

Teaching residents to know their patients as individuals

The Aiki Initiative at
Johns Hopkins Bayview
Medical Center





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Ms. P: Case summary

Ms. P is a fifty-year-old woman with a history of hypertension who presented to the hospital with a severe allergic reaction to over-the-counter pain medications. During her hospitalization, Ms. P admitted to the intern that she had experienced the same allergic reaction before and felt ashamed that it had occurred again. In discussing how Ms. P organizes her medications, she also admitted that she only intermittently takes her blood pressure medications. She revealed that she is a busy caregiver for her mother and son, both of whom live with Ms. P and have complex medical problems of their own. The intern, consulting with her resident and attending, wondered how she can best help Ms. P return home safely and avoid future problems with her medications.

Sir William Osler, if reincarnated and the attending for Ms. P, would have taken this opportunity to teach his residents the importance of knowing her as a person, for it was he who famously observed, “It is much more important to know what sort of a patient has a disease than what sort of a

Mr. Charles Lam, Jr., and Mr. Thomas Lam, with Aliko team members Dr. Janet Record (attending physician), Dr. Sean Agbor-Enoh (intern), Dr. Justin Chronister (intern), and Dr. Grant Chow (senior resident).

Photo courtesy of the Johns Hopkins Bayview Medical Center.



disease a patient has.”¹ Despite increasing evidence that knowing the patient as an individual improves patient outcomes, graduate medical education (GME) pays little attention to affording residents the opportunity to know their patients well.

If you ask the members of an inpatient ward team what keeps them from knowing their patients, most—from students to residents to attendings—say, “We don’t have enough time.” Medical historian Kenneth Ludmerer laments the recent focus of residency training on service over education, with residents caring for greater numbers of patients for shorter periods of time. He argues that a fundamental educational principle of traditional medical education requires that residents learn deeply from and about fewer patients,² citing the landmark report by Abraham Flexner: “Men become educated by steeping themselves thoroughly in a few subjects, not by nibbling at many.”^{3p148}

Hippocrates wrote, “Healing is a matter of time, but it is sometimes also a matter of opportunity.”^{4p1670} At Johns Hopkins Bayview Medical Center, we are seizing the opportunity to give residents the gift of time to allow them to

become healers and know their patients in the way Osler recommended. The Alike Initiative—a new educational program named for philanthropist Mrs. Alike Perroti, who supports our efforts—reduces residents’ workloads and creates new opportunities for residents to know their patients more fully both inside and outside the hospital. The program provides residents the time both to get to know their patients and to learn from and reflect with their teachers.



The importance of patients’ narratives

The opportunity to know patients as individuals is one of the greatest rewards in medicine. The narratives of our patients’ lives fuel our passion for this work and keep us grounded in the art and humanity of medicine.⁵ By allowing us into their lives—whether through a single, brief interaction in the hospital or an enduring relationship over decades—patients bestow on us a special privilege.

Beyond this, however, our capacity to know patients as individuals allows us to translate the best evidence-based medicine into the highest quality, personalized care. In 1977, George Engel exhorted physicians to break free from the constraints of the biomedical model to understand “the patient as well as the illness” by uncovering the psychological and social aspects of patients’ lives and life views.⁶ This patient-centered framework of care is associated with improved patient outcomes, including better quality of life, improved adherence, pain reduction, and improved blood pressure control.^{7,8}

Despite its demonstrated benefits, the widespread failure of the health care system to provide individualized, patient-centered care is directly linked to suboptimal patient outcomes.⁹ A survey of 39,090 patients by *Consumer Reports* published in 2007 shows that fifty-eight percent of them feel their doctors do not know them as individuals.¹⁰ Another report in 2005 indicates that, on discharge from the hospital, fewer than half of patients can list or explain the purposes and side effects of their medications.¹¹ A study by D. R. Calkins and colleagues published in 1997 shows that physicians, on the other hand, tend to overestimate the quality of their discharge instructions.¹² A 2007 paper by Derjung Tarn and coworkers noted that physicians prescribing new medications only stated

the name of the medication seventy-four percent of the time and addressed adverse effects and duration of therapy about one-third of the time.¹³ This failure by physicians to communicate critical elements of medication use may contribute to failure by patients to take medications as directed. Similarly, Sunil Kripalani and colleagues in an article published in 2007 report that communication between hospital physicians and primary care physicians is often lacking or suboptimal in detail, affecting the quality of care in twenty-five percent of follow-up visits.¹⁴



Patient centeredness—one of six core aims for improving the quality of health care in the United States

The Institute of Medicine (IOM) report *Crossing the Quality Chasm* highlights patient-centeredness as one of the six core aims for improving the U.S. health care system. The report defines patient-centeredness 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.”^{15p6} Toward that goal, the IOM in the follow-up report *Health Professions Education: A Bridge to Quality* proposes that skills in providing patient-centered care should be a central competency for health professionals.¹⁶

