

A Remedy for Fragmented Hospital Care

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Fragmented hospital care has been associated with higher hospital mortality and length of stay, and failures of communication and teamwork are the most commonly identified sources of “sentinel events” in hospitals – unexpected occurrences that result in actual deaths or the risk of deaths, or physical or psychological injuries.

Organizational Context

To address this problem, Emory Healthcare (EHC), the clinical delivery arm of the Robert W. Woodruff Health Sciences Center of Emory University and the largest and most comprehensive health system in Georgia, launched its Care Transformation initiative in 2009.

Through the strength of this initiative, in 2012, EHC became the first and only health system in the nation to have two hospitals – Emory University Hospital and Emory University Hospital Midtown – simultaneously in the top 10 in the University HealthSystem Consortium (UHC) Quality and Accountability ranking of U.S. academic medical centers. In 2013, these two hospitals were ranked in the top five.

The Care Transformation initiative at EHC has influenced the organization in many ways, one of which was the creation of an environment where the redesign of care models was encouraged.

This piece focuses on the development of a collaborative care model called the Accountable Care Unit (ACU), which became a re-imagining of hospital care inspired by core principles of EHC's Care Transformation initiative: patient-and-family centered care and shared decision making (in which patients and their families are treated as integral members of the team coordinating their care); teamwork and transparency (where all personnel work together with accountability to each other and to shared outcomes); and fair and just culture (where all members of the organization are treated with respect and dignity).

The Accountable Care Unit Model

We launched the first ACU in 6G, a 24-bed medical unit on September 1, 2010, at Emory University Hospital, a 579-bed tertiary care teaching hospital in Atlanta. The ACU combines several complementary design features:

Unit-based physician and nurse teams. The first step to put this unit-based collaborative-care model in place was to re-frame the way patients were assigned to physician teams. We reduced the number of physician teams caring for patients in the intervention unit from five to two, which made it much easier for staff, especially nurses, to engage in face-to-face discussions with physicians and non-physician providers about changes in patients' conditions and needs.

At the same time, we reduced the number of units that each of the new physician teams served from five to 1.5, and assigned each a home unit, where more than 90% of the physician teams' patients were located. This "geographic de-fragmentation" brought physicians together with nurses and staff on the same unit for the duration of the clinical workday to care for the same cohort of patients. This geographic proximity made it possible to set consistent start times for otherwise difficult-to-implement best-practice interventions,

from daily goals sheets to quality-safety checklists to multidisciplinary rounds. Interdisciplinary communication and coordination improved dramatically by having physicians directly available to staff, patients, and families for the majority of the day.

Structured interdisciplinary bedside rounds. Every day all the members of a unit-based team responsible for the care of a patient visit him or her together. The members of the team include the attending physician, the primary nurse, and any involved allied health professionals (e.g., pharmacy, social services, palliative care). During these structured interdisciplinary bedside rounds (SIBR), team members cross-check perspectives and a quality-safety checklist with the patient, family, and one another and then develop a shared care plan for the day and create a specific discharge plan.

Running SIBR efficiently is vital because it occurs in the morning, the busiest, most influential time of day for care planning. We allotted each unit-based physician team just 60 minutes to complete SIBR for their patients. Yet in the ACU each unit-based physician team cares for 12 to 15 patients and each nurse for four to six patients. From the physician perspective, SIBR efficiency means each successive nurse is prepared and present at the moment the physician is ready to approach a patient's bedside. From the nursing perspective, for SIBR to be efficient the individual nurses must be present for SIBR on their own patients but only their patients. We found that a proactive *SIBR rounds manager*, typically a charge nurse, was required to coordinate efficient drop-in and drop-out of nurses during the SIBR hour for each physician team.

With the help of this diagram we were able for the first time to provide the medical, nursing, and allied health staff with a shared mental model of patient-centered teamwork. The diagram spells out a standardized protocol that interdisciplinary ACU teams should use for communicating with patients, their families, and each other. It makes explicit the roles of each team member and expectations regarding the nature, sequence, and timing of inputs. And it emphasizes the interdependence of team members to develop an interdisciplinary plan of care.

