It Takes a Village...

Transitioning care from the hospital to home for heart failure patients

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Assistant Clinical Professor
Overview

• Why should I care about transition of care?
• Evolution of patient flow
• Barriers to good transitions
• Overcoming barriers
Transition of Care (TOC)

- A product of the modern era of medicine
- Increased focus on this area by CMS and other initiatives that affect reimbursement
- Vulnerable time for patients
  - New diagnoses
  - Multiple medication changes
Components of a Transition

• Medication reconciliation
• Education about diagnoses/warning symptoms
• Follow up appointments/referrals
• Follow up labs/studies
• Durable medical equipment
• Home health
Dr. Washington Epps

Circa 1885

House call
Patient Flow

Patient gets sick → Patient stays at home → Patient gets better
Patient Flow

Patient gets sick → Patient stays at home → Patient gets better

No transition of care needed
Norman Rockwell-esque family doctor
Patient Flow

1. Patient gets sick
2. Patient goes to doctor’s office
3. Patient admitted to hospital
4. Patient gets better
5. Patient goes to doctor’s office
6. Patient goes home
Patient Flow

Patient gets sick → Patient goes to doctor’s office → Patient admitted to hospital → Patient gets better

Transition of Care Needs

Education
New prescriptions
New equipment
Follow up appointments
Advent of the hospitalist

- Separation of inpatient and outpatient care
- Doctors engage in shiftwork

Circa 1990s
Hospital based specialists

**PROS**
- In house physician available for patients at all times
- Better rested physician
  – Reduce medical errors?
- Inpatient specialist

**CONS**
- Increases number of handoffs
- Physician caring for patient in hospital may not be physician who knows patient best
- Less patient ownership?
- Lower patient satisfaction?
Patient Flow

Patient gets sick ➔ Patient goes to doctor’s office ➔ Patient admitted to hospital ➔ Patient gets better

Transition of Care Needs

Provider-to-provider communication
  • Inpatient findings
  • Follow-up labs
  • Appointments

Patient goes to doctor’s office ➔ Patient goes home
Patient admitted to hospital

Night shift

Primary Team
Attending, Fellow,
Resident, Intern

Primary Team
Attending, Fellow,
Resident, Intern

Day of Discharge
Attending
Fellow, Resident,
Intern’s day off

Discharge Summary

Patient goes to doctor’s office

Consultants

Consultants
Other Realities

• Managed care
• Increasing number of treatment options
• Limited care for mental health and addiction
• Push for shorter hospital stays  
  – More outpatient evaluations (or more loose ends)
• Electronic medical record
• Cultural melting pot
Barriers to a Good Transition

• Access to Care
• Behavioral
• Communication
• Logistical
Barriers to a Good Transition

Access to care

– Payor
  • Number of underinsured growing
  • Managed care plans

– Limited finances
  • Drug copays
  • Appointment copays
Barriers to a Good Transition

Behavioral

– Patient motivation
  • “what is the point?”
  • “…but I like salt/smoking/fast food.”

– Dementia

– Addiction

– Mental health issues
  • Depression is very common in HF patients

– Provider motivation
Barriers to a Good Transition

Communication

– Provider-to-provider communication
  • May not occur
  • Information may not be accurate

– Provider-to-patient communication
  • Language barriers
  • Pseudo-language barriers
  • Low health literacy
  • Patients forget (assume 50%)
Barriers to a Good Transition

• Logistical
  – Contact with outpatient providers
    • Phone tree problems, no contact information
  – Multiple providers
    • Coordination of care
  – Transportation
Vulnerable Patients

• Elderly
• Homeless
• Skilled nursing facility residents
• Addiction
• Complex patients
Transition of Care Models

• Mary Naylor model
• Project RED
• Telemedicine
Mary Naylor

• Studied Medicare population in randomized controlled trials
• Intervention patients had advanced practice nurses (APN) that follow patients from admission to three months after discharge.
Patient admitted to hospital

Night shift

Primary Team
Attending, Fellow, Resident, Intern

Patient goes to doctor’s office

Home

Day of Discharge
Attending Fellow, Resident, Intern’s day off

Consultants

Consultants

Primary Team
Attending, Fellow, Resident, Intern

APN

APN

APN
Mary Naylor: HF Population

- Mean age 75
- Annual income < $20,000 (52%)
- No social support (~33%)
- Mean # daily Rx = 6.5
- Mean # health conditions = 6.4
Mary Naylor: Results

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year readmission rate</td>
<td>44.9%</td>
<td>55.4%</td>
</tr>
<tr>
<td>Total hospital days</td>
<td>588</td>
<td>970</td>
</tr>
<tr>
<td>Mean 52 week cost</td>
<td>7,636</td>
<td>12,481</td>
</tr>
<tr>
<td>Patient Satisfaction</td>
<td>Greater</td>
<td></td>
</tr>
</tbody>
</table>

*JAGS 52;675-684;2004*
Project RED

• Started in Boston Medical
• Implementation of discharge engineers to facilitate transition home
  – Educate the patient about his or her diagnosis throughout the hospital stay.
  – Make appointments for clinician follow-up and post-discharge testing
  – Discuss with the patient any tests or studies that have been completed in the hospital and discuss who will be responsible for following up the results.
  – Organize post-discharge services.
  – Confirm the Medication Plan.
  – Reconcile the discharge plan with national guidelines and critical pathways.
  – Review the appropriate steps for what to do if a problem arises.
  – Expedite transmission of the Discharge summary to providers
  – Assess the degree of understanding
  – Give the patient a written discharge plan
  – Provide telephone reinforcement of the discharge plan and problem-solving 2-3 days after discharge.

