hospital to the Community

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A Typical Presentation to the ED

- A 67-year-old male presents to the Emergency Department complaining of shortness of breath, achy chest pain, and leg swelling
  - He appears to be in acute distress, and tells the triage nurse he ran out of his meds three days ago
  - Electrocardiogram excludes ST-segment elevation MI
  - Placed on monitor, IVs started, oxygen provided, chest radiograph ordered
  - Intern initiates search for old records, but this is complicated by the fact that he has not been treated in our system previously
  - Nurse calls family member to obtain medication list

Clinical Management Begins

- The patient's *symptoms* are evaluated and managed before a diagnosis is established
  - The differential diagnosis includes several life-threatening illnesses
- The clinical evaluation, chest radiograph, and lab work all lead to the conclusion that the patient's *diagnosis* is acutely decompensated heart failure
- More specific clinical therapy begins, based on published guidelines

Executive Summary: HFSA 2010 Comprehensive Heart Failure Practice Guideline

HEART FAILURE SOCIETY OF AMERICA

St. Paul, Minnesota

Guideline Committee Members
JoAnn Lindenfeld, MD[1] (Chair)

Circulation
JOURNAL OF THE AMERICAN HEART ASSOCIATION

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2009 Focused Update: ACCF/AHA Guidelines for the Diagnosis and Management of Heart Failure in Adults: A Report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines: Developed in Collaboration With the International Society for Heart and Lung Transplantation

2009 WRITING GROUP TO REVIEW NEW EVIDENCE AND UPDATE THE 2005 GUIDELINE FOR THE MANAGEMENT OF PATIENTS WITH CHRONIC HEART FAILURE WRITING ON BEHALF OF THE 2005 HEART FAILURE WRITING COMMITTEE, Mariell Jessup, William T. Abraham, Donald E. Casey, Arthur M. Feldman, Gary S. Francis, Theodore G. Ganiats, Marvin A. Konstam, Donna M. Mancini, Peter S. Rahko, Marc A. Silver, Lynne Warner Stevenson and Clyde W. Yancy

Circulation 2009;119;1977-2016; originally published online Mar 26, 2009;
DOI: 10.1161/CIRCULATIONAHA.109.192064

HF is a Prevalent and Expensive Disease

- 4.8 million patients in US have heart failure, and as the population ages, this number will increase
  - Currently adding 40,000 patients per year to this number, but . . .
  - 50% of patients diagnosed with heart failure today will be dead in 5 years
- HF is first-listed diagnosis in nearly 1 million hospitalizations each year, and is the most common diagnosis in hospital patients age $\geq$ 65 years. In that age group, 20% of all hospitalizations have a primary or secondary diagnosis of HF.
- Annual cost of care in US exceeds $40 *Billion* (direct and indirect combined)
- HF is the number one expense for Medicare

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ELSEVIER

European Journal of Heart Failure 3 (2001) 315–322

The European Journal of Heart Failure

www.elsevier.com/locate/heafai

More 'malignant' than cancer? Five-year survival following a first admission for heart failure

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Received 19 September 2000; received in revised form 27 October 2000; accepted 31 October 2000

Acute Management of Heart Failure

- High-risk presentation
- Requires pharmacologic management and often requires ventilatory support
- 75%+ will require admission from the ED

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The Disposition Decision

- *Mostly* a clinical decision
  - "keep" vs "send home" decision usually straightforward
  - "admit" vs "obs" decision may be more problematic as healthcare reform advances . . . Because of its prevalence and expense, HF is an attractive target
    - Recovery Audit Contractor (RAC) program
    - Reimbursement penalties for readmissions within 30 days, with more draconian penalties proposed for 7 and 15-day intervals
    - Possibility that HF could fall under new bundled payment rules
    - The advent of care management models: Accountable Care Organizations, Medical Home Model

The Hospital Stay

- Nationally, the average hospital length of stay for HF admissions is around 5 days
  - Because a not insubstantial number require ICU stays that can be much longer, this suggests some HF stays are quite short
  - The significant majority of HF patients carry co-morbidities, which complicate care, worsen short- and long-term prognosis, and increase length and cost of stay . . . . and the likelihood of readmission
  - Planning for discharge from the hospital *must* begin as soon as possible

Readmissions

- Besides reducing patient satisfaction and reducing revenue, near-term readmissions also reduce hospital margins indirectly
  - MedPAC *Report to Congress* (2007): "for patients who are later readmitted, hospitals have lower margins on both the initial admission and the readmission, compared with patients who are not readmitted. By reducing the frequency of these patients' readmissions, hospitals may be able to fill the beds with other patients who are more profitable."

