



SCHOOL OF MEDICINE

Enhancing Clinical Communication to Improve Patient Care and Reputational Metrics on Academic Medicine Inpatient Services

ELAM Fellow: Cristin Colford, MD, Vice Chair Clinical Services, UNC Department of Medicine

Mentor: Ron Falk, MD, Chair, UNC Department of Medicine

Collaborators: Scott Keller, De-Vaughn Williams, MD, Michael Croglio, MD, Jennifer McEntee, MD, Paul Ossman, MD, Callie Gudeman, ELAM Learning Community 3 (RAWLS)



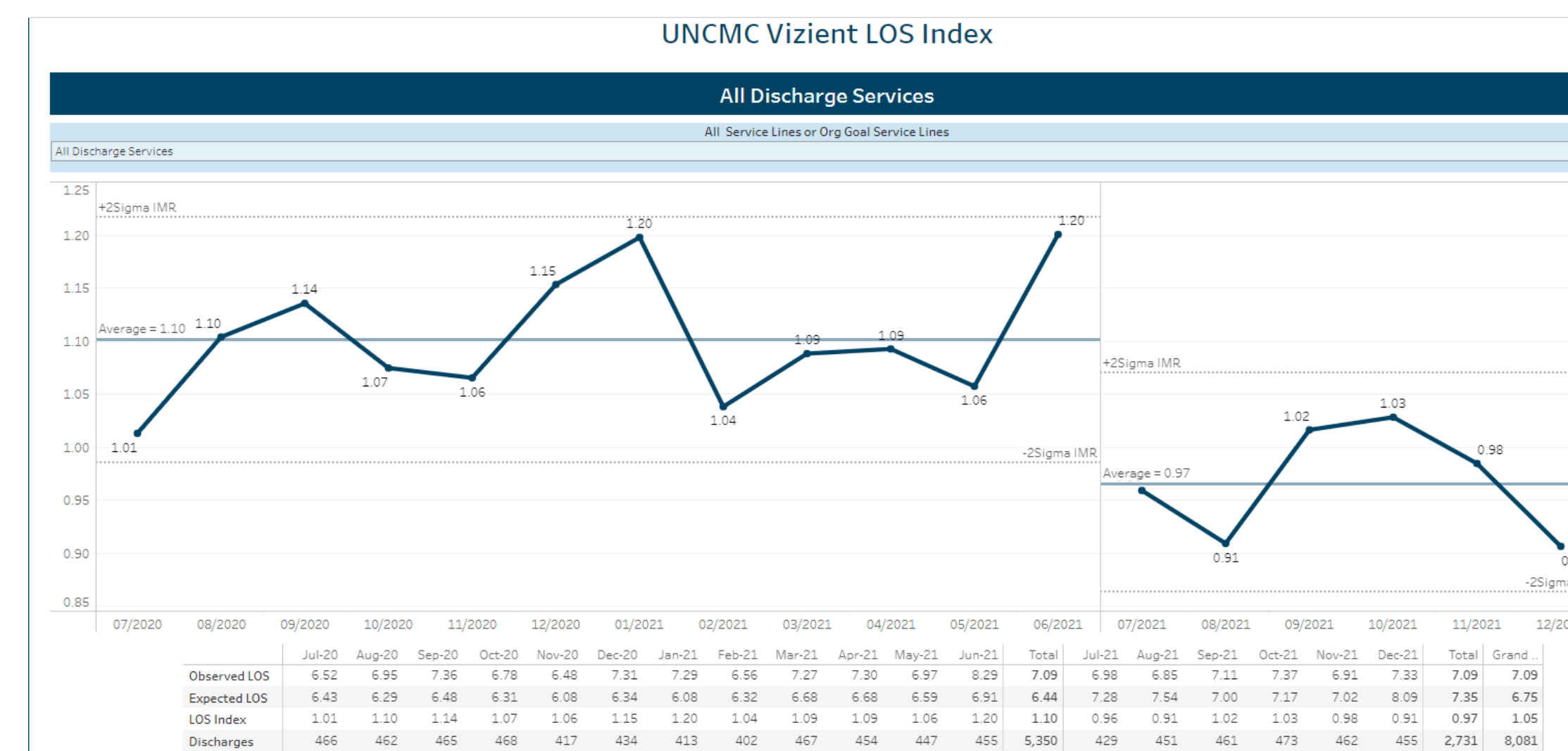
What we learned: An educational curriculum combined with a close partnership between physicians and clinical documentation specialists led to optimization in the expected LOS and LOS index despite difficulties to reduce LOS in the current situation of limited bed capacity.

