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Update on the Aliki Initiative at year 10

Changing the culture of medicine to know our patients as individuals

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> Graduate Medical Education must be judged by the total experience, and not by the hours of work alone. Medical educators need to pay attention to what house officers do with their hours, not merely how many hours they do it.
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> —Kenneth Ludmerer (AΩA, Washington University in St. Louis School of Medicine, 1986, Faculty)[1]

In 2007, an educational experiment to improve the teaching of patient-centered care (PCC) in the era of resident duty hour regulations was undertaken. The Aliki Initiative is now in its 10th year, and has evolved and expanded to a multilevel, interprofessional curriculum that supports the teaching and practice of PCC activities on all medicine teams at Johns Hopkins Bayview Medical Center (JHBMC).

The experiment raised many questions: What was the impact on patients? What was the impact on residents' learning? Was it sustainable? How could the curriculum be refined, further developed, and expanded to other training experiences?

In the beginning

In 2009, the Aliki Initiative, a novel educational program for internal medicine residents that provides explicit teaching of skills needed to provide patient-centered, humanistic care, was introduced in *The Pharos*.[2] This curriculum, the focus of one of four general medicine inpatient teams, provides structured opportunities and tools to help trainees to learn more about each patient as an individual—their lives and circumstances outside of the

hospital; their beliefs about health and illness; their patterns of medication adherence; and their preferences, values, and concerns about their health. The curriculum also emphasizes patient-centered transitions of care.[2] By calling each patient several days after hospital discharge, and by making post-discharge visits to selected patients, trainees often encounter surprises that challenge earlier assumptions, leading them to develop a deeper understanding of care needs at times of transition. These assumption-challenging Aliki experiences reinforce the central importance of knowing each patient as an individual.[2]

Rationale and overview of the Aliki Initiative

Enid Balint.
Courtesy American Balint Society

Enid Balint first introduced the term "patient-centered medicine" in 1969, describing the belief that "each patient has to be understood as a unique human being." The support for the central importance of this approach, and proliferation of definitions of PCC have grown drastically since that time.[3,4]

The Institute of Medicine prioritizes PCC among six core aims to improve the United States health care system, and defines PCC as "providing care that is respectful of, and responsive to, individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions."[5] Practicing PCC is not only the right thing to do, but also has been linked with improvements in patient-provider relationships, diagnostic accuracy, adherence, quality of life, physician well-being, and job satisfaction.[6,7] Patient-centered communication is linked with patients' trust in their physicians; and patients with greater trust in their physicians are more comfortable sharing information, which, in turn, can be critical for diagnostic accuracy, and for crafting management plans to which patients are willing, able, and motivated to adhere.[9]

Some have advocated for teaching patient-centered communication as a core feature of medical school curricula.[8] However, pressures of the clinical learning environment, including workload, work hour regulations, and the need to learn vast amounts of new information and skills, often cause biomedical topics to overshadow teaching and learning of patient-centered approaches in trainees' experiences.[9] Most residency program curricula lack an explicit focus on patient-centered communication skills.[9]

When educational leaders at JHBMC considered how to ensure that trainees learn how to provide patient-centered care, it became obvious that this could not be done without first ensuring that trainees know each patient's preferences, needs, and values. This inspired the creation of the Aliki Initiative at JHBMC in 2007, with additional attention to optimizing transitions of care and understanding each patient's circumstances outside the hospital.

Several curricular activities are completed for each patient on the Aliki inpatient general medicine team—conducting a medication adherence review; contacting each patient's principal outpatient provider(s); and initiating a structured telephone call to each patient after discharge from the hospital.[2] Additional domains of the curriculum utilized for selected patients during the rotation include post-discharge visits to the patient's home or sub-acute rehabilitation facility, exploring the challenging provider-patient relationship, and a pharmacy curriculum for individualized prescribing.[10]

The curriculum is delivered on one of the four inpatient medicine teaching teams at the JHBMC, where each team includes two basic clerkship students; two interns working day shifts and a third working the night shift; one assistant resident; and one attending physician. Other team members include a subintern (fourth-year medical student); chaplain and chaplain trainee; clinical pharmacist and pharmacy students; and a medical library informationist.

