

Learning Objectives

- Discuss a quality improvement method to review the inpatient stroke rate among cardiac patients.
- Explain the importance of a multidisciplinary approach to quality improvement projects.

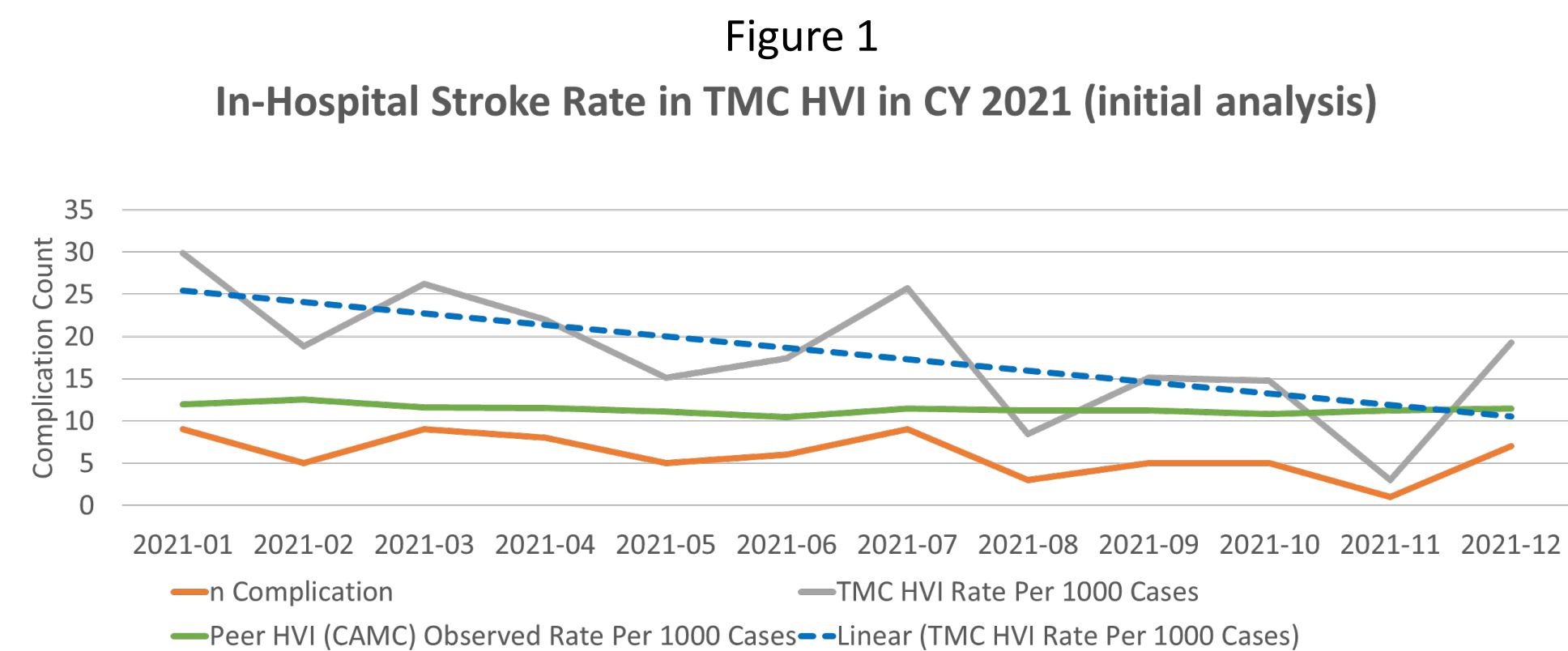
Background

- Academic medical centers take care of high acuity patients who experience high complication rates and our hospital has one of the highest acuity, highest % transfer populations among peer hospitals.
- Retrospective analysis identified inpatient stroke (IP STK) as the most commonly occurring complication in the cardiac population and at a rate higher than peers.
- A multidisciplinary group including an analyst, a nurse practitioner (NP) specializing in stroke, and the coding team was formed to manually audit charts in real time to find coding opportunities in the inpatient population.