AHA Scientific Statement

Team Management of Patients With Heart Failure

A Statement for Healthcare Professionals From the Cardiovascular Nursing Council of the American Heart Association

Kathleen L. Grady, PhD, RN; Kathleen Dracup, DNSc, RN; Gemma Kennedy, PhD, RN; Debra K. Moser, DNSc, RN; Mariann Piano, PhD, RN; Lynne Warner Stevenson, MD; James B. Young, MD

Heart failure is estimated to affect 4 to 5 million Americans, with 550 000 new cases reported annually.[1] In the past 3 decades, both the incidence and prevalence of heart failure have increased.[1–3] Factors that have contributed to this increase are the aging US population and improved survival rates in patients with cardiovascular disease due to advancements in diagnostic techniques and medical and surgical therapies.[2,4–6] Heart failure is a chronic, progressive disease that is characterized by frequent hospital admissions and

Development of an Integrated Approach to Heart Failure Management

Pathophysiology and Definition of Heart Failure

The syndrome of heart failure is a result of complex interactions among molecular, endocrine, and biodynamic systems. There are several pathophysiological mechanisms that are involved in the progression of heart failure; however, cardiac remodeling is more than likely a central feature in the progression of heart failure (Table 1).[8–10] We now recognize

(*Circulation*. 2000;102:2443-2456.)

Circulation is available at http://www.circulationaha.org

Conventional Heart Failure Care

Goal is to prevent next crisis

Patient needs routine care from PCP

BEWARE THE REVOLVING DOOR!

After acute care stay, patient may go to SNF or be followed by cardiologist

Most are admitted

In crisis, patient goes to ED

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The New World

- CMS reimbursement function has shifted from passive payer to value-based purchaser
- Focused on core measures in HF:
  - Ejection fraction measurement
  - Smoking cessation counseling
  - ACE/ARB prescription (or documentation of contraindication)
  - HF-specific discharge instructions: weight monitoring, symptom management, proper diet ands activity levels, medication management, outpatient care
  - HF readmission in less than 30 days

The HF Team

- Ideally a core team of 5-7 members to oversee work to improve transitions home . . . Should include front-line staff
- Choose from among
  - Front-line nurse
  - Nurse manager
  - Physician (PCP, hospitalist, geriatrician)
  - Pharmacist
  - Motivated, articulate patients/family caregivers
  - Case manager
  - QI specialist
  - Nursing home/LTC rep
  - Dietician, physical therapist, occ therapist, etc

Post-Acute Care

- Financial pressure on hospitals to *shorten* length of stay, sometimes resulting in sicker patients at discharge and an inherently higher risk of readmission.
- Transition out of hospital may include outpatient cardiac rehab, home health services (including telehealth resources), inpatient rehab, or hospice care. Management process includes coordination with funding sources and resources for care.
- Frequent patient contact essential for symptom (and medication) management, awareness of logistical issues (money for Rx, transportation, etc), sense of support

Barriers to Effective Care Transitions

Structural

- Lack of integrated care systems
- Lack of longitudinal responsibility across settings
- Lack of standardized forms and processes
- Incompatible information systems
- Care providers do not learn care coordination and team-based approaches in school

Procedural

- Ineffective communication
- Failure to recognize cultural, educational or language differences
- Processes are not patient-centered

Performance Measurement and Alignment

- Lack of valid measures for the quality of optimal transitions
- Compensation and performance incentives not aligned with care coordination and transitions
- Payment is for volume of services rather than outcomes

Breakdowns in the System

- Rise of the hospitalist movement, disconnecting inpatient care from PCP
- Insufficient HIT infrastructure
- Lack of patient-centered handoffs
- Failure of providers to accept responsibility for ongoing communication
- Lines of communication among not just physicians but pharmacists, care managers, and nurses not in place
- Mobile population
- ED crowding, throughput, registration/payor issues

What is Known?