Background

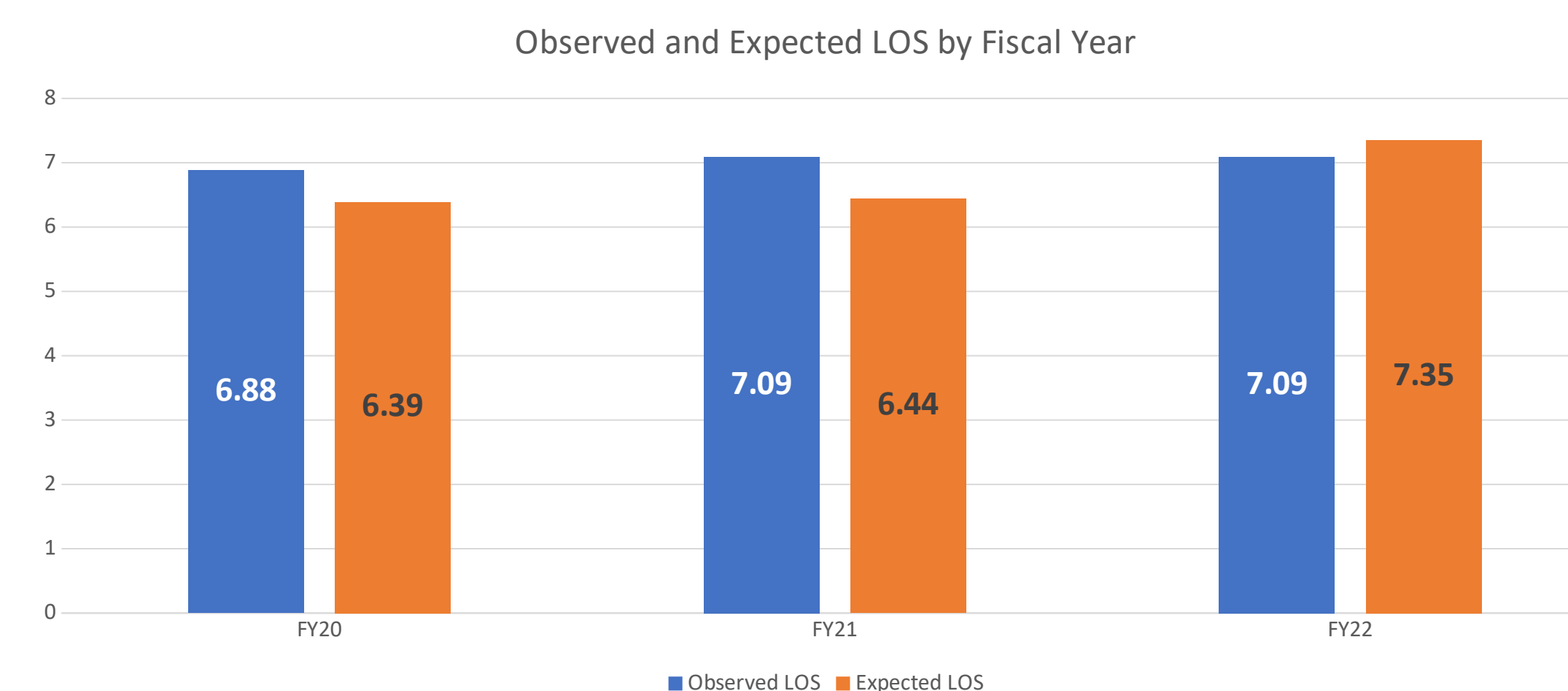
Results

Conclusions

- Comprehensive documentation in the electronic health record (EHR) has implications for patient care, communication, and institutional reputation.
- Documentation is a time-intensive task for trainees¹ and few report formal note-writing training.
- Clinical documentation specialists (CDS) have expertise in documenting diagnoses and complexity but there are regulations to how they interact with physicians.
- Physicians are often resistant or unaware of best practices for working with CDS.



In FY22, the participating DOM services have seen a collective ~12% improvement in Vizient LOS index over FY21



Nearly all LOS index improvement is attributable to changes in expected LOS. The observed LOS on participating Medicine services has risen ~3% over FY20, and the expected has increased by 15%

Progress note rubric scores

	October 2020 (n)	October 2020 Mean Rubric Score (Max of 22)	October 2021 (n)	October 2021 Mean Rubric Score (Max of 22)	P-value
A (MDB)	20	17.6	21	19.6	0.007
B (MDE)	21	18.25	22	18.1	0.88
C (MDO)	20	16.05	30	18	0.007
D (MDU)	20	16.32	35	16.6	0.7
E (MDW)	20	15.6	27	17.4	0.04

Progress note rubric scores improved after educational intervention resulting in improved notes on 3 of 5 services.

Approach

- Two-pronged approach to improve communication: educational and clinical focusing on 6 inpatient medicine services at UNC Medical Center.
- An innovative educational curriculum was delivered to first year residents. The curriculum highlights the use of a universal daily progress note template for inpatient medicine services. Peer educators use a rubric to score progress notes and give direct formative feedback.
- Clinical process of daily in person huddle with physicians and CDS team to review high yield topics and queries such as malnutrition and electrolyte disturbances. Biweekly meetings with CDS team and physician leaders to discuss process and share feedback.