Unit-level performance reports. Hospital performance is traditionally reported at the level of the facility or the physician service line, neither of which reflects performance of the frontline hospital units where clinical decisions and care actually happen. Reporting performance at the unit level made it easier to engage frontline personnel, cultivate a sense of ownership for outcomes, and enable process improvement.

Unit-level physician and nurse partners. Supporting the unit's nurse manager by adding a physician leadership partner created a dyad to role-model the collaborative care model, directly influence culture, and actively manage unit personnel and processes towards better outcomes.

Challenges

There were two significant challenges in implementing the ACU model:

Moving from the traditional physician-centric to a geographic approach. Creating the unit-based physician teams requires assigning attending physicians to a home unit. In addition, it means a patient in the emergency department must receive a unit assignment before the attending physician for the patient can be determined. This geographic approach is at odds with traditional physician-centric routines such as distributing patients according to call cycles or equalizing volume across partners in a practice. Implementing this aspect of the model was a learning process for all involved. We had to hold frequent face-to-face meetings across nursing, medicine, and admitting departments to help key stakeholders understand the importance of their contributions.

Fully involving patients and their families. Inaugurating an ACU requires a commitment from everyone to change the focus of the unit from physician- and staff-centered workflow and priorities to a workflow that actively involves patients and families in all care-planning activities. On a unit with a fully mature ACU, physicians and staff consciously adjust their

pace during SIBR, their focus (they look at, listen to, and talk directly with the patient rather than solely at or with each other), and their language to ensure patients feel welcome to participate in discussing and planning their care.

Building momentum for the model requires a sustained educational campaign to transfer the knowledge, attitudes, and skills needed to develop into self-aware, high-performing team members. We developed a three-hour interactive ACU-SIBR class to teach physicians, nurses, and allied health professionals the key components of the collaborative care model and their contributions. In addition, we created a set of posters, diagrams, ground rules, and leadership messages for display on the unit to reinforce the approach. To teach nurses and physicians specific skills to perform SIBR at the highest level and to enable hospital leaders to affirm the SIBR competence of professional staff and trainees, we developed a SIBR certification program. With this program all nurses, physicians, students, and interns in an ACU can study from a training manual, receive coaching, and achieve formal certification from a SIBR instructor.

Significant Results

In the first year of the ACU, the average length of stay for hospital patients on the unit fell to 4.5 days from 5 days and in-hospital mortality declined to 1.1 deaths per 100 encounters from 2.3 with none of the mortality reduction attributable to transfers to hospice. These improvements were associated with minimal additional expenses (largely, compensation for a part-time physician medical director and additional training for non-exempt staff).

Dissemination

Since 2010, the ACU model has been implemented in six other units in four hospitals within the Emory Healthcare system and more than 25 units of health care systems in seven U.S. states and in Australia, where it has become the focus of a state-sponsored initiative in New South Wales.

In 2012, the model was selected for inclusion in the CMS Innovation Advisor Program, recognized as the top innovation at the 2012 Society of Hospital Medicine Annual Meeting, and the SIBR structure was featured in a white paper, *Ward rounds in medicine: principles for best practice*, published by the Royal College of Physicians and Royal College of Nursing. Most recently, Emory's Nell Hodgson Woodruff School of Nursing received a \$1.5 million award from the U.S. Human Resources and Services Administration to fund training to support the scale up, spread, and evaluation of ACUs.

Implementing the ACU model is not for the faint of heart. It requires vision from hospital leadership and daily commitment from the nurse and physician unit leaders and staff to radically change the way hospitalized patients are cared for, starting with the admission process and continuing throughout the entire hospitalization. But the model appears to resonate strongly with staff, which we believe reflects the joy of working in high functioning teams.

Disclosures

Dr. Stein is the author of training and implementation materials for the ACU care model described in this publication that have been licensed to Centripital, a non-profit company he founded and for which he serves as president. In addition, Dr. Stein has served as a paid consultant to the Clinical Excellence Commission of New South Wales on this care model. This publication could affect his personal financial status. The terms of this arrangement have been reviewed and approved by Emory University in accordance with its conflict of interest policies.

Mr. Castle and Mr. Clark have received compensation for consulting activities related to the implementation of the ACU care model.

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