



KEY POINT SUMMARY

OBJECTIVES

The purpose of this study is to review lessons learned on how six health institutions have applied Acuity-Adaptable Units (AAUs) into their hospitals, with the aim to identify strategies for success.

Making acuity-adaptable units work: lessons from the field

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Key Concepts/Context

Acuity-Adaptable Units (AAUs) are rooms with a treatment model that allows all stages of patient care to come to the patient's unit from the time of admission to discharge. Minimizing the amount of patient transfers helps decrease medication errors, infection rates, and medical complications. This helps avoid injuries and infections connected with patient transfers from unit to unit through transitions in stages of care. Some examples of this include staff lifting injuries, patient falls, and missed or delayed treatment. Some AAUs can "flex" the entire range of the care spectrum, serving critical care needs to medical-surgical acute care. AAUs have had both successful and unsuccessful results, but little investigation has gone into why AAUs work in some hospital settings and not in others. The purpose of this study is to outline the tactics and strategies that have worked in different institutions.

Methods

Of the 16 hospitals that were identified as having explored AAU units, leaders of six hospitals agreed to be interviewed for this study. Three of the six hospitals were academic medical centers with more than 250 beds, one was a cardiac specialty hospital with 150 beds, and two were community hospitals with fewer than 100 beds. This design consulting project was funded by the Robert Wood Johnson Foundation.

The question in focus during the interview was, "How did the unit work (or not work) in your hospital?" Other questions related to implementation, operations, and general information (e.g., physical environment, unit culture, staffing, patient population specialties) were asked as well. A follow-up phone call or email was made to answer additional questions and gather more information.

The interview transcripts were analyzed using Burnard's (1991) thematic content analysis suggestions. Answers from the same question were compared across all six hospitals. Similar answers were merged. Burnard referred this as the "open coding"



process. Similar features were consolidated into themes (defined by colleagues), then larger themes, and even larger themes once again to come up with a list of “Characteristics of Successful Implementation.”

Findings

1. Cardiology was recommended as the specialty most conducive to AAUs because patient progress is predictable, cardiac care is protocol driven, and a predictable amount of cardiac patients will be admitted into ICU consistently.
2. Patient care should be predictable because it requires a predictable staffing arrangement to meet the necessary workload.
3. Cardiac surgery patients have more predictable care pathways than medical patients.
4. Medical patients have an unpredictable workload volume, patient admission volume, and unpredictable changes in patient acuity, making it difficult to create AAUs around this patient pool
5. Recommended to adopt the AAU model were community hospitals with fewer than 100 beds because there is a small, manageable amount of ICU patients and few “super-acuity patients.”
6. AAUs in community hospitals (of fewer than 100 beds) are **not** divided into different specialties; therefore, it is important to equip these with mobile telemetry ICU and with an e-ICU model that accommodates 10 ICU patients in any of the X number of beds.
7. It is important to hire staff willing to work in a flexible environment, especially when transforming existing units to the AAU model. Leadership must help staff adjust to this new culture.
8. The more ICU-trained staff, the more flexible they are in working with both ICU and non-ICU patients. But not all staff need to be trained -- just a critical number to allow for flexible staffing assignments.
9. Communication is critical between leadership and staff when undergoing a culture change like implementation of AAU model care.
10. AAU units can be clustered together so that when there is higher-than-expected volume of ICU patients, nurses can readily float from one unit to another. But it seems that clusters should be centered on specific medical need.
11. AAUs work well when surgeons and intensivists can interact with a smaller staff throughout the recovery process, building close relationships with the staff and patients.

Recommendations:

1. Culture change is necessary for the AAU's success.



2. Choose medical centers with the right specialty—they must have a service line of predictable patient progress (cardiology is the most predictable).
3. Prepare for resistance when introducing major changes in culture. It is important to engage key leaders and stakeholders early, as well as implement a comprehensive communications plan for physicians, nurses, and all hospital staff
4. Evaluate processes and outcomes at the unit level for both staff and patient. Be particularly sensitive to fluctuations in workload on the staff.

Design Implications

1. Adopt the AAU model for community hospitals with fewer than 100 beds because there is a small, manageable amount of ICU patients and few “super-acuity patients.”
2. Cardiology was recommended as the specialty most conducive to AAUs because patient progress is predictable, cardiac care is protocol driven, and a predictable number of cardiac patients will be admitted into ICU consistently.
3. AAUs in community hospitals (of fewer than 100 beds) are **not** divided into different specialties; therefore, it is important to equip these with mobile telemetry ICU and with an e-ICU model that accommodates 10 ICU patients in any of the X number of beds.
4. Communication is critical between leadership and staff when undergoing a culture change like implementation of AAU model care. Design with the understanding that communication is at the core of its success.
5. AAU units can be clustered together so that when there is higher-than-expected volume of ICU patients, nurses can readily float from one unit to another. But it seems that clusters should be centered on specific medical need.
6. AAUs work well when surgeons and intensivists can interact with a smaller staff throughout the recovery process, building close relationships with the staff and patients.
7. Technology implementation is helpful with AAUs.
Strategy for implementation of an acuity-adaptable model is color-coded patient nametags for different acuity levels so physicians can identify patients by acuity.

Limitations

1. Reports included in this study are anecdotal-limited and intended as background information for consultation with a single hospital. But trends were noticed across hospitals.
2. Caution is urged regarding adoption of AAUs in community hospitals because long-term success is inconsistent across hospitals.



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3. It is difficult to recruit and retain critical care nurses willing to provide acute care in AAUs in community hospitals.
4. It is difficult to integrate ICU with non-ICU nurses. ICU nurses are accustomed to developing close relationships with other ICU nurses, physicians, and patients.
5. Implementation is difficult due to nurse and physician resistance to changes in workflow.
6. The upfront expensive cost of ICU headwalls and increased patient room size to accommodate ICU-level care, even when knowing that not all rooms will be accommodating ICU patients, is difficult to justify.
7. Some U.S. states require critical care-level patients to be in units that are completely staffed and equipped for critical care—but many AAUs do not meet this requirement, sacrificing provider reimbursement rates.
8. This study was only based on six case studies. More sharing of best practices should be exchanged for a better understanding of AAUs' benefits and draw-backs.