Creation of an Operational Dashboard to Monitor 4M Implementation in an Acute Care for the Elderly Unit

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INTRODUCTION

The Institute for Healthcare Improvement's Age-Friendly Health Systems framework emphasizes the "4Ms" (*What Matters, Medication, Mentation, and Mobility*) as a foundation for safe, patient-centered care for older adults. On August 1, 2024, the Centers for Medicare & Medicaid Services finalized its Inpatient Prospective Payment Systems rule, requiring hospitals participating in the Hospital Inpatient Quality Reporting Program to attest to age-friendly practices and monitor 4M care. Hospitals face payment reductions for non-compliance. With this new Age-Friendly Hospital Measure, hospitals need informatics-driven strategies to monitor readiness and identify care gaps.

METHODS

At Vanderbilt University's Acute Care for the Elderly (ACE) unit, which has 19 rooms (6 semi-private) and accommodates up to 25 patients in total, we developed an operational dashboard within the Epic EHR. Dashboard outputs were validated against manual chart review and designed to track performance longitudinally.
The dashboard visualizes 4M-related performance indicators:

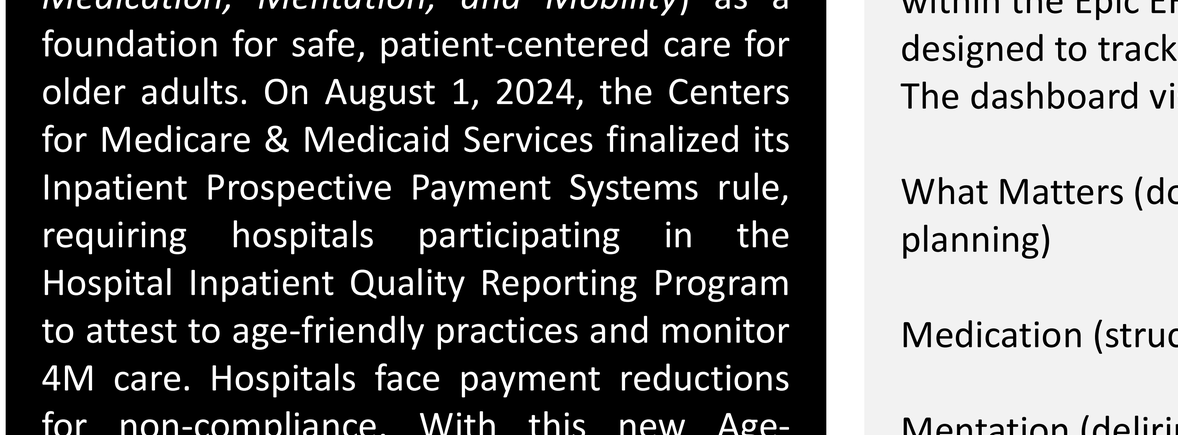
What Matters (documentation of patient- or family-stated goals, code status, and advance care planning)

Medication (structured medication reviews, exposure to 'Beers List' and high-risk medications)

Mentation (delirium screening, dementia and depression histories)

Mobility (Johns Hopkins Highest Level of Mobility scores, therapy referrals, restraint use).

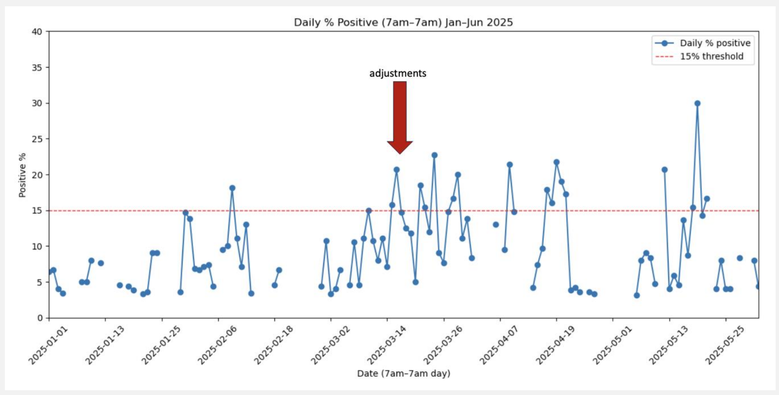
RESULTS



Example Epic-based dashboard displaying *What Matters, Medication, Mentation,* and *Mobility* performance indicators in Vanderbilt University's ACE unit. Can find on VUMC's Epic Dashboards: SH Geri ACE Unit. The figure showcases a subset of the dashboard components. Due to space limitations, only select metrics are displayed.

The dashboard revealed strengths, such as high delirium screening rates, frequent code status documentation, and the use of structured medication reviews, alongside weaknesses, including the limited capture of patient-stated goals and inconsistent documentation of medical history diagnoses. By tracking data over time, the dashboard also enabled rapid identification of performance gaps; for example, early detection of inconsistent delirium (brief CAM) documentation prompted workflow changes to improve screening reliability.

CASE STUDY: The brief Confusion Assessment Method (bCAM) is used at VUMC for delirium screening in the ACE unit. bCAM should be measured twice daily per patient per shift and documented in the EHR, with an expected positive rate of about 15%. The dashboard helped visualize when screening numbers were low, which prompted adjustments in March to improve measurement accuracy. As a result, screening rates and accuracy improved. The dashboard is expected to be used a few times per week by ACE unit staff and attendings to continue monitoring performance.



CONCLUSION

This project demonstrates the feasibility and value of EHR-based dashboards as visualization and diagnostic tools for monitoring the delivery of age-friendly care. By surfacing strengths and gaps in 4M implementation and enabling longitudinal tracking, dashboards can guide strategic quality improvement, strengthen regulatory readiness, and accelerate progress toward improved patient care and compliance.

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