DOES DISCHARGE PHARMACY AFFECT OUTCOMES AFTER PERCUTANEOUS CORONARY INTERVENTION?

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Problem Definition

- Percutaneous coronary intervention (PCI) is one of the most common procedures performed in hospitals around the country each year.
- In-stent thrombosis is the most significant potential complication of this procedure, often occurring in the first month and with a high rate of mortality and morbidity.
- Patient compliance with dual antiplatelet therapy (DAPT) after hospital discharge is the most effective strategy in preventing in-stent thrombosis and hospital readmission from PCI-related complications.
- Transition of care from hospital to discharge is a common source of systems-based error.
- Inefficiencies in patient health education, coordination of transportation, family support in discharge process, and variability in pharmacy accessibility may all contribute to medication non-adherence.
- Delivery of discharge medications from an inpatient pharmacy prior to hospital departure may avoid these potential pitfalls.

Aims for Improvement

- To reduce the rate of this institution's readmission rate in patients discharged after PCI, by identifying the current trends in readmission in relation to prescription and medication delivery practices over the past 1 year.

Intervention

- The National Cardiovascular Data Registry (NCDR) database was queried for all patients who received PCI at TJUH from Sept 2017-Sept 2018.
- Through extensive chart review, information on discharge medication list, pharmacy used, and rates of readmission at 30-, 60-, and 90-day intervals was collected.
- Planned hospital readmissions for staged PCI-procedures were identified but not included as the population of interest

Results

- A total of **210 PCI procedures** were performed at TJUH during the study period.
- In these patients, discharge medication prescriptions were delivered to:

  TJUH pharmacy -   59 patients

  Outside pharmacy - 151 patients
- **Total hospital readmission rate was 17%**

Readmission	# of patients	TJUH Pharmacy	Outside Pharmacy
0-30 days	19	4 (7%)	15 (10%)
31-60 days	7	1 (2%)	6 (4%)
61-90 days	9	2 (3%)	7 (5%)
Total	35 (17%)	7 (12%)	28 (19%)

Discussion

- **Conclusions:** Patients who received discharge medications from outside pharmacies had higher rates of hospital readmission than those who received their medications from the inpatient pharmacy.
- The majority of patients have discharge prescriptions sent to their home pharmacies.
- An in-house discharge prescription program may be of benefit institutionally.
- **Limitations**: Hospital readmission to another institution was not included in our analysis and may underestimate the rate of PCI-related complications in our cohort.
- Medication issues that were addressed by physician phone call or urgent clinic visit were not included in this analysis, which may underestimate the rates of medication confusion and non-adherence.
- **Future directions:** Elucidating reasons behind the pattern or patient preference of using outside pharmacies (i.e. business hours, home delivery, pharmacist teaching).
- Development of an in-house discharge prescription program.
- An analysis of more recent data, over a longer period of time, or after a discharge prescription protocol has been put in place.
- Expansion of the outcome variables studied may better identify at risk patients and areas for improvement.