- National examples of best practices:
  - The Care Transitions Model (Coleman)
  - The Transitional Care Model (Naylor)
  - The Continuity Assessment Record and Evaluation (CARE) tool

The Ideal Transition Home

- Four key components (per Institute for Healthcare Improvement, 2008):
  - Enhanced admission assessment for post-discharge needs
  - Enhanced teaching and learning
  - Patient and family-centered handoff communication
  - Post-acute care follow-up

Enhanced Admission Assessment for Post-Discharge Needs

- Include family caregivers and community providers as full partners in standardized assessment, d/c planning, and predicting home-going needs
  - The most appropriate family caregiver—who understand limits of home environment or who helps patient with self-care—is not necessarily the most frequent visitor to the hospital
- Reconcile meds upon admission
  - May involve family members, PCP, pharmacist/s
  - Consider providing patient a standardized record for retention
- Initiate a standard, evidence-based plan of care based on needs identified in the assessment

“standard, evidence-based plan of care”

- Based on many factors that help predict basic d/c needs, such as
  - Medication and dietary (especially sodium) restrictions
  - Volume status
  - Cognitive status, psychological state, culture
  - Access to social and financial resources
  - Recommended activity level
  - Expected medication and dietary compliance
  - Monitoring of volume status, body weight, electrolytes, renal function
  - Consideration for referral for formal disease management program
- Poor function in more than one of these, or the presence of significant co-morbidity (e.g., diabetes), may indicate need for referral for home care or assignment of new resources

Enhanced Teaching and Learning

- Identify the learner/s on admission (patient, caregiver/s)
  - Determine health literacy level
  - Consider multiple formats (written material, videos, audio recordings, etc)
- Redesign patient education process to improve understanding of self-care
  - Providers should emphasize patients' "active and central role" (IOM, 2003) in managing their illness
- Use "Teach Back" daily in the hospital and in follow-up calls to assess (and reinforce) understanding of d/c instructions and ability to do self and home

“Teach Back”

- IHI states that asking a learner to recall and restate what they have been told is one of the top 11 patient safety practices
- In HF management, this is particularly useful for
  - Stressing medication and dietary compliance, daily weighing
  - Symptom awareness and management
  - Reasons to call physician (such as weight gain, dyspnea, or exhaustion)
- Ask Me 3: to ensure transmission of necessary information at each healthcare encounter
  - What is the main problem?
  - What do I need to do?
  - Why is it important to do this?

What's Wrong with Me?

- Patient-friendly explanation of heart failure
- What is an LVEF and why is it important?
- What caused my heart failure?
- Do I have any other problems that could make me worse?
  - CAD, diabetes, hypertension, kidney problems, diabetes
  - What numbers should I know?
    - LDL
    - BP
    - Grade/Stage
    - Weight

What Should I Do About It?

- Adhere to medication regime – your health and survival depend upon it!
- Lifestyle changes
- Dietary instructions
- Maintain a symptom, weight, medication and physician appointment diary
- Report changes in your condition to your physician immediately.

HEART FAILURE ZONES

EVERY DAY

EVERY DAY:

- Weigh yourself in the morning before breakfast, write it down and compare to yesterday's weight.
- Take your medicine as prescribed.
- Check for swelling in your feet, ankles, legs and stomach.
- Eat low salt food.
- Balance activity and rest periods.

Which Heart Failure Zone are you today? GREEN, YELLOW or RED?

GREEN ZONE

ALL CLEAR – This zone is your goal

Your symptoms are under control. You have:

- No shortness of breath.
- No weight gain more than 2 pounds (it may change 1 or 2 pounds some days).
- No swelling of your feet, ankles, legs or stomach.
- No chest pain.

YELLOW ZONE

CAUTION – This zone is a warning

Call your doctor's office if:

- You have a weight gain of 3 pounds in 1 day *or* a weight gain of 5 pounds or more in 1 week.
- More shortness of breath.
- More swelling of your feet, ankles, legs, or stomach.
- Feeling more tired. No energy.
- Dry hacky cough.
- Dizziness.
- Feeling uneasy, you know something is not right.
- It is harder for you to breathe when lying down. You are needing to sleep sitting up in a chair.

