An Interprofessional Student Hotspotting Program: Curriculum Design, Implementation, and Evaluation at Thomas Jefferson University

Gerald Gibbons, MD(c), MPH(c); Charles Baron MD(c), MPH(c); Lauren Collins, MD; Shoshana Sicks, EdM, EdD (c)
Conflicts of Interest

• We have nothing to disclose
Learning Objectives

Upon completion of the presentation, attendees will be able to:

• Identify the relevant stakeholders for developing an interprofessional clinical “hotspotting” curriculum

• Describe an interprofessional curriculum focused on addressing the needs of super-utilizer patient populations

• Apply lessons learned from the design, implementation and evaluation of “hotspotting” curriculum at their home institutions.
Background
Super-Utilizers

Figure 1. Distribution of health expenditures for the U.S. population by magnitude of expenditure and mean expenditures, 2010

Source: Center for Financing, Access, and Cost Trends, AHRQ, Household Component of the Medical Expenditure Panel Survey, 2010
Super-Utilizers

Concentration of Healthcare Spending in the US Population

- Year 1996
- Year 2005
- Year 2010

Cost Share

Population Share
Super-Utilizers
Hotspotting

• Law enforcement term → mapping 911 calls to understand resource allocation

• In healthcare, used to map health care costs to better utilize resources
Hotspotting

• Developed by Camden Coalition of Healthcare Providers (CCHP)
Interprofessional Student Hotspotting Learning Collaborative

• The CCHP has been hotspotting for nearly 15 years

RESULTS FROM CAMDEN COALITION’S FIRST 36 PATIENTS

<table>
<thead>
<tr>
<th>Category</th>
<th>Before Intervention</th>
<th>After Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Number of Hospital &amp; Emergency Room Visits Per Month</td>
<td>62</td>
<td>37</td>
</tr>
<tr>
<td>Average Monthly Cost</td>
<td>$1.2M</td>
<td>$500k</td>
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• Launched the ISHLC in 2014
  • Students identify healthcare super-utilizers
  • Students explore factors that lead to high healthcare utilization
  • Students facilitate patients in obtaining community resources, coordinating care and navigating the healthcare system
Student Hotspotting at Jefferson
Early Hotspotting at Jefferson

- Participating since 2014
- Traditionally one interprofessional team/yr:
  - 4 faculty advisors
  - 6 students
  - Professions: Couple & Family Therapy, Medicine, Nursing, Occupational Therapy, Pharmacy, Public Health
- Largely an “extra-curricular” activity for students and faculty
Hotspotting Curriculum

• Kick-Off & Wrap-Up Events
• Online Mosaic-Based Video curriculum
• Regular team meetings
• Monthly Skills Workshops
• Monthly Case Presentations
• Wrap-Up PowerPoint presentation
Expansion
Why scale up?

- Students interested in more clinically relevant collaborative practice experiences
- Jefferson Center for Interprofessional Practice and Education (JCIPE) interested in expanding longitudinal curriculum on social determinants of health
- Clinical stakeholders/Office of Care Coordination interested in addressing needs of super-utilizers
- Academic leadership interest in community engagement and additional IPE/CP opportunities
- Two MD/MPH students interested in curriculum development and program implementation
Stakeholders

Academic Pillar
- Sidney Kimmel Medical College
- College of Pharmacy
- College of Nursing
- College of Health Professions
- College of Population Health
- Jefferson Center for Interprofessional Education

Clinical Pillar
- Family Medicine
- Internal Medicine
- Emergency Department
- Geriatric Medicine
- Office of Care Coordination

Community Partners
- Center for Urban Health
- Camden Coalition of Healthcare Providers
Something Borrowed & Something New

Original ISHLC Program

- Kick-Off & Wrap Up Events
- Online Mosaic-Based Video curriculum
- Regular team meetings
- Monthly Skills Workshops
- Monthly Case Presentations
- Wrap-Up PowerPoint presentation

New Jefferson Additions

- Curriculum
  - For-credit experiences
  - Transcript designation
  - Personal Reflection Essay
  - Team Poster Presentation
  - Capstone/Research Projects

- Operations
  - Student Application Process
  - Pre-generated patient lists of Super-Utilizers
  - List of available community resources
  - Student Alumni Council
  - FAQs for students and advisors
  - Flowchart for questions for students and advisors
  - Systems training
  - Faculty/staff recruitment and development
Evaluation
A Little More Logic

- Mixed method, multidimensional
- Encompassing student, patient, systems effects

Academic (TJU) Impacts
- Increase curriculum integration
- Increase $ commitment
- Create hotspotting fellowship

Health Partner (Jefferson Health) Impacts
- Decrease ED, inpatient usage
- Increase outpatient + social program usage
- Increase cost savings

Student Impacts
- Increase K,S,A,Bs in:
  - IPCP
  - Complex patients
  - Health systems

Impacts for PC Field
- Increase primary care providers working w/ complex patients
- Decrease burn-out
- Increase empathy

Patient Engagement
- Set personal goals
- Use appropriate services
- Create own sustainability plan

If...

ISHLC Care Model
- Identify super-utilizers
- Provide high touch clinical support via patient-centered, IP teams
- Partner with patients to set goals, plans
- Connect patients to appropriate outpatient, social services

If...

Student Development
Engage in:
- Curriculum
- Faculty mentorship
- Team meetings
- Team debriefings

Academic (TJU) + Health Partner (Jefferson Health) Support

Improved Patient Outcomes

If..
Student Outcomes
- Pre/post KSAB (adapted from ATHI, HPATHI, Asgare)
- Jefferson Empathy Scale
- Cultural Competence Scale
- Jefferson Teamwork Observation Guide (JTOG)
- Focus Groups

Advisor Outcomes
- Maslach Burnout Scale
- Program Evaluation/Satisfaction
- Focus Groups

Patient Outcomes
- Multidimensional Health Locus of Control Scale
- Freelist Interviews

System Outcomes
- Utilization Data
- Claims Data
- Curriculum Integration
- Funding
Sustainability
Setting Ourselves up for Longevity

- Integration into Jefferson curriculum (capstones, independent studies, existing courses, scholarly inquiry)
- “Excellence in Collaborative Practice” transcript designation
- Data analysis to support additional buy-in and expansion
- Grant, institutional and philanthropic funding
Office of Care Coordination Partnership

• Dedicated to improving patient outcomes through innovative strategies
• Have access to claims data and hospital/ED utilization
• Healthshare Exchange of Southeastern Pennsylvania

Why make care coordination a priority?

- **Happier patients**: Patients and families hate it that we can’t make this work.
- **Fewer problems**: Poor hand-offs lead to delays, lapses in care, adverse drug effects, and other problems that may be dangerous to health.
- **Less waste**: Enormous waste is associated with duplicate testing, unnecessary referrals, unwanted specialist-to-specialist referrals, and failed transitions from hospitals, EDs, & nursing homes.
- **Happier physicians & staff**: Clinical practice will be more rewarding.
Challenges

- Institutional memory
- Funding
- Faculty and staff advisors
- Coordination/operations
- Data access

Responses

- Identifying and meeting with stakeholders to collate and centralize information
- Hub grant, seeking additional
- Individualized identification and recruitment as well as faculty/staff/student development & mentoring
- Hired Program Coordinator
- Partnering with Care Coordination to request access, using EPIC for most updated data
Questions?

Jefferson Center for Interprofessional Practice and Education
JCIPE@jefferson.edu
@JeffCIPE
References


