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Continuity of Care in Rural Surgical Patients

Item Type	Presentation;Presentation
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Download date	2026-06-11 10:27:50
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Link to Item	https://hdl.handle.net/20.500.14849/2674

Continuity of Care in Rural Surgical Patients

Brandon, VT

February-March 2023

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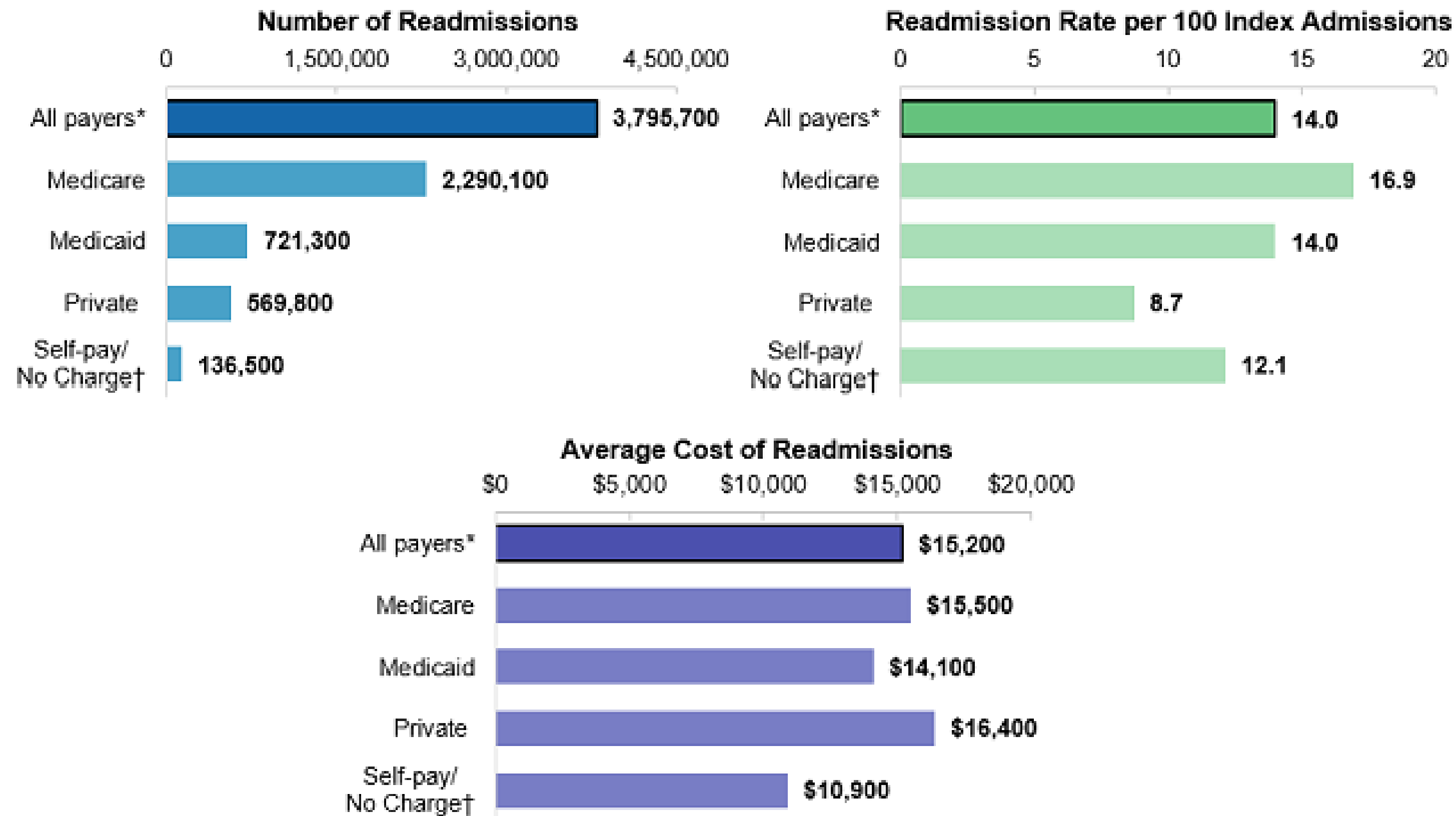
Problem Identification