RED ZONE

EMERGENCY

Go to the emergency room or call 911 if you have any of the following:

- Struggling to breathe. Unrelieved shortness of breath while sitting still.
- Have chest pain.
- Have confusion or can't think clearly.

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Patient and Family-Centered Handoff Communication

- Reconcile meds for discharge
  - Check particularly for substitutions from hospital pharmacy
  - New meds should be thoroughly explained (purpose, dosing, side effects, etc), with emphasis on whether they are new or a replacement drug
- Ensure first fill
- Provide customized, real-time critical info to next provider/s that physically goes with the patient or is automatically (preferably electronically) transmitted

Importance of Patient and Family-Centered Care

- Important in and of itself – hallmark of compassion and respect
- Provides feedback to health system on how to improve care – other industries do extensive market research
- Improves loyalty, market position, and reduces malpractice
- Increases trust and adherence
- Improves coordination of care
- Improves clinical outcomes

Post-acute care follow-up

- *For high-risk patients:* **prior to d/c**, schedule a FTF follow-up visit (office visit, home care, or care coordination visit), to occur within 48 hours after discharge
- *For moderate-risk patients:* **prior to d/c**, schedule a follow-up phone call within 48 hours and schedule a physician office visit to occur within 5 days

Post-acute care follow-up

- Meta-analysis of hospital-to-PCP handoffs
- Direct communication between hospital physicians and primary care physicians occurred infrequently
- Discharge summary
  - Availability at first post-discharge visit low (12%-34%)
  - Remained poor at 4 weeks (51%-77%)
  - Affected quality of care in ~25% of follow-up visits
  - Often lacked important information (e.g., lab results, discharge medications, treatment, follow-up plan)

Kripalani, 2007

Post-acute care follow-up

- 69.3% of PCPs reported "always" or "most of the time" sending notification of a patient's history and reason for consultation to specialists, but only 34.8% of specialists said they "always" or "most of the time" received such notification.
- Similarly, 80.6% of specialists said they "always" or "most of the time" send consultation results to the referring PCP, but only 62.2% of PCPs said they received such information.
- Physicians who did not receive timely communication regarding referrals and consultations were more likely to report that their ability to provide high-quality care was threatened.

O'Malley, 2011

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Readmissions

- 20% of Medicare beneficiaries readmit within 30 days of discharge (Jencks 2009)
- 33% readmit within 90 days; 56% within year
- Readmissions have a 0.6 day longer LOS than other patients in the same DRG
- Estimated cost to Medicare: $15 to $18.3 billion in annual spending
- Medical causes dominate readmissions

Readmissions

Condition at Index Discharge	30-Day Rehospitalization Rate	Proportion of All Rehospitalizations
Medical		
All	21.0%	77.6%
Heart failure	26.9%	7.6%
Pneumonia	20.1%	6.3%
COPD	22.6%	4.0%
Psychoses	24.6%	3.5%
Surgical		
All	15.6%	22.4%
Cardiac stent placement	14.5%	1.6%
Major hip or knee surgery	9.9%	1.5%
Other vascular surgery	23.9%	1.4%
Major bowel surgery	16.6%	1.0%