- Alignment of organizational goal for LOS index (LOSi) with Department of Medicine (DOM) physician incentive plan increased engagement of all stakeholders.

- LOSi on participating services decreased significantly over the first 6 months due to improvement in expected LOS. In other words, the complexity of patients is better documented and better aligns expected and actual LOS.
- The educational curriculum was well received by first year residents who welcomed formative feedback on notes. Third year residents valued gaining expertise in coding processes and mentoring younger residents.
- Partnership between rounding teams and CDS improves communication around specific diagnosis related coding details. There had been prior attempts to embed the CDS teammates into the rounding teams without success. The current partnership allows for utilization of CDS expertise in an efficient, time saving huddle.
- One of our collaborators will be a faculty champion for expansion into admission notes, discharge summaries and consult notes.
- Success of this project has generated interest in from other residency programs and service lines.
- Preliminary data suggests an expected improvement in mortality index, Case Mix Index, and hospital billing, but more work needs to be done to verify.
- The prioritization of this project by DOM leadership and engagement of physicians was critical to the success of the changed culture of collaboration with CDS team

References

-Black M, Colford CM. Transitions of Care: Improving the Quality of Discharge Summaries Completed By Internal Medicine Residents. MedEdPORTAL. 2017 Aug 7;13:10613. doi: 10.15766/mep_2374-8265.10613. PMID: 30800815; PMCID: PMC6338163

-Kahn D, Stewart E, Duncan M, Lee E, Simon W, Lee C, Friedman J, Mosher H, Harris K, Bell J, Sharpe B, El-Farra N. A Prescription for Note Bloat: An Effective Progress Note Template. J Hosp Med. 2018 Jun 1;13(6):378-382. Doi: 10.12788/jhm.2898. Epub 2018 Jan 19. PMID: 29350222