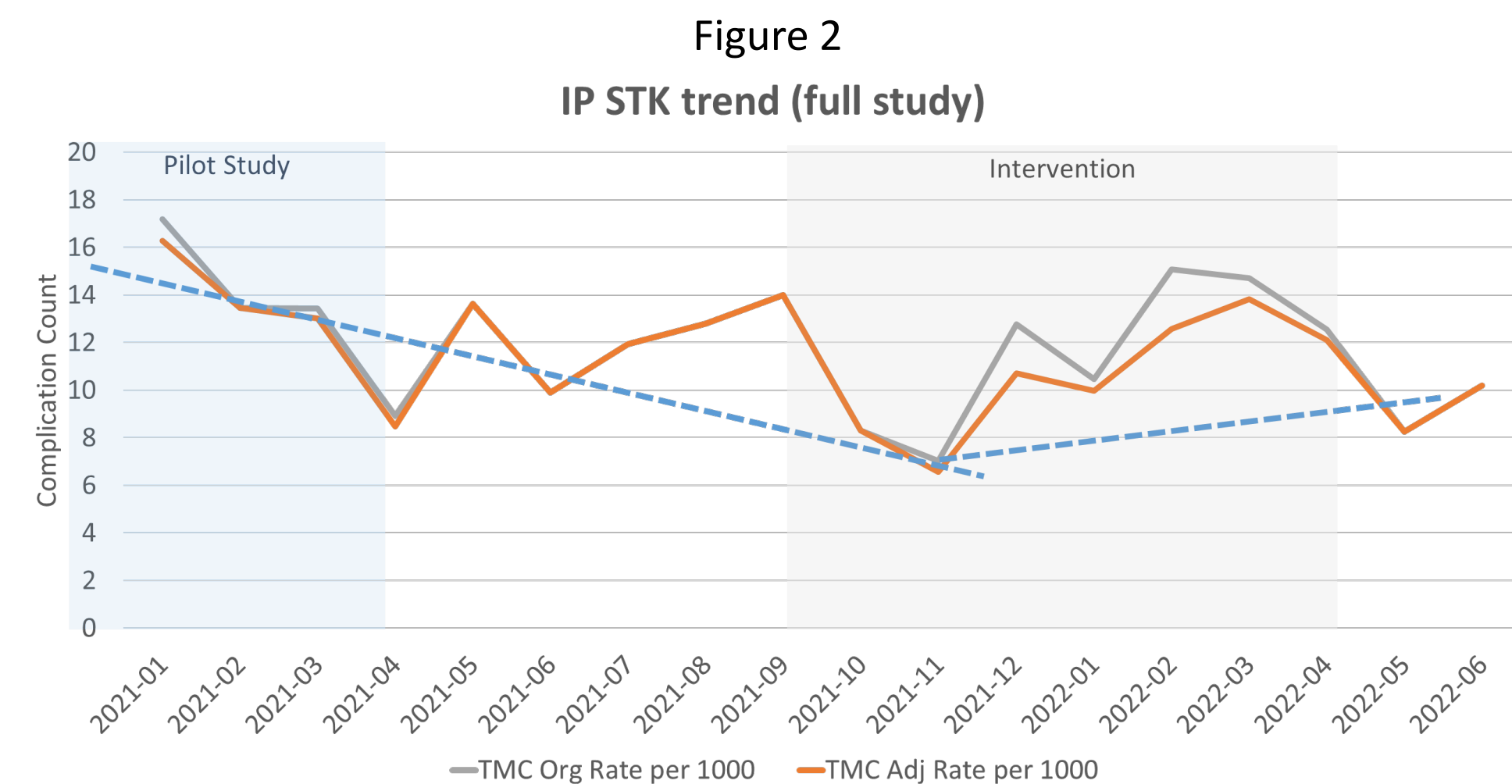
Methods

- From October 2021 to April 2022 all IP STK cases were reviewed:
 - An internal report was developed using ICD-10 codes associated with database “#ms-1 in-hospital stroke” metric regardless of the code’s present on admission (POA) status.
 - A stroke NP reviewed charts for clinical opportunities (DVT prophylaxis, Blood pressure control, anti-platelet regimen) and coding opportunities (present on arrival, correct diagnoses) and updated the file to reflect which charts needed to be reviewed by coding.
 - Coding reviewed for agreement with the NP
 - ✓ If coding agreed, the corrections were made immediately
 - ✓ Coding left comments when they disagreed for educational purposes.
- Real-time chart review remains in place for data validation, code change verification, and monthly trend analysis as part of an ongoing cyclical process.

Results



- Figure 1 describes retrospective data analysis during initial study
- This collaborative approach informs stakeholders on all sides and resulted in a gradual reduction of inpatient stroke rates from 22 to 12 complications per 1000 cases (R=0.4129).



- Figure 2 describes the inpatient stroke trend during the entire evaluation period
- Complication rate reduction trend was not sustained in the later months of the project.
- Project prompted discussion of inpatient admission protocol and refined consult protocol from the stroke team for at-risk patients

Unique Innovation

- Although multidisciplinary teams are not new, creating a team that combines active clinicians and coders to discuss cases is.
- This project supports engaging analytics, clinicians, and coding as a way Vizient members can improve the accuracy of documentation, coding capture, and ultimately, Vizient rank.
- Literature supports the effectiveness of the NP role on patient outcomes, as change agents, and highlights underutilization in quality efforts.

