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Measuring Patient Quality of Life: Time Is What Matters

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Sarah Haas, MSHA, MBA, Barbara Jacobs, RN, MSN, Mitchell Schwartz, MD & Maulik Joshi, DrPH

Anne Arundel Health System

In an effort to measure quality, numerous stakeholders, such as the Centers for Medicare and Medicaid Services, commercial health plans, state Medicaid agencies, and The Joint Commission, have developed hundreds of measures. Many, if not most, focus on individual processes or aspects of safe and effective care. These are undoubtedly important, but they do not measure what matters most to patients: high quality of life.

Patients *expect* safe care from hospitals. Patients *desire* high quality of life. The high points in patients' lives are not spent within the walls of a hospital, but with family and friends doing the things they enjoy. How can a hospital quantify these high-quality moments? By measuring how much time hospitals have given back to patients.

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In recent years, health care providers have proposed innovative patient-centered metrics. One example, the Personalized Perfect Care (PPC) Bundle, combines select measures and evaluates the

quality on an "all-or-none" score. The PPC Bundle counts a patient's care as "complete" only if all the eligible quality measures have been met. Another example is the "days spent at home" outcome measure, which counts the number of days spent at home in the last 6 months of life. This measure aims to provide high-quality care in the most comfortable setting for patients. The Organization for Economic Co-operation and Development (OECD) has proposed measures that focus on patients' well-being and their ability to play an active role in society. The patient-reported experience measures and the patient-reported outcome measures use qualitative and quantitative approaches to measure patient-reported indicators of health system performance.

We propose the Time Is What Matters Measure (TWMM), which aggregates the time patients have saved from hospital reductions in readmissions, length of stay, and emergency department (ED) wait time. While these measures are not new to the hospital field, they are generally thought of in terms of saving cost to the system or demonstrating better outcomes in the medical care of patients. Shifting the focus to patients' time encourages provider organizations to focus on what truly matters to patients, and provides an additional impetus for improvement.

The TWMM was developed as part of the Age-Friendly Health System initiative, created by the John A. Hartford Foundation and supported by the Institute for Healthcare Improvement. This initiative aims to improve the health outcomes that matter to older patients and their families. The Age-Friendly Health System focuses on four high-level interventions, known as the "4 Ms": (1) What Matters, (2) Medication, (3) Mobility, and (4) Mentation. Five health systems, including ours, are currently piloting best practice implementations.

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We created the Time Is What Matters Measure specifically to address the first component of this framework: "What Matters." Our own data indicate that time is a key component in patients' perceived quality. We analyzed the write-in comments of our patient satisfaction data, and found that in 2016, approximately 42% of Emergency Department patients' negative comments were about time (such as long wait times). We developed the TWMM to highlight three measurements that were already important for our health system from a financial and operational standpoint, to emphasize for our staff how important they also are to our patients' quality of life.

