Hotspotting in Healthcare: Identifying Emergency Department Super Utilizers

Vinay Maliakal, Evan Zhang, and Clare Wynne
University of Massachusetts Medical School Class of 2020

University of Massachusetts Medical School

UMassMemorial Health Care

Background

- Hotspotting in healthcare is a method of targeting super- utilizers of the Emergency Department (ED) with the goal of intervention
  - Super-utilizers are patients with high rates of ED admissions, with specific criteria defined in our project
- Based on the work of the Camden Coalition and Dr. Jeffrey Brenner
- The benefits of these interventions include better quality care for patients and health care cost reduction
- Goals of this summer's project:
1. Define inclusion and exclusion criteria for super-utilizers to more objectively identify at-risk patients in both the University and Memorial campus ED
2. Allow students a care management learning experience with the UMass Office of Clinical Integration

Care Management Model

1. Patient Identification via defined Hotspotting Criteria

2. Approach patient to gauge interest in program enrollment

3. Conduct either in-person or telephonic assessment interview

4. Appropriate interventions identified and addressed

5. Follow up with patient to record progress and intervention efficacy

## Super-utilizer Criteria

Step 1
9311 unique visits in the past month at University (6184) and Memorial (3217)
7959 unique patients accounted for all visits
Pulsecheck data from a 1 month search exported and analyzed using Excel
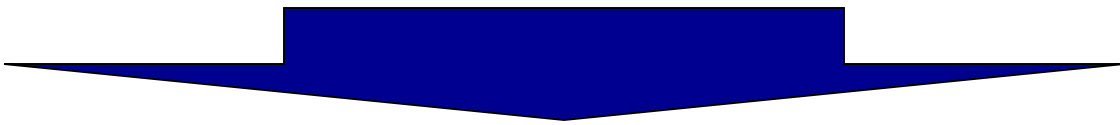
Step 2
86 patients with 4+ ED visits within the past 1 month from date of search, including visits at both UMass Memorial and UMass Worcester
Identified through sorting of 1 month Pulsecheck data using Excel
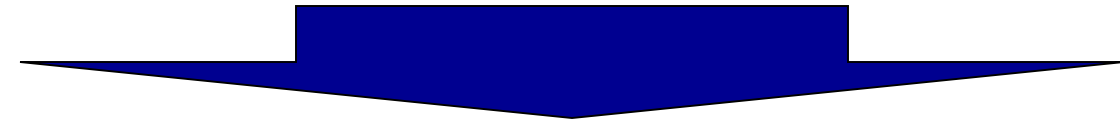
Step 3
56 patients with 10+ ED visits within the past 1 year from the date of search, including visits at both UMass Memorial and UMass Worcester
Patients with 4+ ED visits within the past 1 month individually searched to determine number of visits within past year

Qualitative Exclusion Criteria
- pregnancy
- cancer
- chronic inebriation
- and per ED provider advice

Care Management Assessment Note

Synopsis: Short summary of what you spoke about
Diagnoses: See Allscripts
Current disease state: Diagnosis being treated for currently? How do you feel things are going, controlled/not well controlled? In past 30 days, how many days did poor mental / physical health prevent you from your usual activities? Are you limited in any way in your activities due to any impairment / health problem? What is your major health problem that limits your activities (one)? How long (weeks, months, years) has this limited you for?
Medical/Health Needs: How would you describe your health in general? (Excellent, Very Good, Good, Fair, Poor) How many days of the past 30 days was your physical health "not good"?
Mental Health: Over the last two weeks, how often have you felt: anxious or nervous? Not able to stop worrying? Little interest / pleasure in doing things? Feeling down, depressed, hopeless? How many days in the past 30 days was your mental health "not good"?
Addiction: In the past year, how many times have you used the following: alcohol (> 5x/day for men, > 4x/day for women)? Tobacco? Recreational drugs? Prescription drugs (for reason other than prescribed)?
Active/Current medications: What meds are you taking right now, frequency? Reviewed current meds with the pt.
Adherence to medication(s): How often do you think you miss your meds? (copay issues/ reminds MH copay policy.
Specialists: What specialists are you seeing right now? Whom/location/Who prescribes meds?
Pain: Are you currently taking pain medication? Are you currently seeing a pain specialist for treatment? How bad is the pain (1-10 scale)? Where is your pain?
Next PCP f/u appt: Next appt w/ PCP/ Verify in chart.
Other upcoming appt.s: BH etc, how often do you see the specialist? Are you getting same type treatment or doing something different with them?
Hospitalizations: Any hospitalizations recently? If so what was it for/ how long in hospital? How is it going since the last hospitalization?
ED utilization: Ask last time in ED and if yes, what was it for? How is it going since the last ED visit?
Current access to care/services: Any concerns with getting care w/ pcp/ specialists etc. Are you able to get appts when you need them?
ADL/ IADL deficits: Do you require any assistance w/ (ADL's/IADL's) personal care, cooking, cleaning, shopping etc? Do you have services in the home PCA/HHA?
DME needs: Do you use any assistive devices ie; cane, walker, W/C etc? Do you need assistance w/ getting DME devices?
Social support issues: Who lives with the patient at home? If pt lives with someone else, is it temporary?
Family situations pertinent to care: What family/ friend supports are in place? Do you feel like you are being supported?
Transportation: How do you get to your appts? Missed appts d/t transportation issues? Do you drive? Family / friends drive you? Public transport or taxi? Walk, ride bike, scooter? Medical transportation? Can you get around easily (Y / N)? Offer PT1 (prescription transportation).
Insurance elig/auth: Issues: Look up eligibility in IDX if Medicaid 2003/pcc is not visible. Any other insurance eligibility or prior auth issues?
Housing: Do you have a place to live? Are you living in an apartment, house, room? Do you live with a friend or relative? Shelter / boarding home? Streets / abandoned home? Other? Do you plan on moving out of _____ ? If so, when? Any concerns w/ housing?
Food / Nutrition: Do you follow a special diet? Have you lost / gained 10 lbs in past 3 months? Do you have trouble affording food? In the past year, how often did you worry about running out of food? How often (if ever) did you run out of food in the past year and were not able to buy food?
Income/ Benefits: Do you have income? What type ie SSDI/SSI/EFDCA? SNAP, housing assistance, fuel assistance? Unemployment? Plasma center? Pension / retirement? Sex work? Drug trade? Recycling? Panhandling? VA benefits? Any concerns with either?
Advance Directives: Do you have something in place if you were not able to speak for yourself, ie; healthcare proxy, living will, medical power of attorney?
Legal: Do you have a power of attorney? Do you have any current charges pending? Are you on probation / parole? Do you have any felony convictions?
Identification: Do you have a state ID card? Do you have a SS card? Do you have a birth certificate / passport? Where were you born?
Care Coordination needs: document and discuss w/ patient what you are going to do to assist them.
Initial Education provided: document any education provided.
Contact numbers / Program info: Provided: (508)334-2655 work#.
Provider goal: What I am going to assist the pt w/.
Pt. goal: What would you say is the biggest goal in terms of your healthcare you are working on right now or interested in working on?
Goal for next f/u: What they agree to work on and what you are going to assist them with.
Other barriers & considerations: Anything getting in the way, which is preventing you from maintaining your health?

Figure 1: Case Management Assessment form used to determine patient health and social needs after enrollment

Future Directions

- Continue care management of identified super utilizers
- Further refine super-utilizer criteria both quantitatively and qualitatively
- Define metrics for progress in reducing health care expenditures and quality improvement
- Create a sustainable program for future students to continue

Acknowledgements

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