- Continuity of care is an integral part of patient care and is important for reducing morbidity and mortality following hospitalizations.
- Following a simple elective surgery, a patient may experience a minimum of 7 transitions of care, rising to 15 for complex patients requiring critical care, and interhospital/rehabilitation moves.[1]
- 80% of medical errors that occur during transition of care are associated with poor communication of health information between healthcare providers.[2]
- 20% of Americans reside in rural communities, served by only 11% of the nation's physicians.[3]
- General surgeons are the most geographically widely distributed surgical subspecialist with 7.7 per 100,000.[4]
- In large rural areas (like most of Vermont) there are approximately 28 family physicians per 100,000.[4]
- Given these statistics, family medicine physicians and general surgeons are often pushed to take on a greater scope of practice and foster a closer relationship than their counterparts in urban settings.
- Communication of health information is an important part of patient management success, and increased patient volume and changing EMRs pose challenges to the surgeon family physician relationship.

Public Health Cost

- Lack of suitable discharge planning and proper transition of care increases the risk of readmission and may negatively affect the functional and status quality of life of patients and caregivers.
- Readmission makes up a significant portion of the expense incurred by the US healthcare system; approximately $52.4 billion dollars is spent annually to care for patients that were readmitted to the hospital within 30 days for a previously treated condition.[5]
- For example, in 2018 readmissions associated with circulatory system diseases or injuries (including procedural complications) cost Medicaid and Medicare payers between $22,000 and $25,800.[6]
- Readmissions caused by septicemia in 2018 cost Medicaid and Medicare payers between $15,000 and $19,800.[6]
- Not only is readmission costly monetarily, it is also costly to the overall health of patients with increased instances of permanent disability, hospital associated delirium, and cognitive decline in the elderly.

Statistics pooled from “Overview of Clinical Conditions With Frequent and Costly Hospital Readmission”[6]:



Community Perspective

- **PMC Brandon Family Physician**:
  - Communication: Receives cc'd op-notes, which for the most part is sufficient information. Helpful to receive specific instructions if staples/drains need to be removed or if they will return to surgeon/specialist for management.
    - Some challenges are when patients show-up without having received confirmation of care management and then needing to call surgeon's clinic. Usually there is a time of waiting to be connected to nurse of provider, and the patient ends up in the office for longer and PCPs day is prolonged.
  - Chronic Care: Patients with chronic health conditions and chronic pain require a lot of follow-up and support. Notices continuity of care and communication is most challenging for these patients following orthopedic procedures.

- **UVMMC Colorectal Surgeon**:
  - Communication: UVM health network with EPIC and chat feature makes communication easy.
    - Sometimes challenge of knowing messages received or getting through to PCPs with urgent/acute messages.
  - Chronic Care: Tries to manage most of the immediate post-op care (staples, drains etc). Goal is to inform PCPs of any chronic care that was managed in the hospital and collaborate (HTN, DM). Ex, HTN/DM management of patient with new ileostomy.
  - Future Interventions: The idea of medical homes could be an interesting concept to incorporate into surgical care. Patients apart of a medical home could have easier access to pre-op planning as well as pre-op frailty and "pre-hab" interventions like PT/OT/nutrition to optimize surgical intervention and reduce hospitalizations in general. Barriers would be resources in VT and the already busy/maximally scheduled primary care physicians.

- **UVMMC Cardiothoracic Surgeon**:
  - Communication: Discharge summary with hospital course and follow-up plan most important information to send. For more complicated patients prefers to call primary care and cardiologists directly.
    - Challenges noticed is absence of confirmation process of receiving discharge paperwork, especially for out of network primary care offices
  - Chronic Care: HTN management very important post cardiac surgery, depending on area may be PCP or cardiologist managing medications. Important to send records to both if cardiology out of network.