The structure and process of patient care, teaching, and documentation are designed to facilitate PCC, deliberately and explicitly. A patient-centered history and physical form is used by the team, and begins with the patient's personal history. This puts the current symptoms into a context that helps the health care team understand how the episode of illness is affecting the individual, and provides important information that leads to a more focused and informed diagnostic and treatment plan.

Rounds are conducted at the bedside, and the student or intern presents to the patient, instead of to the medical team. Delivering the personal history first, and presenting in the second person to the patient, place the patient at the center of the rounds encouraging him/her to be actively involved in the discussion.

Program outcomes

The aim of the Aliki Initiative was to change what residents learn, and how they provide care. By several measures, these goals have been met.

On residents' evaluations of their learning on the medicine inpatient services, ratings for PCC domains are higher for the Aliki team compared with standard teams, including communicating with patients about post-hospital transitions of care, addressing patient medication adherence, and knowing their patients as people.[11] And, residents report no difference in traditional biomedical learning on the Aliki team versus standard ward teams.[11]

On post-rotation evaluations, medical students reported that they found the Aliki rotation to be a particularly patient-centered and positive experience. One student wrote:

> I helped take care of a gentleman on the Aliki team during my medicine rotation. He was admitted for pre-renal acute kidney injury secondary to volume depletion in his nursing home. During attending rounds, I was encouraged to present the entire admission history and physical to the patient and his wife as patient-centered rounds. Though the patient had altered mental status, the patient's wife was extremely grateful for having been included as part of the care team. It was one of the most memorable and rewarding experiences of medical school, thus far.[11]

Patient outcomes have also been positively impacted. Patients' satisfaction with their physicians, as measured by Press Ganey survey data, was at the 97th percentile on the Aliki team compared with the 47th percentile on standard teaching teams ($p<0.01$), while control measures such as satisfaction with room cleanliness or food were not different among any of the teams.[11]

Patients with heart failure (HF) who were cared for by the Aliki team had a lower rate of death or readmission for HF within 30 days (4% on the Aliki team versus 14% on the standard teams, $p=0.04$).[12]

Patients who reported receiving a post-discharge telephone call from their hospital intern indicated that they experienced a higher quality transition of care, as measured by the Care Transitions Measure-3 (CTM-3) (mean CTM-3 score 84.7 versus 78.2 on a 100-point scale, $p=0.03$).[13] Interns on the Aliki team called their patients more often after discharge compared to their counterparts.[13]

Culture change

The Aliki Initiative has spurred scholarship and creativity among residents, and continues to pay dividends. The Initiative creates a culture that empowers residents to act as agents of change, and to think broadly about patients beyond hospitalization.

In the years since the start of the Aliki Initiative, residents have begun several new PCC projects, including a focus on the ABIM Foundation's Choosing Wisely® campaign; a new behavioral health curriculum; and a Medicine for the Greater Good curriculum to give residents the experience of effecting health change within the community, beyond the hospital and clinic spaces. Two residents have partnered with StoryCorps, a national oral history project, to teach housestaff to audio record patients' life stories. Residents have also created a project to improve care for patients who have required frequent episodes of acute care, and struggle with significant challenges in their home lives.[14] And, residents have written and published reflective pieces about their experiences on the Aliki service that suggest the experience contributes significantly to professional identity formation.[15,16]

Curricular enhancement and growth

Several other patient-centered initiatives and areas of curricular development have been spawned by the Initiative.

In the first year of implementation, it was noted in regular, informal interviews with housestaff that the extent to which the curriculum was adopted on the Aliki team varied. Some attending physicians were effective with explicit teaching of patient-centered activities, while others adopted it to a more limited degree. For this reason, a core faculty of experienced educators with expertise in practicing and teaching PCC, and with a commitment to learning and teaching the specific activities outlined in the curriculum, was found to be essential for the Initiative's success.