Conclusion

- Manual chart review did not identify gaps in clinical care for inpatient strokes but did identify opportunity for improvement in coding capture of strokes that were present on admission and misdiagnosis of stroke.
- Improved communication between the clinician and coders provide feedback for both groups to improve performance:
 - A decrease in the number of charts audited each month may indicate that better front-end coding capture is occurring.
 - The Stroke NP uses chart audits /coding feedback to educate the physicians on documentation methods and the importance of verbiage to improve efficiency and ease of coding capture.
- Experienced, specialty-focused NPs should be trained in quality performance measures and participate in service line related quality projects.

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The authors have no relevant financial relationships to disclose.

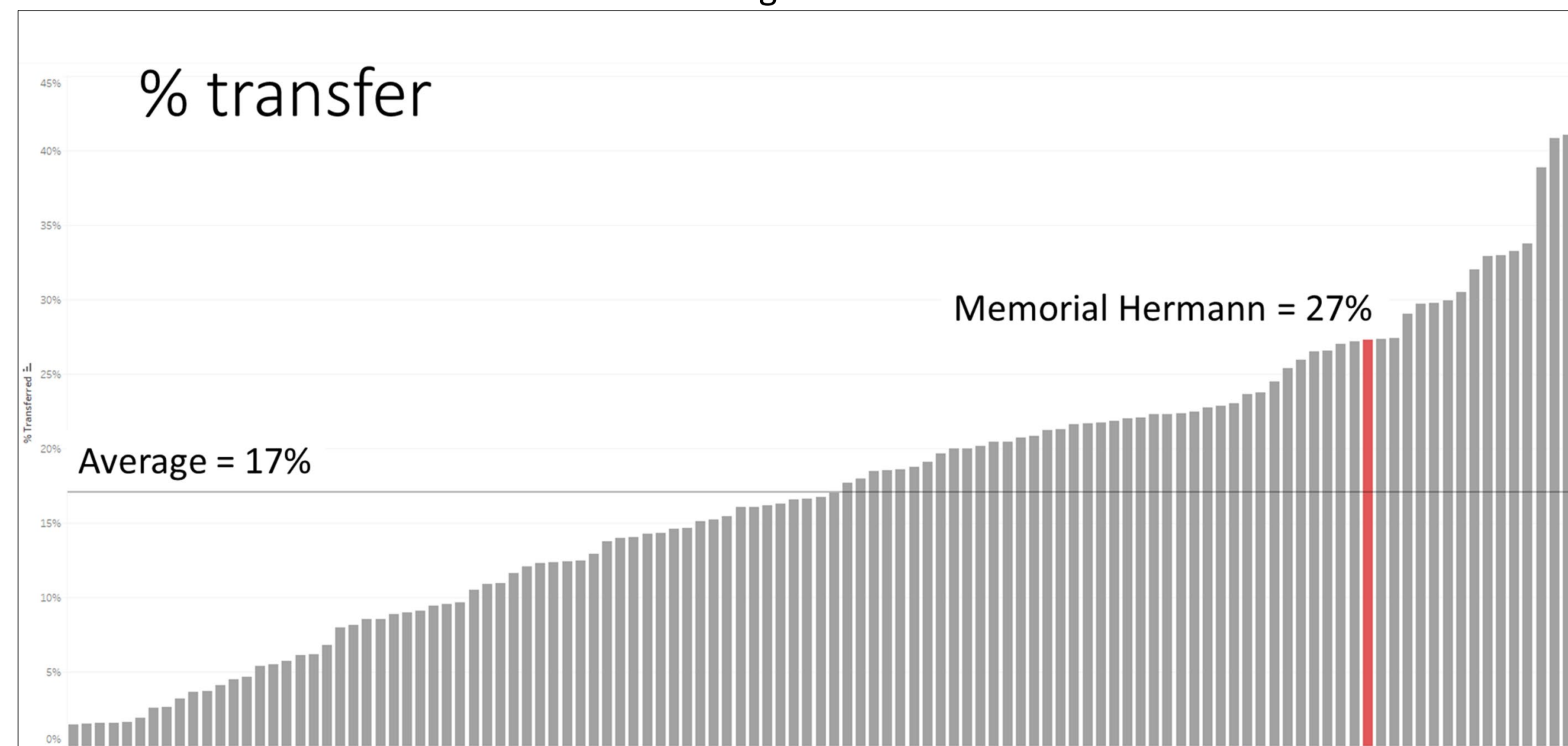
References

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- Walker, D. K., & Polancich, S. (2015, November). Doctor of nursing practice: The role of the advanced practice nurse. In *Seminars in Oncology Nursing* (Vol. 31, No. 4, pp. 263-272). WB Saunders.