Intervention and Methodology

- While the discharge summary is an important source of information regarding the hospitalization , the amount and clarity of the information is dependent on the writer.
- Propose the creation of a "Dot Phrase" in Epic that contains explicit list of post-op management items and when specialty follow-up is indicated.
  - Examples of items include labs needing to be drawn, medications added/discontinued and those needing tapering, wound management, suture/staple removal timelines if necessary and finally contact information if complications or questions arise.
- Surgeons could duplicate and customize the Dot Phrase for different common procedures like Laminectomy, CABG, Hemicolectomy, Appendectomy, etc.
- For those outside the Epic and Care Everywhere network (i.e Rutland Regional), the template could be used in their EMR and faxed to the family physician's office.
- Intended to decrease burden of chart review, chart searching, and time spent researching for surgeon contact info for family physician.
- Also intended to decrease burden of charting and phone calls for surgeons and residents on the surgery team.

Results and Response

- Due to time constraints, there was inadequate time to create the Dot Phrase and evaluate its effectiveness on transition of care.
- Both surgeons interviewed as well as PMC Brandon colleagues were interested in learning more about this modification in communication to reduce documentation review and increase efficiency of communication.
  - It is important to note that attitudes towards communication between PCPs and surgery teams in the UVM Health network were positive, with most suggestions being for augmentation rather than replacement of current practices.

Proposed Dot Phrase Example:

Patient Name: @NAME@
MRN: @MRN@
DOB: @DOB@
Admit Date: @ADMITDTTM@
Discharge Date: ***
Main Dx: ***
Procedure: ***, **Date:** ***

Op-Note routed to PCP: Y/N
Chronic Medical History: ***
Complications Post-Operatively: ***

Discharge Medication Changes: ***

Home Medications to Continue: ***

Patient/Family Aware of Changes: Y/N

Labs/Imaging pending results: ***

Labs/Imaging needed after discharge: ***

Drains/Staples/Sutures: Managed at specialist FU/Managed by PCP*** [insert instructions]

Discharge Vitals & Physical Exam:
Vital Signs: @TEMPRANGE@, @HRRANGE@, @PULSERANGE@, @PULSEFROMOXRANGE@, @RESPIRATORYRANGE@, @BPRANGE@, @O2SATRANGE@

General Appearance: alert, cooperative, no distress
Lung: clear to auscultation bilaterally, non labored breathing
Heart: regular rate and rhythm
Abdomen: soft, nontender, nondistended
Extremities: warm and well perfused, no edema
Incision(s)/Wound(s): ***

Next Follow-up: {To Insert Follow Up Appts, select link after D/C Orders are complete:29889}

Contact Information:
@SurgeonsContact@

Limitations

- Challenge of implementing the Dot Phrase across multiple hospitals (UVMMC, Dartmouth, CVMC, Porter, Plattsburgh, Rutland Regional, Northwestern) and multiple primary care clinics across the state. There would need to be a network and regional wide briefing on the quality improvement measure.
- Some redundancy of information, most is already present in discharge summary, but depends on person writing the summary.
  - Better intervention could be the restructuring of the discharge summary template rather than adding a new one.
- This intervention mostly falls on the residents and attendings to implement effectively.
- Difficult to monitor efficacy from a patient perspective, since the end goal is to reduce complications and readmission by increasing effectiveness of transition of care.

Future Interventions

- Implement the Dot Phrase in smaller health systems like Porter Medical Center and PMC Brandon and PMC Middlebury and monitor effectiveness before bringing before entire UVMMC Health Network, Dartmouth and Rutland Regional.
- Train new residents and medical students to use this Dot Phrase when completing discharge summaries.
- Inclusion of social determinants of health screening before discharge in transition of care documents with automatic inclusion of Social Workers/Case Managers associated with the patient’s primary care practice.
- Further research on the concept of medical homes and how surgeons and PCPs can collaborate more outside the hospital to optimize good outcomes in surgery (or avoidance of surgery/admissions).

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