Jencks, 2009

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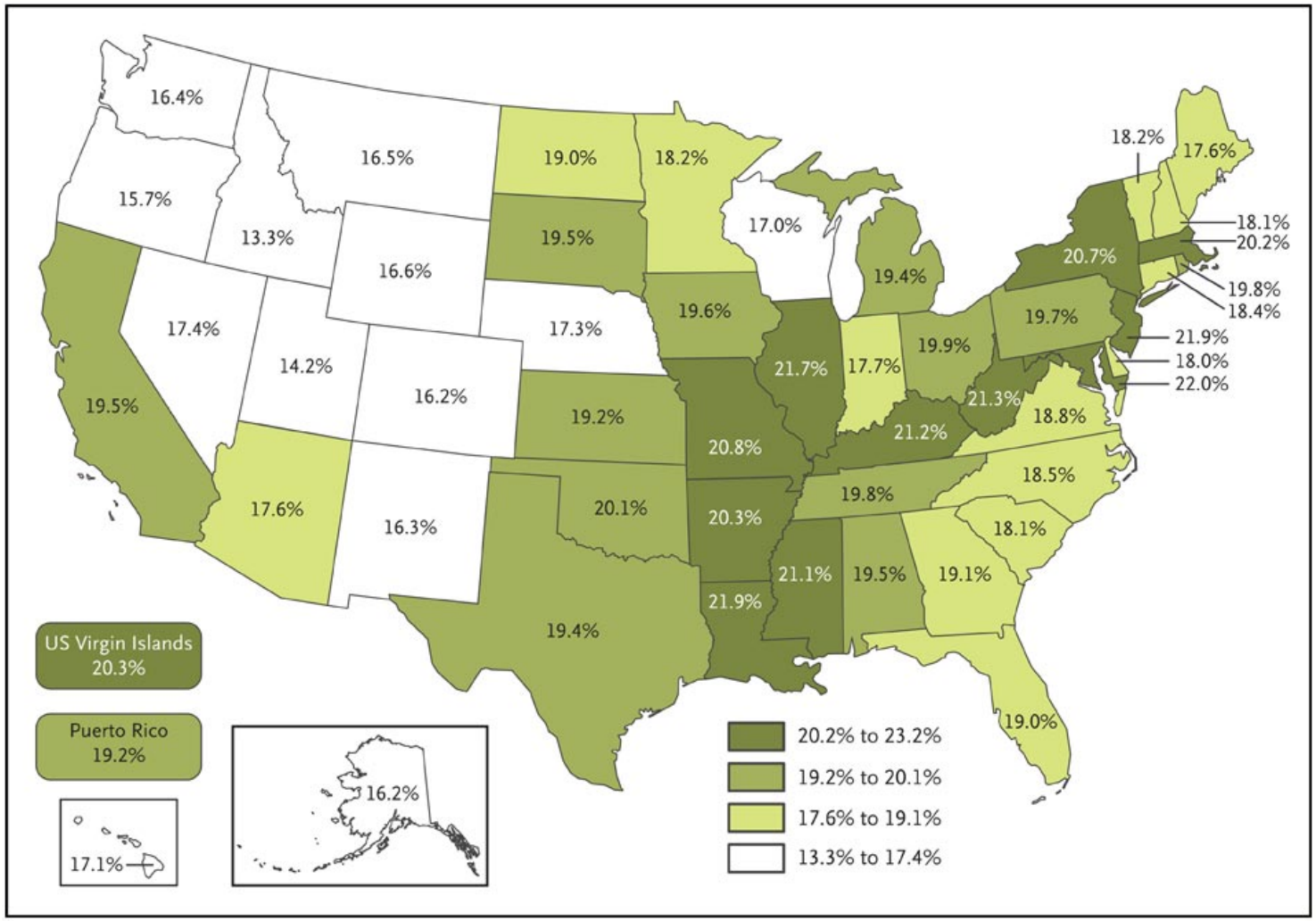
Readmission Rates (Medicare)



