Hotspotting in Healthcare: Using Care Management to Improve Healthcare Outcomes

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Background

- Hotspotting in healthcare is a method to pinpoint high utilizers of healthcare services using available data and stage interventions to help patients improve their health and reduce overall healthcare costs.
- The Office of Clinical Integration at UMass is an organization that provides care management for high-risk patients that use MassHealth.
- The goal of this population health clerkship was to gain exposure to care management by building on the summer 2016 Hotspotting project at UMass.
- Additional experiences included a tour of the UMass Care Mobile and shadowing community health workers of the Pediatric Asthma Program.

Approach

1. Patient referred to OCI by provider
2. Needs assessment conducted during face-to-face meeting with patient
3. Appropriate interventions researched and provided to patient
4. Follow-up outreach to patient to record progress

Case Management Assessment

| Needs                        | Care Coordination needs | Advance Directives | DME needs | ADL/IADL deficits | Current access to care/services | ED utilization | Specialists | Active/Current medications | Current disease state | Other upcoming appt.s | Transportation | Social support issues | Insurance | Missed Appointments (No-shows) | ADL/ADL | Medication Authorization / DME | Mental Health Access | Transportation |

Top Needs Identified by Patients

(n = 17 patients)

Number of Patients

| Mental Health Access | Transportation | Medication Authorization / DME | Housing | Missed Appointments (No-shows) | ADL/ADL |

Sample Interventions Conducted

- Referral for mental health care management
- Referral for psychiatry eval
- Set up PT-1
- Facilitated PA for medications
- Referral for knee/back braces
- Referral for glasses Rx
- Education about housing options
- Phone calls to remind patients about appointments
- Found new visiting nurse
- Referral for home health agency

Results

Take Home Points

- Social determinants of health (e.g., housing, transportation, etc.) can be important factors that prevent patients from maintaining good health.
- A team-based approach to healthcare that includes case managers and care coordinators can play a vital role in assisting patients improve their health.
- Patients engaged in a care management program may be more motivated to take an active role in their healthcare.
- Patients seem more satisfied with their care when a case manager is involved.

Future Work

- Develop ways of collaborating with the Emergency Department at UMass Memorial to conduct care management on-site.
- Explore the possibility of doing hotspotting as part of a student organization or elective.
- Analyze patient and cost outcomes to understand impact of care management.

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Case Example

- Patient Description: JS is a 46 y/o male with PMH of ESRD (s/p renal transplant), anxiety, depression, T2DM, and HTN.

Main Needs

- Frustration with home health care nurse
- Missed appointments d/t transportation
- Education regarding diabetes
- PA for insulin pen
- Handicap status

Interventions

- Found new nurse for patient
- Facilitated transportation
- Attended appointments with specialists to reinforce education about diabetes
- Facilitated PA for insulin pen
- Sent handicap placard application

Outcomes

- Patient satisfied with new nurse
- Patient more informed about diabetes
- Received insulin pen
- Applied for handicap status
- No additional ED visits/admissions

Education regarding diabetes

Follow-up

- Missed appointments due to transportation issues
- Frustration with home health care nurse
- Frustration with home health care nurse

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Patients seem more satisfied with their care when a case manager is involved.

“I was glad that someone was there to advocate for me.” - Patient

Barriers to effective care management include loss of patients to follow-up, lack of patient interest, ineffective social services and miscommunication between healthcare providers.