Why it Matters

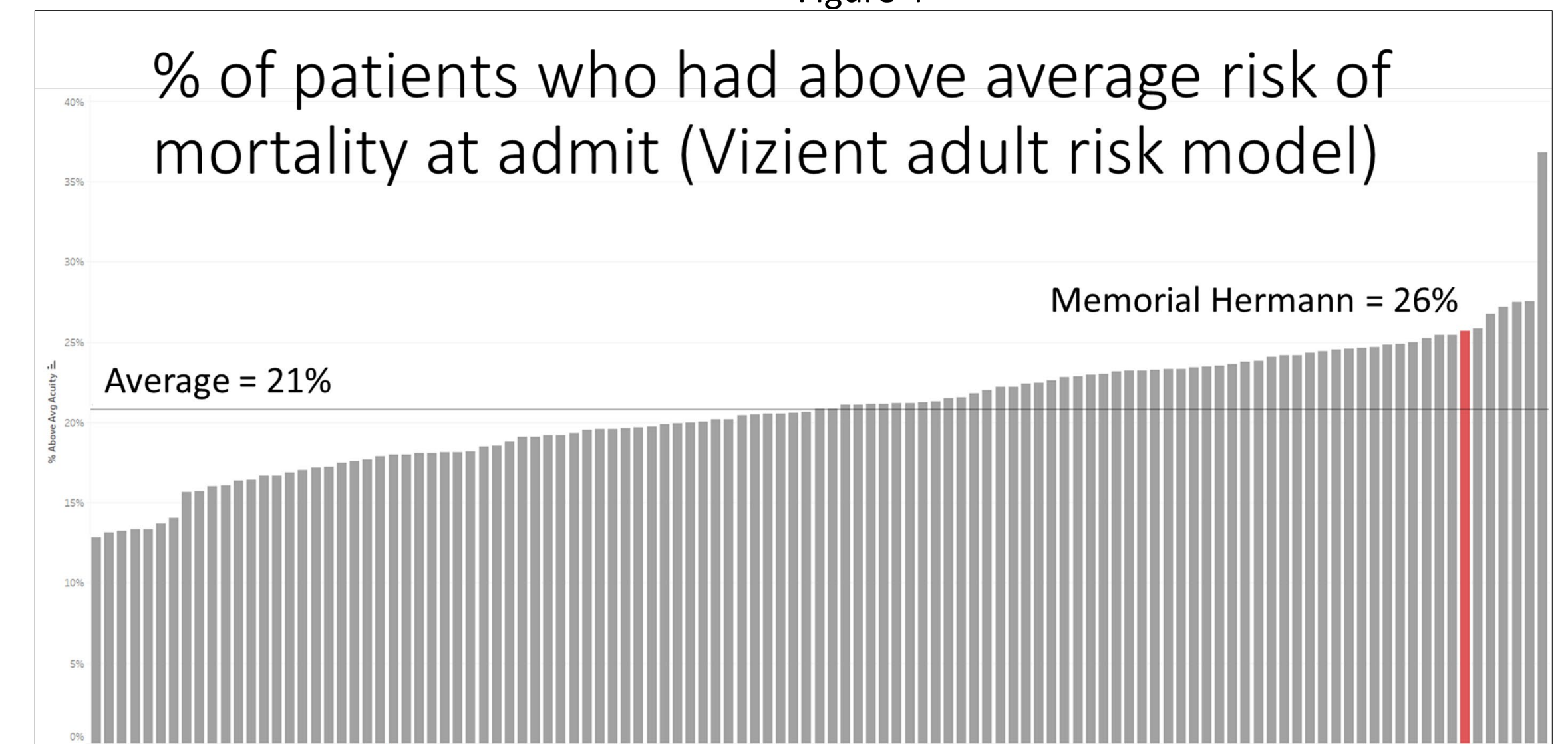
- Memorial Hermann, Texas Medical Center is the flagship hospital for our system of 11 acute care hospitals and numerous other facilities
- The TMC location, as the academic medical center, admits and accepts transfers of the sickest of patients from within our system as well as around the country and internationally due to the availability of specialties offering ground-breaking procedures and trials for the advancement of medicine
- Understanding, explaining, and adjudicating the higher acuity of our patients is important towards building trust for and integrity of quality data. By reducing technical and documentation errors, quality departments can focus on clinical and process factors impacting outcome.
- Accurate data and quality improvements lead to improvements in ranking and reputation among patients and clinicians and in healthcare.

Figure 3



- This project began with improving in-patient stroke rate in the cardiac population but soon was expanded to all services across the hospital.
- Figure 3 demonstrates the percentage of transfer cardiac patients among the Vizient Comprehensive Academic Medical Center (CAMC) cohort.

Figure 4



- Figure 4 demonstrates that among CAMC peers, Memorial Hermann admits a higher proportion of cardiac patients who had above average risk of mortality.

Stroke NP Chart Audit Summary			
By the Numbers:			
Time frame	7 Months	Complications overturned	8%
Cases reviewed	169	NP/Coding agreement	62%
Codes reviewed	399	Code errors	11.4%