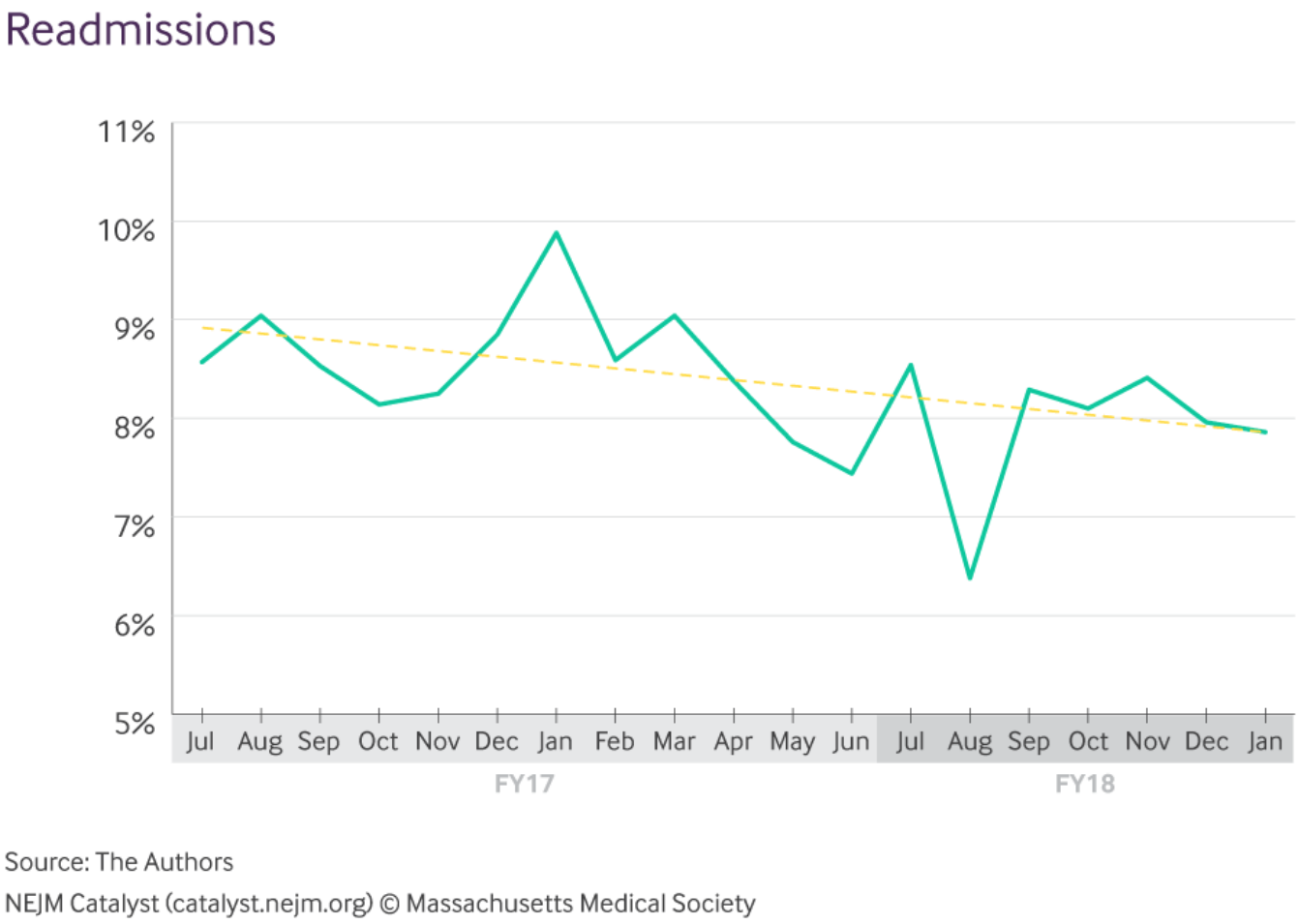
How to Compute the Time Is What Matters Measure

Annually, Anne Arundel Health System has over 95,000 emergency room visits, 26,000 admissions, and 5,500 deliveries. We created a composite score based on reductions in readmissions, length of stay, and ED wait time. Each month, we add up the time saved in each area and compare it against the average for the previous fiscal year to gauge how much additional time we are saving or costing our patients.

1. **Readmissions:** This measure projects how many patients would have been readmitted had we maintained the readmissions rate average from the prior fiscal year, and compares that number with how many patients were actually readmitted for the month. For example, our average readmissions rate in fiscal year 2017 was 8.54%. In March of fiscal year 2018, our readmissions rate was 8.84%, with 2,024 total eligible inpatient discharges. Subtracting the expected number of readmissions if we had maintained the fiscal year 2017 average (172.85) from the actual number of readmissions for the month (178.92), results in 6.07 more patients readmitted in March of fiscal year 2018. Using the average length of stay for March of fiscal year 2018 (3.63 days), we calculated an additional 22.03 inpatient days in fiscal year 2018 because of an increase in the readmissions rate. We need to do better on this TWMM metric.
2. **Length of stay:** This measure projects how many days our patients would have spent in inpatient care had we maintained the length of stay average from the prior fiscal year, and compares that number with how many days our patients actually spent in inpatient care. For example, our average length of stay in fiscal year 2017 was 3.78 days. In March of fiscal year 2018, our average length of stay was 3.63 days, with 2,060 total inpatient admissions. Subtracting the expected number of inpatient days if we had maintained the fiscal year 2017 average (7,786.8) from the actual number of inpatient days (7,477.8), shows that we achieved 309 fewer inpatient days in fiscal year 2018 because we reduced our length of stay.
3. **Median time from ED arrival to ED departure for discharged ED patients:** This measure uses monthly total ED visits to calculate how much additional time patients would have spent in the ED had we maintained the average from the prior fiscal year. For example, our average time in fiscal year 2017 was 192 minutes. In March of fiscal year 2018, our time was 188 minutes, with 7,998 total ED visits. Subtracting the expected number of total minutes if we had maintained the fiscal year 2017 average (1,535,616) from the actual total minutes (1,503,624), we calculated 31,992 fewer minutes, or 22.22 fewer days, spent in the ED in fiscal year 2018.

The number of days saved from these three measures are combined to generate the total number of days saved. For example, if we add 22.03 days lost from readmissions, 309 days saved from length of stay, and 22.22 days saved from ED wait time, we save a total of 309.19 days for the month of March. The TWMM is calculated monthly. The days saved for each month are totaled and then converted into number of years saved, based on 365 calendar days in a year.