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Readmissions

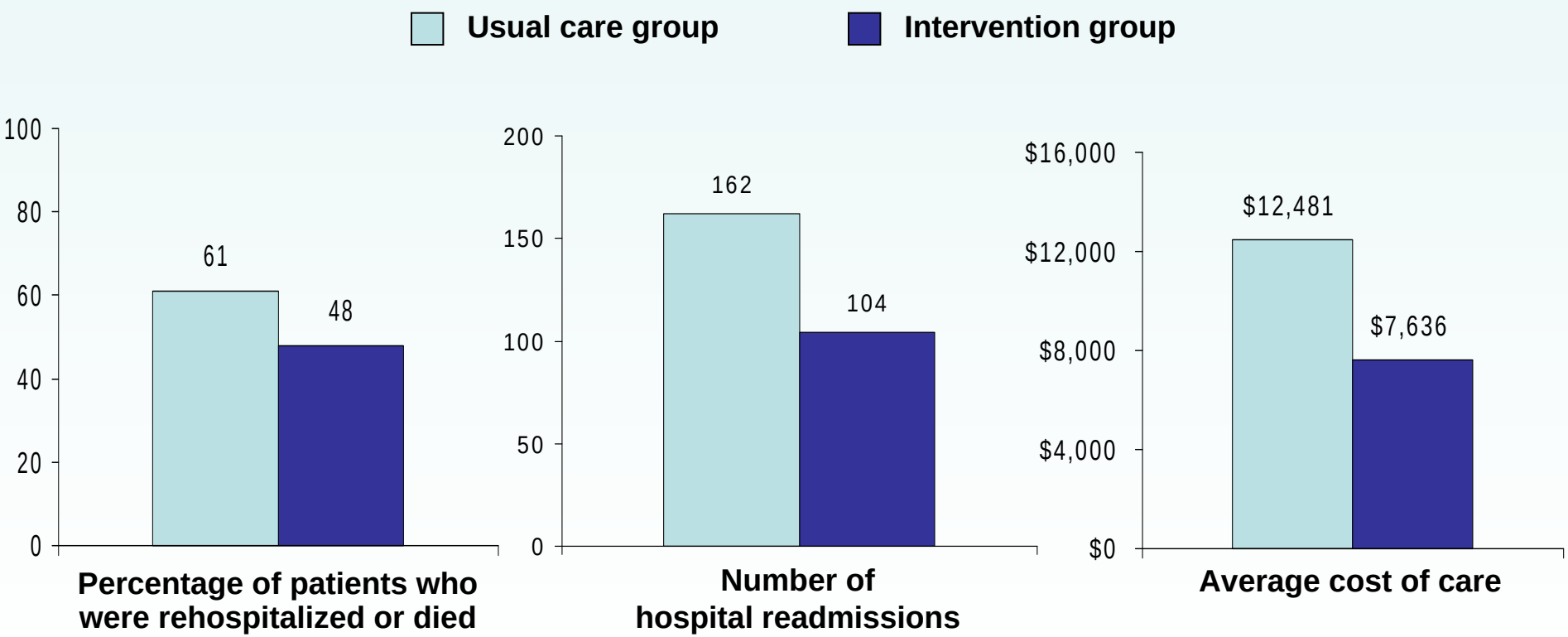
- 50% of all patients re-hospitalized within 30 days of medical discharge had no bill by a physician between discharge and rehospitalization (Jencks)
- 52% of HF patients had no bill by a physician between discharge and rehospitalization
- Potential implications:
  - Seeing a physician post discharge may have a protective effect on readmitting to the hospital.
  - 30-day monitoring period does seem appropriate

HF Readmissions

- “Comprehensive Discharge Planning With Post Discharge Support for Older Patients with HF” (Phillips, 2004)
- Evaluated effects on HF readmission rates (meta analysis: 18 studies, 8 countries)
  - Found 25% relative reduction in risk of readmission
  - A trend towards 13% relative reduction in all cause mortality
  - Improvement in Quality of Life scores (in a smaller subset of studies)
  - Without increase to cost of medical care
- Specific to HF patients, >=55 years old, moderate to severe symptoms, and LV systolic dysfunction

Transitional Care Reduces Rehospitalization for Heart Failure Patients

Resource use among congestive heart failure patients ages 65+ treated at 6 Philadelphia hospitals 1997–2001, randomly assigned to receive 3-month transitional care intervention or usual care



