A Multidisciplinary Team Approach to Reducing Readmission Rates

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Background
Reducing early postoperative readmissions is of keen interest to Hospital Administrators, both to improve the quality of care and reduce costs. As a result of higher-than-desired readmission rates for coronary artery bypass grafting (CABG) procedures, the Department of Cardiovascular Surgery at the Mayo Clinic launched a review of readmission causes and implemented interventions to reduce readmissions in this patient population.

Objective
The objective was to reduce 30-day unplanned CABG readmissions by 20% within a 6-month period.

Planning/Research Methods
The department formed a multi-disciplinary team comprised of physicians, advanced practice providers, healthcare systems engineers, and administrators to define the goals, objectives, and methods.

- Utilized DMAIC (Define, Measure, Analyze, Improve, and Control) framework.
- Performed a root cause analysis for a cohort of post-CABG readmissions during the identified time-period to determine the most prevalent reasons for 30-day all-cause readmissions within the population.
- Identified the three most common causes for readmission: 1) infection, 2) heart failure/effusion, and 3) clotting (deep vein thrombosis (DVT) and stroke).
- Collected baseline data on average time to readmission, patient follow-up compliance, and the rate of contact between post-CABG patients and the cardiovascular surgery care team.
- Conducted a best-practice review, highlighting the importance of post-discharge follow-up in reducing readmission rate.
- Reviewed inpatient and discharge protocols and identified opportunities to improve adherence to DVT prophylaxis.

Interventions Implemented

- Implemented a process to support compliance with inpatient protocols for postoperative DVT prophylaxis.
- Assigned a provider to identify and contact a cohort of post-discharge patients within one week of discharge.
- Engaged key stakeholders to endorse the interventions.

Results

- Reduced overall readmissions by 22%.
- Decreased readmissions in each category identified in the root-cause analysis: infection (by 50%), heart failure (by 100%), and DVT (by 100%).
- Increased compliance with postoperative DVT prophylaxis standards from 20% at baseline to 66% within the pilot group.
- Increased postoperative follow-up visits by 78%.
- Calculated an estimated 13 readmissions would have been avoided had these interventions been in place for the pre-pilot patients.

Lessons Learned

- Involvement of stakeholders from a range of disciplines (clinical and administrative) allowed for a broader view of the issue.
- A comprehensive review of clinical data was critical to accurately identify the reasons for readmission as well as to develop and implement appropriate interventions.
- Offering options for postoperative follow-up (i.e., phone call, in-person, or video visits) increased patient postoperative follow-up rate, representing a model that may be easily replicated in other practice areas.

Next Steps

- Proceed with implemented interventions for complete calendar year and conduct full data analysis.
- Implement a post-discharge call triage process to allow patients to reach an appropriate member of the care team if they have concerns before or after their follow-up visit.
- Improve hand-off and coordination with outside providers and facilities to identify patients who had received postoperative follow-up visits.
- Evaluate other peri- and postoperative protocols to further improve root cause factors for readmissions.
- Share the lessons learned and the methods developed through this project to surgical procedures and practice areas beyond the CABG patient population.

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