Figures A through C show the time saved from fiscal year 2017 to fiscal year 2018 year-to-date and the associated trend line for readmissions, length of stay, and ED arrival to departure.



Source: The Authors

Figure A. Click To Enlarge.

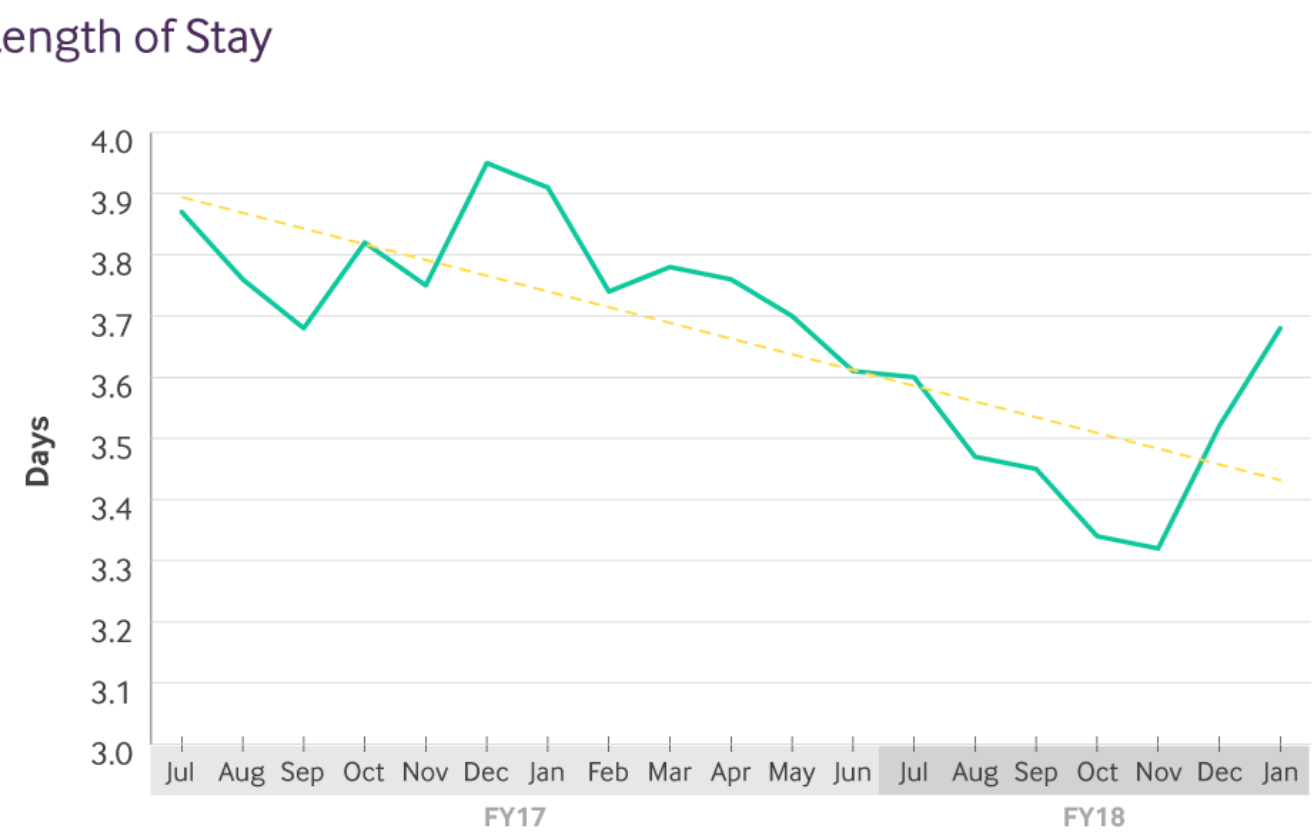


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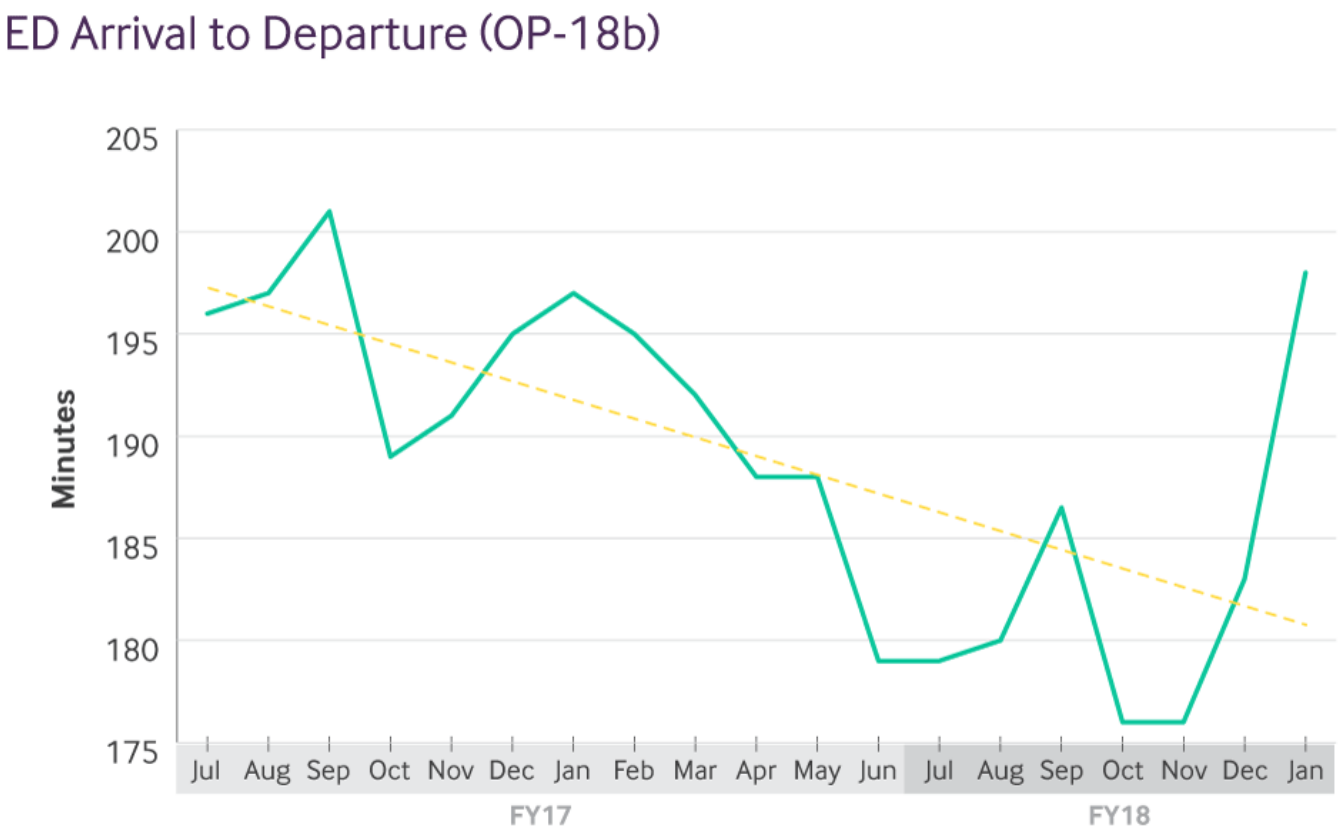
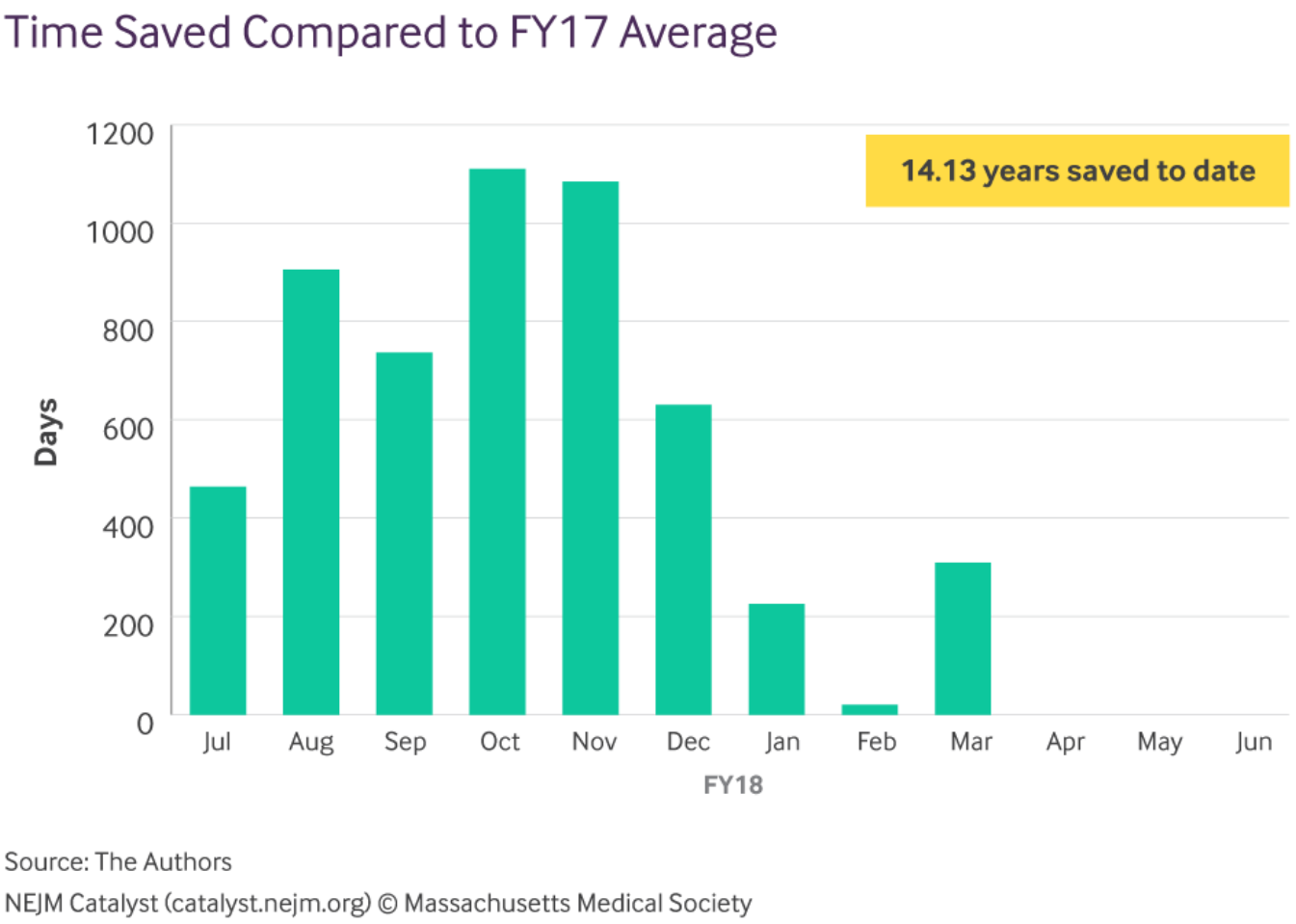
Figure B. Click To Enlarge.