Naylor et al. 2004, Leatherman and McCarthy, 2005

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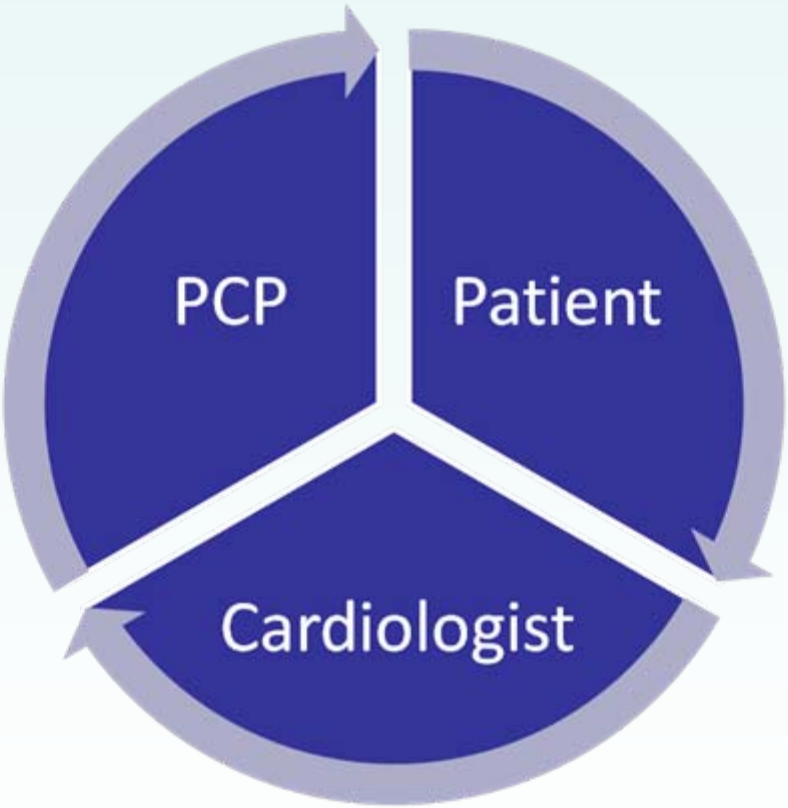
Who's in charge?



Nancy Skinner: must have patient *engagement, empowerment, and education*

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Most Common Causes of Readmission

- Deficiencies in patient self-care education
- Inappropriate medication reconciliation
- Poor communication among healthcare professionals
- Lack of discharge planning/coordination of care
- A “fumbled handoff” at discharge +/- progression of disease

Care Transition Measures (CTM)

- 3-question patient survey intended to measure appropriateness and success of transition of care at hospital discharge from patient perspective
- CTM is strongly associated with post-d/c use of both hospital and emergency services
- Conducted 48 hrs to 6 weeks after d/c

Care Transition Measures (CTM)

- Q1: “The hospital staff took my preference and those of my family or caregiver into account in deciding what my health care needs would be when I left the hospital.”
- Q2: “When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.”
- Q3: “When I left the hospital, I clearly understood the purpose for taking each of my medications.”
- 4-point Likert scale, “strongly disagree” to “strongly agree”

Care Transition Measures (CTM)

- Predictive power: Q2 (a good understanding of my healthcare responsibilities) answers correlate to ED use (Coleman 2005)
  - Of those who agreed, 15.5% had an ED visit
  - Of those who disagreed, 38.5% had an ED visit
- Overall, the CTM Score was predictive of 30-day ED visits ($p = 0.004$) after discharge (Coleman 2007)

HCAHPS

- Hospital Consumer Assessment of Health Plan Survey (HCAHPS) is another patient measure, this of satisfaction more than understanding
- CMS – AHRQ
- Inpatient Prospective Payment System (IPPS) hospitals must report or face financial penalties
- Discharge-related questions intuitively relate to success of post-acute care transition but to date have not been shown to predict recidivism as CTM does

