Emergency Department Patient Navigation for Frequent Emergency Department Users: Findings from a Randomized Controlled Trial

Roberta Capp, MD, MHS
Assistant Professor, Department of Emergency Medicine, School of Medicine
Director of Care Transitions

Lauren Kelley, MSW, MPA
Darcey Cobbs-Lomax, MBA, MPH
Peter Ellis, MD
Adrienne Lofton, MSN, RN
Juan Carmona, MS
Erica Spatz, MD, MHS
Gail D’Onofrio, MD
Conflict of Interests

- Funding from NIH U grant (UL1 RR024139) and Yale New Haven Hospital to conduct ED patient navigation program
- Funding from NIH to support my time-K award (KL2 TR001080)
- Ongoing collaboration with Scribe of America to train scribes to become ED patient navigators
Background

- Medicaid patients comprise a large % of frequent ED users\(^1\)
  - Barriers to timely primary care\(^2,3\)
  - Lack of engagement in primary care\(^2,3\)
  - Lack of trust in primary care providers and health care system\(^2,3\)
  - Environmental barriers [lack of transportation, etc] \(^2,3\)
  - Long wait times for specialty appointments\(^2,3\)


Trifecta leading to Repetitive ED Use

Social Stressors

Chronic diseases

Mental Health Disorders

Avoidable Frequent ED use
Study Location: New Haven, CT

- High poverty in urban center
  - 26% living in poverty (vs. 9.5% in CT and 14.3% in U.S.)
  - 45% below 200% FPL
- Increasing poverty in surrounding suburbs
- Vast income disparities across county and state
- Growing income disparity in City of New Haven

Greater New Haven Community Index 2013 (DataHaven)
Study Objectives

• Assess whether patient navigation reduces:
  – Emergency Department visits AND
  – Hospital Admissions

for Medicaid-insured, frequent ED users (defined as 4-18 visits/year) in Greater New Haven
Community-Academic Partnership

- Project Access-New Haven (PA-NH) [Community Organization]
- Yale New Haven Hospital
- Yale, School of Medicine
- University of Colorado, School of Medicine
- Federally Qualified Health Centers (FQHC)
- Community organizations
Population Studied

• Medicaid-insured
• 4-18 visits to any of two local EDs in previous 12 months
• Greater New Haven, CT resident
• Exclusions
  – Chief complaint or >50% of previous ED visits for a psychiatric or substance use disorder
  – Active drug or alcohol abuse/dependence
  – Apparent drug-seeking behavior
Study Design

- RCT of patient navigation vs. standard care
- 100 patients recruited in Yale New Haven Hospital’s ED (March 2013-Feb 2014)
  - Staff screened electronic health record and approached eligible patients in the ED
  - Research & DSS/Medicaid consent
  - Extensive baseline questionnaire and interviews
  - Randomized to intervention or control
ED Patient Navigation Intervention

- **Intervention** – Patient navigation (12 months)
  - Connection with a PCP (if needed)
  - Accompaniment to an initial PCP visit
  - Development of a care plan with PCP (posted in Epic)
  - Appointment scheduling and reminders
  - Assistance overcoming access barriers (e.g., transportation)
  - Frequent check-ins
  - Follow-up on ED visits

- **Control** – Standard care
  - Contacted by RA at 1 year for follow-up survey
Six Months Utilization Results
Findings – Enrollment

- 251 Electronic medical records reviewed
- 227 Patients meeting study criteria
- 214 Patients approached
- 100 Patients enrolled (49 intervention/51 control)
Findings – No Participation

Reasons for not wanting to participate:

• Not interested/refused
• We will still be coming to the ED a lot anyways
• I don’t need help with my medical care
• I don’t want people in my business
• I am in too much pain
• Agreed to participate, but then pulled out once had to sign Medicaid release forms
Findings – Patient Characteristics

• 73% female
• Mean age: 40 years
• 48% Black, 33% Hispanic, 16% White, 3% mixed/other
• 58% high school education or less
• 28% employed full or part-time
• 89% state assistance (e.g., food stamps, WIC, housing)
• Low health literacy (mean REALM score = 5.4)
Findings – Social and Medical Stressors