Source: The Authors

Figure C. Click To Enlarge.

Figure D depicts the time saved each month under the TWMM by comparing the fiscal year 2018 times to fiscal year 2017 times. To date, we have saved patients approximately 15.03 years by reducing time in the hospital.



Source: The Authors

Figure D. Click To Enlarge.

How to Use the Time Is What Matters Measure

We are currently piloting the use of the Time Is What Matters Measure in the Acute Care for the Elderly unit, an inpatient unit caring for geriatric patients to help raise awareness among the leadership and the staff about the impact of improving our performance on these time-related metrics. The graphs are displayed on our internal huddle board. We are reporting the TWMM monthly to our leadership council of more than 200 leaders. We also show TWMM data to patients, which lets them know that we are measuring what matters to them and also gives them an opportunity to suggest changes or additions to the measure.

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The effectiveness of TWMM is measured by further reductions in readmissions, length of stay, and ED wait times. It is also measured by an increase in patient satisfaction, as we shift providers' and staff's focus to what goals and measures matter to patients. As this measure evolves, we may find it is necessary to include other components in the aggregate time saved.

While other measures can be added to the composite measure, they should meet the following criteria:

Be meaningful to patients and their families: The components making up the TWMM should be easily understood by patients and meaningful to them. For example, patients visiting the ED expect to be cared for in a timely manner, and the ED wait-time measure is one that they can understand.

Be measurable for a large portion of the patient population: It is important to focus on measures that affect a significant percentage of the patient population, rather than one specific subset. For example, measuring the time it takes for patients to be discharged to home following a total knee replacement would only impact a small segment of our population with a specific condition and would not be included in the TWMM.

Reflect improved care processes: The input measures for the TWMM should align with the organization's goals to improve the safety and effectiveness of care. A reduction in TWMM input measures should correlate with improved patient care.

Be reported on a monthly basis: To keep the TWMM relevant and meaningful to patients and staff, it is important to provide timely and actionable data for staff members.

Time with loved ones is invaluable to the people we serve, and therefore it must be a priority for us as a health system. To create cultural change that refocuses attention to what matters to patients, we must find a way to eliminate the excess noise. The Time Is What Matters Measure is our attempt to take existing data and convert it into an easy-to-understand measure of what matters to patients.

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Sarah Haas, MSHA, MBA
Manager of Healthcare Payment Redesign Programs, Anne Arundel Health System