30% reduction in hospital usage in 30 days in intervention group
### Project RED: Sample DC Plan

<table>
<thead>
<tr>
<th>Time</th>
<th>Medication</th>
<th>Dosage</th>
<th>Route</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Morning</strong></td>
<td><strong>heart</strong></td>
<td><strong>ASPIRIN EC 325 mg</strong></td>
<td>1 pill</td>
</tr>
<tr>
<td></td>
<td>To stop smoking</td>
<td><strong>NICOTINE 14 mg/24 hr</strong></td>
<td>1 patch</td>
</tr>
<tr>
<td></td>
<td>Then, after 4 weeks use</td>
<td><strong>NICOTINE 7 mg/24 hr</strong></td>
<td>1 patch</td>
</tr>
<tr>
<td></td>
<td><strong>Blood pressure</strong></td>
<td><strong>COZAAR LOSARTAN POTASSIUM 50 mg</strong></td>
<td>1 pill</td>
</tr>
<tr>
<td></td>
<td><strong>Infection in eye</strong></td>
<td><strong>VIGAMOX MOXIFLOXACIN HCl 0.5 % soln</strong></td>
<td>1 drop</td>
</tr>
<tr>
<td><strong>Noon</strong></td>
<td><strong>Blood pressure</strong></td>
<td><strong>ATENOLOL 75 mg</strong></td>
<td>1 pill</td>
</tr>
<tr>
<td></td>
<td><strong>Blood pressure</strong></td>
<td><strong>LISINOPRIL 40 mg</strong></td>
<td>1 pill</td>
</tr>
<tr>
<td></td>
<td><strong>Infection in eye</strong></td>
<td><strong>VIGAMOX MOXIFLOXACIN HCl 0.5 % soln</strong></td>
<td>1 drop</td>
</tr>
</tbody>
</table>
Project RED: Sample DC Plan

** Bring this Plan to ALL Appointments **

John Doe

What is my main medical problem?
Chest Pain

When are my appointments?

<table>
<thead>
<tr>
<th>Tuesday, October 24th at 11:30 am</th>
<th>Thursday, October 26th at 3:20 pm</th>
<th>Wednesday November 1st at 9:00 am</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Brian Jack Primary Care Physician (Doctor)</td>
<td>Dr. Jones Rheumatologist</td>
<td>Dr. Smith Cardiologist</td>
</tr>
<tr>
<td>at Boston Medical Center ACC – 2nd floor</td>
<td>at Boston Medical Center Doctor’s Office Building 4th floor</td>
<td>at Boston Medical Center Doctor’s Office Building 4th floor</td>
</tr>
<tr>
<td>For a Follow-up appointment</td>
<td>For your arthritis</td>
<td>to check your heart</td>
</tr>
<tr>
<td>Office Phone #: (617) 444-2222</td>
<td>Office Phone #: (617) 444-7777</td>
<td>Office Phone #: (617) 555-1234</td>
</tr>
</tbody>
</table>
My Medical Problem:

Noncardiac Chest Pain

Noncardiac chest pain is chest pain that is not caused by a heart problem.

- If your chest pain gets different or worse, call your doctor.
- Take your medications as prescribed.
- Carry your medicine with you.
- See your doctor and ask questions.

Picture adapted from The Society of Thoracic Surgeons Website.
**Bring this Plan to ALL Appointments**

After Hospital Care Plan for

Samuel

Discharge

If you have any questions or need further assistance, call your Discharge Advocate: (617) 414-6822.

Within serious health problems? Call Pamela Cottel: (617) 269-7500

Northeastern U.S.
Relational Agents Group
Telemedicine

• Remote home monitoring beyond a simple telephone call
  – Telephone transmission of vital signs
  – Pacemakers
  – Devices (PA Pressure monitors, impedance)
  – Virtual visits
Telemedicine in HF

- Manual or automatic
- Doctor’s Office
- Manual or automatic
- Call Center
- Action
Telemedicine

• Manual transmission of VS
  – Fail. NEJM 2010 Dec 9;363(24):2301-9

• Cochrane Review
  – Pooled 25 randomized controlled studies on structured phone calls and telemonitoring
    • Positive effect with respect to mortality and hospitalizations
Current TOC Program at UC Davis

• Hybrid program
• Inpatient based NP and pharmacist
  – Education
  – Identification of barriers
  – Logistical planning
  – Post-discharge telephone follow up
Patient admitted to hospital

Night shift

Primary Team Attending, Fellow, Resident, Intern

Day of Discharge Attending Fellow, Resident, Intern’s day off

Patient goes to doctor’s office

Home

Consultants

Consultants
Heart Failure Clinic

- Dedicated heart failure care
- Detailed case management
- Education reinforcement
- Multidisciplinary HF clinics have been shown to reduce readmission rates as much as 85%
Future Directions

• Fine tune technologic adjuncts to improve automatic transmission
  – Reduce active patient involvement
  – Direct hemodynamic monitoring may be coming

• Extend programs to primary care networks and remote areas

• Health care reform
  – Improve access to care
It really does take a village...

...to make a good transition

- Challenging patients
- No shortcuts
- Multidisciplinary team is needed
- Vulnerable patients should be the focus if resources are limited