• Medical/social needs
  – Mean local ED visits in past year = 7
  – 87% ≥1 chronic medical condition
    • 47% hypertension
    • 44% asthma
    • 31% diabetes
    • 20% high cholesterol
  – 51% food insecurity
  – 13% current or recent homelessness
Findings – Total ED Visits, Hospital Admissions, Hospital Costs

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<tr>
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<th>Intervention (n=49)</th>
<th>Control (n=51)</th>
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<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
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<tr>
<td>Total ED Visits (6 months)</td>
<td>202</td>
<td>114</td>
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<tr>
<td>Total Admissions (6 months)</td>
<td>56</td>
<td>23</td>
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<tr>
<td>Total Hospital Costs (6 months)</td>
<td>$541,972</td>
<td>$272,316</td>
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# Findings – Mean ED Visits, Hospital Admissions, Hospital Costs

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<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
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<tr>
<td>Mean ED Visits (6 months)</td>
<td>4.1</td>
<td>2.3</td>
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<tr>
<td>Mean Admissions (6 months)</td>
<td>1.1</td>
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<tr>
<td>Mean Hospital Costs (12 months)</td>
<td>$3,008</td>
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# Findings – % Change in ED Visits, Hospital Admissions, Hospital Costs

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<th>Intervention (n=49)</th>
<th>Control (n=51)</th>
<th>Difference</th>
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<tr>
<td>% Change ED Visits (6 months)</td>
<td>-44%</td>
<td>-21%</td>
<td>-23%**</td>
</tr>
<tr>
<td>% Change Admissions (6 months)</td>
<td>-59%</td>
<td>8%</td>
<td>-67%***</td>
</tr>
<tr>
<td>% Change Hospital Costs (12 months)</td>
<td>-22%</td>
<td>22%</td>
<td>-44%</td>
</tr>
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* <.05  
** <.01  
*** <.001
Findings – Program Satisfaction

“Extremely/Very Helpful” Program Components

- Scheduling assistance
- Reminder calls
- Follow-up calls
- Appointment accompaniment
- Transportation assistance
- Assistance understanding
- Assistance obtaining test results
- Medication assistance
- Social service referrals
- Someone to talk to about

Yale School of Medicine

Department of Emergency Medicine

SCHOOL OF MEDICINE
UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS

Project Access
New Haven
"[My Patient Navigator] kept me on my toes about appointments. There were some appointments that I did not want to go [to]. I got tired of hearing different stories. I didn’t want to hear no more bad news about my health. But my navigator encouraged me to go [to my doctor] and was there for me."

- Study participant
Conclusions

• Participants had complex health and social needs and many barriers to care
• Patient navigation reduced a large proportion of ED visits, hospital admissions, and hospital costs
• Navigated patients reported fewer barriers to care and high program satisfaction
Implications for Policy or Practice

• “High-touch/low-tech” interventions can make a difference
• Engagement and enrollment occurring in the emergency department is KEY!
• Ongoing Pilot project with Scribe of America:
  – Goal: To narrow down on the role of the ED in reducing avoidable ED visits/hospital admissions:
    • Development of an ED patient navigation program:
      – How to leverage ongoing community resources, without re-inventing the wheel?
      – What is the impact an ED patient navigation program on primary care follow up and engagement?
      – What is the impact of addressing social determinants of health?
Future/Current Ongoing Pilots

- Developed a training program called Social Advocates Facilitate Effective Home and Outpatient Management of Emergencies (SAFE HOME)- http://www.studenthotspotters.com/

- Training scribes from Scribe of America to become ED patient navigators and conduct socio-health screenings

- Measure outcomes:
  - What is the current ongoing network of resources in the community that scribe patient navigators can use as referral sources?
  - Number of patient touches and service referrals provided by scribe patient navigators?
  - Impact of referrals on ED discharge failures (i.e., return visits within 30 days), hospital admissions, and frequent ED use.
Thank You

• Questions about ED Navigation Programs:

Email me at: Roberta.capp@ucdenver.edu