Three members of the working group participated in a 10-month longitudinal curriculum development process to create the Aliki Scholars program, an ongoing faculty development program for attending physicians on the Aliki team. Faculty members were invited to be Aliki Scholars based on the quality of their inpatient teaching evaluations, and commitment to being part of an ongoing faculty learning community. After an initial half-day retreat, attending physicians were provided with a faculty handbook consisting of the program curriculum and learner-centered teaching principles.

Aliki Scholars participate in quarterly learning community meetings to continue to refine their teaching skills. This forum has introduced new elements of curriculum, and Scholars share best practices for effective teaching of PCC. Peer observation and learning from colleagues have been essential parts of the program.

Of the 18 original Scholars, 15 continue to serve as Aliki faculty—one Scholar moved to another institution, and two had adjustments in clinical duties that no longer allowed them to serve as ward attendings. Post-rotation evaluation comments by Aliki attendings indicate that they find the experience valuable: "It was the most uplifting inpatient attending stint I have had in over a decade."[11]

New curricular domains

A patient-centered discharge curriculum was developed through a grant from the Picker Institute. Learners are taught how to consider the patient's preferences, needs, and understanding of their medical care when preparing for discharge. The central element is a Going Home from the Hospital form used by the team and patient to prepare for discharge. It includes questions to stimulate conversation about discharge planning. It includes a face sheet with the names, photos, and roles of each member of the housestaff team. The material facilitates the discharge process, and primary care physicians have noted that patients often bring the handout to their initial appointment after hospital discharge.

Spirituality is an important part of many patients' approach to health and illness, and should be incorporated into their care.[17] The hospital chaplain is a key part of the health care team; therefore, an interprofessional spirituality curriculum was developed as part of the Initiative. A clinical pastoral education intern rounds with the Aliki team, and provides input into the care plan.[18,19]

Curricular evolution and dissemination

When first implemented, the number of admissions to the Aliki team was reduced by one-half that of other general medicine teams. This gave the residents more time to better know their patients as individuals, and to follow those patients through a transition in care. With the enactment of the 2011 changes in the Accreditation Council for Graduate Medical Education (ACGME), the admission numbers on all general medicine teams were reduced; however, the expectation that some of the Aliki activities would be completed for every patient on all ward teams was added.

When the ACGME enacted new program changes in 2011, residency programs across the country responded in differing ways. Given that a reduction in readmissions had already been demonstrated, financial resources at JHBMC were invested in a work reduction approach, as opposed to a work compression or work fragmentation approach. The number of admissions on all general medicine teams was reduced, and Aliki activities, including calls to key outpatient providers and calls to patients after discharge, were incorporated into all ward teams. Each of the other three ward teams has its own curricular focus—high-value care, behavioral medicine, and technology at the bedside. Currently, each of the four housestaff teams admits between nine and ten patients every four days, and each team's patient census is between seven and 14 patients.[12]

Cost

At the start of the Aliki Initiative, the 50 percent reduction in team admissions required substantial philanthropic funding to support the hiring of hospitalist physicians to care for the subset of patients who were not being admitted by the Aliki team. Funding also supported a full-time research assistant for the first two years of program implementation.

Additionally, during the earliest years, the program supplemented the billing income for each attending physician to offset the reduction in the number of patient admissions. Up front costs to support faculty to develop, implement, and evaluate the curriculum were also covered by the Initiative. These curriculum development costs would not be necessary if another institution adopted the Aliki curriculum, now available on MedEd Portal.[9]

Now that the admission numbers have been reduced on all general medicine teaching teams, supplementation of the billing income of attending physicians is no longer necessary.

The current direct costs to support the Aliki Initiative are modest, and are related to leadership and ongoing research initiatives.

Calculating the overall financial impact of the Aliki Initiative is challenging. Reductions in 30-day hospital readmissions, and in the use of diagnostic tests that may have been rendered unnecessary by clinical evaluations informed by greater knowledge of the patient as a person, must be documented and then linked directly to the program's interventions.