HCAHPS

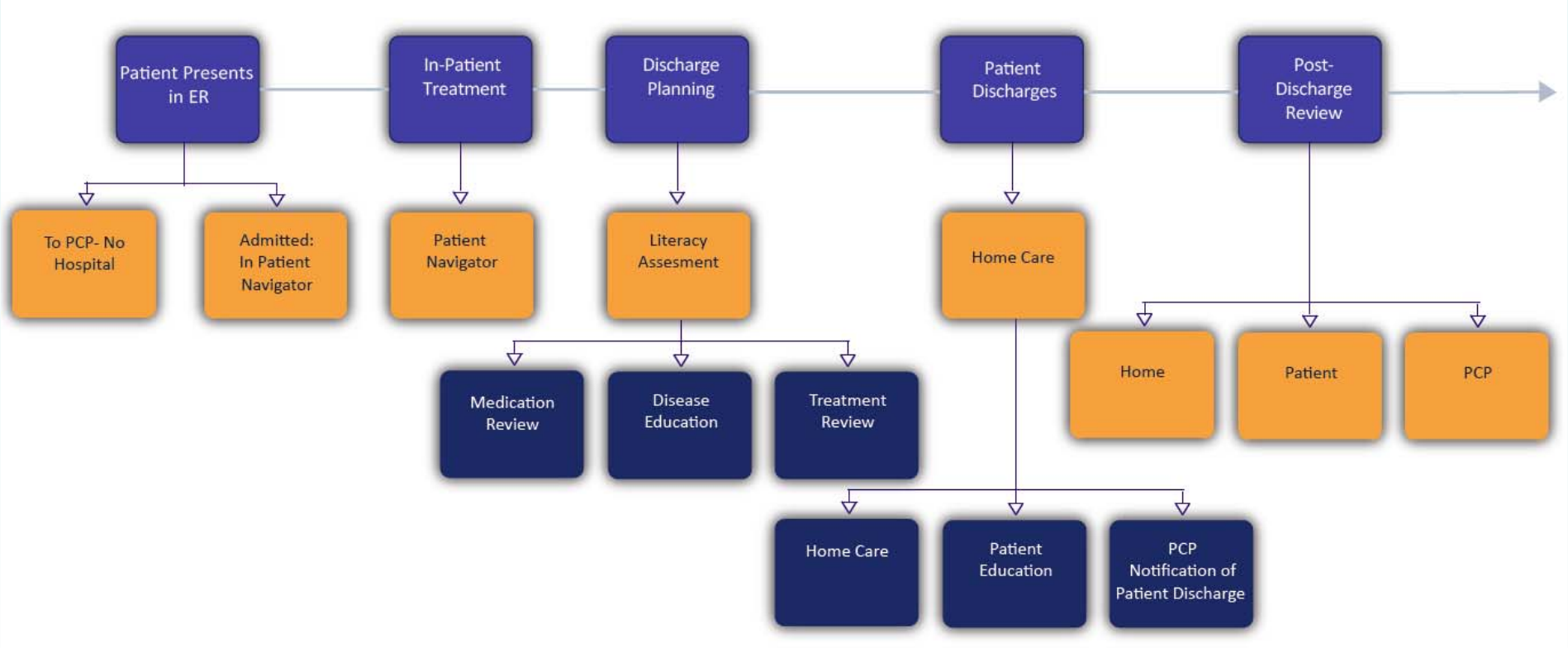
- Discharge-related questions:
- **Q19**: During your hospital stay, did hospital staff talk with you about whether you would have the help you needed when you left the hospital?
- **Q20**: During your hospital stay, did you get information in writing about what symptoms or health problems to look out for after you left the hospital?
- Yes/No answers, not Likert

Starting from scratch?

- Institute for Healthcare Improvement
- N-HeFT (National Heart Failure Training Program)
- ACC/AHA Guidelines
- HFSA Guidelines
- National Transition of Care Coalition (NTOCC)
- Hospital to Home (H2H) Initiative

- Consider a structured “patient journey”

“Patient Journey” Schematic



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Summary: Components of Successful Healthcare Delivery Models for Heart Failure

- Physician-directed care with assistance from nurse coordinators in patient management, or nurse-managed care by experienced advanced practice cardiovascular nurses with access to a cardiologist for consultation
- Intensive, comprehensive patient and family/caregiver education about HF with an emphasis on a low-salt diet, medications, symptoms that signal worsening failure, weighing, and management strategies for problems
- Vigilant, frequent follow-up after hospital discharge
- Optimization of medical therapy (ensuring patients are prescribed the appropriate drugs in appropriate doses and that meds are available at discharge) consistent with published guidelines based on large-scale randomized, controlled clinical trials
- Information systems that support effective point-of-care evidence-based clinical decision making (e.g. registries, patient records, laboratory information, prompts and reminders, self-management tools, etc.)

Summary: Components of Successful Healthcare Delivery Models for Heart Failure

- Increased access to healthcare professionals for problems by telephone or “walk-in” appointment
- Early attention to signs and symptoms of fluid overload (ie, flexible diuretic regimen)
- Supplementation of in-hospital education with outpatient education
- Coordination with home health agencies where appropriate
- Attention to behavioral strategies to increase compliance
- Emphasis on addressing personal, financial, and social barriers to compliance
- Assessment and assistance in management of social and financial concerns
- Adaptable to communities without academic medical centers
- Cost-effective and clinically relevant performance measurement systems