Identify And Intervene With Emergency Department Frequent Users

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Identify and Intervene with Emergency Department Super-Users (i2 EDS)

Project Leaders:
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Christine Dutkiewicz, RN, Nursing Director of Care Coordination;
Jeremiah Schuur, MD, MHS, Emergency Medicine

Team Members:
Emergency Department
Elisabeth Lessenich, MD, PGY4 Resident
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Carla Pina, Community Health Worker

Care Coordination
Jada Devlin, RN, ED care coordinator
Mary Ellen Lockhart, RN, ED care coordinator

Social Work
Elaine Devine, LICSW, ED Social Work

Primary Care
Lori Tishler, MD, Medical Director of Jen Center
Becky Cunningham, MD, Physician lead iCMP program
Lisa Wichmann, RN, Nursing Lead iCMP Program

Psychiatry
David Gitlin, MD, Chief of Medical Psychiatry (Consult-Liaison Services)
Erin Young, LICSW, Social Work
Patient D

- 42 y.o. man with pulmonary sarcoidosis, recurrent hospitalization for pneumonia, on home oxygen, prior stoke, hypertension, high cholesterol, diabetes
- Unemployed, on disability income, lives with wife and 4 children, feels his financial problems prevent him from being healthy, would like to return to work
- 13 ED visits in April-Sept 2014 for shortness of breath
Background

- Small group of patients have high ED use ("frequent-users")
  - 3/2013 – 2/2014: 50 patients accounted for 1,083 visits (1.7% of total)

- For patients, frequent use is associated with poor quality care

- Clinic-based Care Coordination not meeting pt’s needs
  - 25 of 50 had Brigham and Women’s (BWH) PCPs
  - 7 of 50 enrolled in clinic-based care coordination programs
  - 5 of 50 with acute care plans
Aim Statement

• Goal: develop ED-based care coordination program to:
  • *Improve* quality of care for vulnerable population
  • *Decrease* ED visits and hospitalizations*
  • *Improve* value

* beyond historical controls, based on 15% reduction for regression to mean
ED-Based Care Coordination Efforts

- Community Health Worker
- Acute Care Plans
- Analysis of Effect
Accomplishments to date

• Community Health Worker

• Acute Care Plans

• Analysis of Effect
Goal: establish longitudinal relationship with 25-30 patients

- Certified community health outreach worker
- Experienced Housing Case Manager in Boston

Progress to date (4 months):

- Completed initial assessment of 38 patients;
- Ongoing relationship with 22 patients
- 17 home visits completed
- 24 BWH outpatient clinic contacts, 11 outside appointments
- 24 referrals from ED providers
- Connected w/ social services: e.g. housing, utilities, food assistance
Follow-Up: Patient D

- 42 y.o. man with pulmonary sarcoidosis, recurrent hospitalization for pneumonia, on home oxygen, prior stroke, hypertension, high cholesterol, diabetes
- Unemployed, on disability income, lives with wife and 4 children, feels his financial problems prevent him from being healthy
- 13 ED visits in April-Sept 2014 for shortness of breath

<table>
<thead>
<tr>
<th>Health Barrier/ Pt. goal</th>
<th>Community Health worker intervention</th>
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<tbody>
<tr>
<td>Financial and utility concerns</td>
<td>Enrolled in program to prevent utility shut-offs, arrange financial assistance program</td>
</tr>
<tr>
<td>Food insecurity</td>
<td>Enrolled in supplemental food assistance programs, referred to local food pantries</td>
</tr>
<tr>
<td>Missed appointments</td>
<td>Home visits engaged wife with appt management</td>
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</tbody>
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Impact ➞ 0 ED visits since 9/22/14
Accomplishments to date

• Community Health Worker

• Acute Care Plans

• Analysis of Effect
Acute Care Plans

Progress to date:

• 24 draft care plans completed by project team
• 12 completed final review & entered in electronic medical record
• 6 care plans to be updated by outpatient care managers
Patient R

• 30 y.o. man with multiple medical conditions including end-stage renal disease, cardiomyopathy, chronic pain
• 45 ED visits in prior 9 months

Care plan revised x2 over 3 months → Multiple Patient/Family/Team meetings to communicate care plan to patient → Improved and standardized approach to chronic pain in ED
Patient R: ED, Inpatient, Observation and Outpatient Visits

Impact:
Follow-up: Patient R

- 30 y.o. man with multiple medical conditions including end-stage renal disease, cardiomyopathy, chronic pain
- 45 ED visits in prior 9 months

Impact ➔ ➔ 2 ED visits in last 2 months
Accomplishments to date

• Community Health Worker

• Acute Care Plans

• Analysis of Effect
Project Effect

- 72 patients randomized
  - 36: CHW and Acute Care plan
  - 36: Routine care
- Excluded patients w/ no utilization in post period
  - 9 treatment & 6 routine
- Outcome: ED, Hospital (Inpt & Observation) visits
  - intention to treat
  - Adjusted “per patient per month” (PPPM)
  - Difference in Differences
ED & Hospital Utilization

Routine Care
Pre
Post

Intervention
Pre
Post

ΔΔ (Program Effect)

ED visits PPPM
Inpt + Obs PPPM
Direct ED, Obs, Inpt Costs & Revenues

### Routine Care

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<th>Pre</th>
<th>Post</th>
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<tbody>
<tr>
<td>Direct Cost</td>
<td>$4,000</td>
<td>$8,000</td>
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### Intervention

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<th>Pre</th>
<th>Post</th>
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<tbody>
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<td>$0</td>
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**ΔΔ (Program Effect):**

- **Routine Care:** 34% decrease
- **Intervention:** 34% decrease

**Total Direct Cost PPPM**
Next Steps

• Community Health Worker sustainability
  • Funding until July

• Develop multidisciplinary ED acute care plan committee to keep this work ongoing

• Part IV MOC to disseminate findings
Key Learning

• ED-based care coordination is promising to reduce ED visits and hospitalizations

• Many frequent ED users’ needs are not being met by clinic-based care coordination
Thank You

- Jay Schuur and project team
- BWPO
- Shelly Horowitz and Marty Daiga
- My ABMS co-fellows
Questions?

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