In Maryland, preventing one HF readmission results in savings of $10,000 to $15,000 for a medical center. In 2014, JHBMC received a $1.4 million bonus from the state, in part, due to lower readmission rates. The degree to which the Aliki Initiative may have impacted this, distinct from many other interventions targeted to reduce readmissions, is unknown.

Patient-centered care in the ICU

In the Intensive Care Unit (ICU), information is often given by the physician to the patient and family with

missed opportunities to understand the patient as a person, explore patients' and families' perspectives and goals, and acknowledge emotions.[20] Aliki residents have reported a frequent disconnect between two essential goals of patient care during ICU rotations: stabilizing critically ill patients, and knowing patients as individuals to ensure the care they receive is congruent with their values and goals.

Based on the Aliki Initiative, a new patient-centered curriculum for residents in the ICU is being implemented to address these gaps. Through teaching conferences, interactive workshops, and real-time use of a framework for goals of care meetings during ICU rotations, the aim is for residents to gain comfort and skill with patient-centered communication in ICU family conferences. Residents are learning to use attentive listening skills; explore patients' and family members' perspectives; offer empathy and support; consider the life the patient had before the critical illness; and consider the type of life the patient may have if he/she recovers.

To increase residents' awareness of the long-term effects of critical illness, one teaching conference features patients who were cared for in the ICU, and family members. The patients and their family members return for an interview several months after discharge to describe what the months of recovery have been like, opening learners' eyes to the often unforeseen challenges that are common in this setting. Additional teaching conferences cover the role of palliative care, how to better estimate prognosis in patients with numerous comorbid medical conditions, and an overview of features of the post-ICU syndrome.

Interprofessional education and collaborative practice

The Initiative is collaborating with colleagues from the Johns Hopkins Bayview Department of Nursing, and the Johns Hopkins University School of Nursing to establish an interprofessional collaborative practice model with nursing. A new position for a nurse attending is being piloted; the nurse attending partners with the team's attending physician to increase the contributions of nursing to team rounds. Nursing students will be part of the Aliki team.

Lessons learned

Implementing the Aliki Initiative at other institutions will require significantly fewer resources than when the program was designed, and initially implemented at JHBMC. The curriculum is now well-established, with curricular materials for learners and faculty publicly available.[10] While a core group of motivated faculty is key, this curriculum can be implemented with minimal additional faculty time.

Taking the Initiative to scale

The Aliki Initiative teaches how to explore the patient's perspective, circumstances, and goals, and incorporate these into the plan of care to facilitate smoother transitions of care that take into account the patient's unique circumstances outside of the hospital. Bedside rounding offers the chance for the patient to be a more active participant in his/her care, and allows opportunities for role modeling, observation, and feedback on communication and other clinical skills. Communicating with outpatient clinicians can be woven into the day's work.

This curriculum is ready to be adopted in residency programs across the country, and can be easily done with a few recommendations:

- Faculty development is essential. A dedicated group of faculty who are excellent patient-centered clinicians, possess excellent teaching skills, and who are well-versed in the curriculum and part of a learning community is a necessary base.
- The program can be implemented without significant additional time commitment. It is more about doing things differently, than about doing more. For instance, using time at the bedside with patients, exploring their perspective using tools like the Going Home from the Hospital form, or Medication Adherence Review, is time well spent, and can yield information critical to providing optimal PCC and safe transitions.
- There are many curricular elements in the program, and it is impossible to give them all the same emphasis within a given rotation spanning two weeks. The team, attending physician, and nurse should prioritize the elements that are most important for the team's learning.
- Not all learners naturally make the connection between knowing a patient as a person, and how that knowledge impacts the care of the patient. It is important to help learners make these connections, e.g., why knowing about the patient's support system is important to his/her care plan after discharge.

The Aliki model of teaching PCC has been broadly embraced at JHBMC, and has proved to be a viable, sustainable solution to compliance with current ACGME duty hour regulations. It has had profound effects on patients, students, residents, and the institution. It is a self-perpetuating, and self-reinforcing, culture change.

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