Discharge Summary Routing – Improvement by Automation

David Gallagher MD[1], Elizabeth Anderson[2], Kristian Knutsen[2], Lanie Dreibelbis[2], Barbara Walton[3], Jonathan Lovins MD[1], Stephen Telloni MD[1], Kevin Shah MD[4]

1 Duke Hospital Medicine, 2 Duke Performance Services, 3 Duke Health Technology Solutions, 4 Duke Primary Care

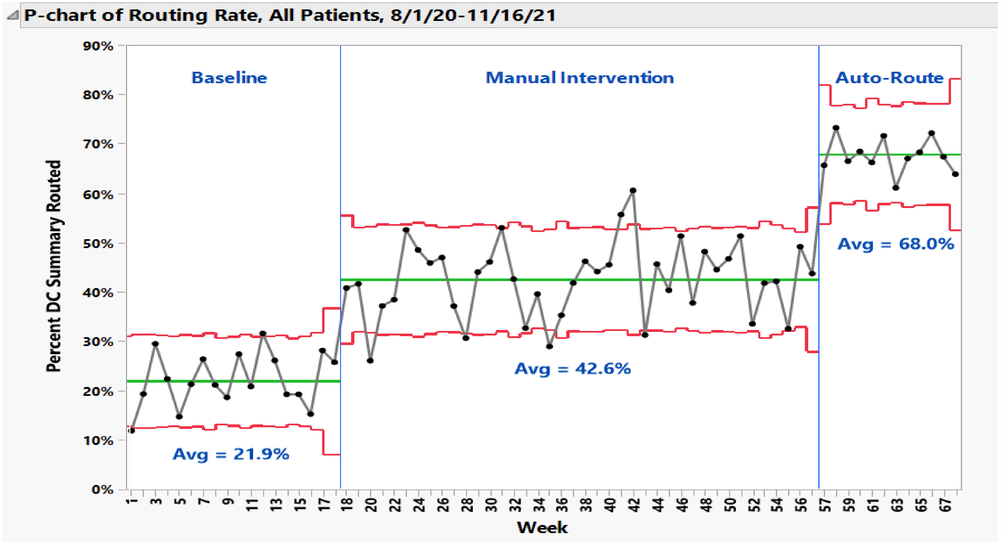
Introduction

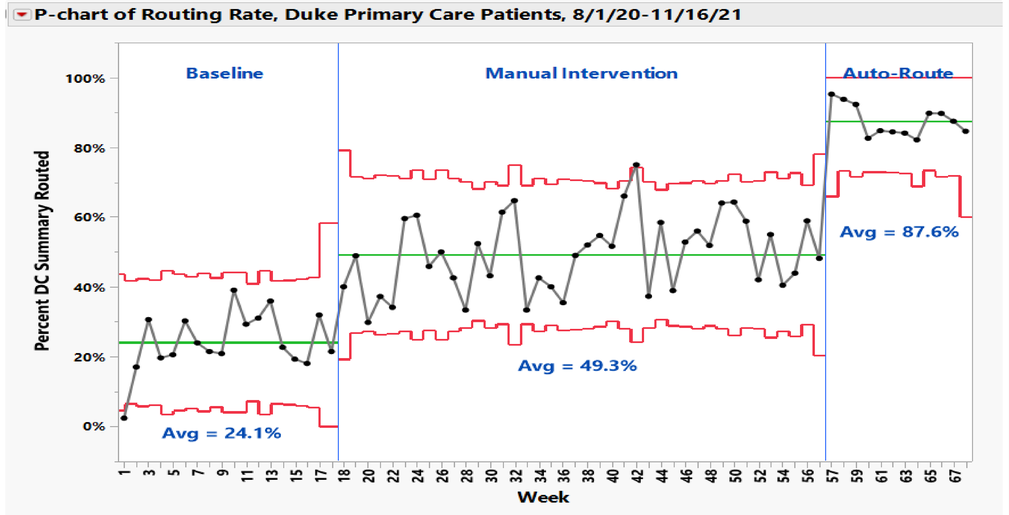
- Unplanned hospital readmissions are an important focus for both inpatient and outpatient teams.
- Communication between inpatient and outpatient team members at time of hospitalization and discharge is critical to improve transitions of care and reduce unplanned hospital readmissions.
- The Hospital Discharge Summary (DCS) is an important component of that communication[1]. Studies show DCSs are often not available to Primary Care Providers (PCPs) at follow-up visit[2,3].
- Routing the DCS to the PCP so it was readily available was the focus of our study.

Methods

- **Study population:** Patients discharged from Duke Hospital Medicine services from 8/1/20-11/16/21.
- **Routing DCS:** Defined as forwarding DCS to physician who was identified as the follow-up provider via Electronic Medical Record (EMR) inbasket message or fax. This occurred with the finalizing signature of inpatient attending physician or advanced practice provider on DCS.
- **Baseline (8/1/20-11/30/20):** Routing DCS to the PCP was optional and the workflow was not prioritized or automated.
- **1st intervention "Manual Routing" (12/1/20-8/31/21):** Encouraged DCS routing by following behavior modification interventions:
  - Providers educated about importance of routing at faculty meetings and via passive email reminders.
  - Physician performance was profiled using audit feedback and peer comparison by showing unblinded data of providers' routing performance.
  - Designed and implemented a reminder system using "vanishing tip" in DCS template.
- **2nd intervention "Auto Routing" (9/1/21-11/16/21):** We designed and implemented automated routing of DCS (forced function) at time of final signature of DCS.

Results (Control p-charts)





Red lines are control limits set at +/- 3SD and mean for each phase is represented by green bar

Conclusions

The aim of this study was to improve the routing rates of discharge summaries. By doing so we improve communication of essential discharge information to the PCP, which can positively impact transitions of care at hospital discharge.

- The 1st intervention involving educational efforts, reminder systems, and physician profiling achieved a 20.7% improvement in DCS routing rates to 42.6% for all patients and a 25.2% improvement in routing rates to 49.3% for Duke Primary Care (DPC) patients. Despite these improvements, there was still a substantial opportunity in routing.
- The 2nd intervention focused on automated routing using EMR forced function processes, achieved an additional 25.4% improvement in DCS routing rates to 68% for all patients and an additional 38.3% improvement in routing rates to 87.6% for DPC patients.
- Non-routed DCSs mostly occur because the patient's PCP is not identified correctly in EMR.

TAKE HOME MESSAGE: These results are consistent with the quality improvement concept that educational efforts to address quality issues by changing providers' practice behavior have some impact, but in isolation are not always effective. More significant improvement can be obtained by changing to automated workflows such as DCS routing as a forced function[4].

References

1. Pantilat et al. *Primary care physician attitudes regarding communication with hospitalists.* Am J Med. 2001. doi:10.1016/s0002-9343(01)00964-0
2. Kripalani et al. *Deficits in communication and information transfer between hospital-based and primary care physicians: implications for patient safety and continuity of care.* JAMA. 2007 doi:10.1001/jama.297.8.831
3. Snow et al. *Transitions of Care Consensus Policy Statement.* J Gen Intern Med. 2009. doi:10.1007/s11606-009-0969-x
4. Soong et al. *Education as a low-value improvement intervention: often necessary but rarely sufficient.* BMJ Qual Saf. 2020. doi:10.1136/bmjqs-2019-010411