-Rahman N, Ng SH, Ramachandran S, Wang DD, Sridharan S, Tan CS, Khoo A, Tan XQ. Drivers of hospital expenditure and length of stay in an academic medical centre: a retrospective cross-sectional study. BMC Health Serv Res. 2019 Jul 2;19(1):442. doi: 10.1186/s12913-019-4248-1. PMID: 31266515; PMCID: PMC6604431

-Sutton JM, Ash SR, Al Makkki A, Kalakeche R. A Daily Hospital Progress Note that Increases Physician Usability of the Electronic Health Record by Facilitating a Problem-Oriented Approach to the Patient and Reducing Physician Clerical Burden. Perm J. 2019;23:18-221. doi: 10.7812/TPP/18-221. Epub 2019 Jun 14. PMID: 31314721; PMCID: PMC6636503

-Wang JK, Ouyang D, Hom J, Chi J, Chen JH. Characterizing electronic health record usage patterns of inpatient medicine residents using event log data. PLoS One. 2019 Feb 6;14(2):e0205379. doi: 10.1371/journal.pone.0205379. PMID: 30726208; PMCID: PMC6364867

Enhancing clinical communication to improve patient care and reputational metrics on academic internal medicine inpatient services

Cristin Colford, MD
ELAM Fellow 2022

Mentor: Ron Falk, MD

Collaborators: De-Vaughn Williams MD, Jen McEntee MD, Scott Keller

Project Categories: Clinical and Education

Background: Accurate and comprehensive documentation of patient diagnoses in the electronic health record (EHR) is necessary for effective communication between providers and impacts the reputation of an institution. Physicians do not receive formal training in note writing but spend hours writing notes in the EHR that are not reflective of patient complexity. This negatively impacts the institution's reputation metrics which can have downstream consequences on academic programs and clinical programs.

Methods: The UNC Department of Medicine (DOM) partnered with UNC medical center leadership to increase the value of daily care notes on inpatient teams, improve efficiency of the note writing process, and improve the reputation of DOM physicians. To improve note writing, an educational curriculum was delivered to first year residents. The curriculum highlights the use of a universal daily progress note template for inpatient medicine services. Peer educators use a rubric to score progress notes and give direct formative feedback. Simultaneously, the DOM and medical center leadership focused on 5 inpatient services to improve the relationship and collaboration between physicians and clinical documentation specialists (CDS) through daily huddles.

Results: Five internal medicine teaching services were selected for note review. An unpaired t-test was used to compare the mean rubric scores for each service before and after curriculum implementation (October 2020 vs. October 2021). Four services showed a numerical increase in mean rubric score in 2021. P-values were less than 0.05 for three of these services. Qualitative data collected from resident surveys shows a positive experience with the curriculum; interns value the formative feedback on clinical evaluation and organization, and upper-level residents enjoy the opportunities for mentorship and learning about formal clinical documentation standards.

Over the first half of Fiscal Year 2022, the 5 participating DOM services have seen a 12 percent improvement in Vizient Length of Stay LOS Index (LOSI) compared to Fiscal Year 2021. The case mix index (CMI) has also increased from 1.98 to 2.10.

Discussion: This project has reaped significant benefits in a short duration. The educational intervention primarily emphasizes the use of a universal note template without modification and teaches first year residents to accurately document patient problems. Improving communication with coding experts allows physicians to incorporate key components to their notes with higher fidelity. The improvement in the LOSI is attributable to changes in expected LOS. The observed LOS increased about 3 percent over Fiscal Year 2020, and the expected LOS increased by 15 percent. The increase in CMI also reflects improved documentation of patient complexity. Moving forward, plans include expanding the educational curriculum with a dedicated faculty champion to include admission notes, discharge summaries, consult notes and ambulatory clinic notes. In addition, the partnership between the medicine teams and CDS will continue with the hope to spread to other services and departments as staffing levels allow. The success of the project can be attributed to the dedication of time of CDS teams and rounding physicians as well as residency educational leaders. The success of the project highlights the motivations of the individuals participating. The structure DOM compensation plan incentivized physician engagement and the outcomes matched the medical center's annual organization goals.