Unfortunately, traditional GME is not prepared for this imperative. The goal of GME is not only to provide trainees with the knowledge and skills to care for patients like Ms. P, but also to inculcate in them the core values of the medical profession.¹⁷ GME today, however, is largely driven by the service needs of medical centers instead of thoughtful educational priorities.² Residency graduates emerge from three years of stressful, demanding training ill-equipped to provide the type of patient-centered, quality care Ms. P deserves. Rather than learning to care for patients collaboratively across transitions and in the greater context of their lives, health care is both practiced and taught in “silos.”¹⁸ At the same time, the structure and financing of GME elevates the business of medicine over the vocation of medicine, creating a hidden curriculum in which “the values of the profession are becoming increasingly difficult for learners to discern.”^{19p1341}

Medical school curricula at many schools show an increased emphasis on patient-centered care and the value of effective patient-provider communication. However, once these physicians-in-training enter the typical residency program, they find that their training experiences do not reinforce this emphasis and are not structured to allow them to know and understand their patients as individuals. Unlike proficiency in traditional medical knowledge or clinical judgment, the skill of knowing one’s patient as an individual may decline under the influence of a hidden curriculum that may not promote humanistic care.^{20–23} Duty hour reforms limiting the number

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of hours without adjusting the volume of work may lead some residents to make conscious decisions about how to spend their time, as voiced by one resident in a 2005 survey: “It is harder to have as much time to speak with and really get to know patients, which impacts the ability to have shared decisions and understand patient perspectives.”^{24p761}

Finally, GME leaves little time for reflective learning. Reflection allows physicians-in-training to think about the meaning of their experiences with patients and how these experiences are influencing their own overall professional development.^{25,26} Although medical educators promote the potential value of self-reflection through activities like critical

incident reports and portfolios, trainees' capacity for reflection may decline with the workload and fatigue of residency training.²⁵⁻²⁷

Thus today's young physicians-in-training may master the mechanics of delivering medical care, yet never have the opportunity to learn the art of healing.



Creative philanthropy — key to success of the Rockefeller Foundation

At the turn of the twentieth century, Frederick T. Gates advised John D. Rockefeller to establish an institute of medical research focused on medical education reform. Rockefeller's \$32 million endowment of the General Education Board comprised the largest gift to higher education up to that time.²⁸ In 1905, Henry Pritchett of the Carnegie Foundation commissioned Abraham Flexner to study the state of medical education in North America and to make recommendations to improve it.²⁸ This effort resulted in the publication of the Flexner Report, perhaps the most influential document in the history of American medical education.²⁹ These achievements a century ago represent striking examples of the ways creative philanthropy can both reform and shape medical education to meet the needs of society.²⁸

The need for educational reform is once again upon us, but the funding constraints of a market-driven health care environment hamper innovation by hospitals and educators.² Reform in the twenty-first century may require educators to consider again the potential of partnering with the public. The Aliko Initiative is a program designed to create physicians who treat all patients with compassionate, competent, and personalized care.

The Aliko Initiative aims to develop caring doctors who have a genuine and deep appreciation of the importance of knowing each patient's unique personal circumstances and who make patient care recommendations that apply the best evidence to the individual patient. The program reduces the number of patients assigned to each resident, providing residents more time to spend with patients during and after their hospitalizations, and thus offering new opportunities for residents to learn from and about their patients.

The Johns Hopkins Bayview Medical Center is an academic medical center serving 8700 medicine inpatients per year; twenty percent are poor. Patients hospitalized on the medical service receive care either from a hospitalist service or from one of four house staff teams. Teams contain one resident, two interns, two students on basic medicine clerkship rotation, a faculty attending, and a case manager. A traditional team admits ten patients every fourth night on "long-call" and four patients during an intervening "short-

call." In October 2007, one team became an Aliko Team, admitting five long-call patients and two short-call patients. Hospitalists care for the patients who would otherwise be admitted by this house staff team.



Lower patient load enables more teaching to the Aliko Team

With this reduced census, the Aliko Team has the time to participate in teaching sessions and mentored experiences designed to foster appreciation of knowing each patient as a unique person and understanding each patient's psychosocial circumstances. This begins from the admission encounter, when house staff learn to elicit a more meaningful, detailed history that includes patients' understanding of their illness and their health. By engaging in this dialogue with patients, their caregivers, and their outpatient health care providers, house staff learn who and what patients have left behind when they arrive at the hospital, an often forgotten but equally important transition time.

Residents also learn how to provide counseling and treatment to match patients' needs and concerns. One key component of the Aliko Initiative is learning to assess and overcome potential barriers to medication adherence, particularly by tailoring evidence-based treatment to the patients' particular preferences and resources.

During each day of the hospitalization, house staff continue these conversations, honing their skills in patient education and joining with patients in shared decision making about diagnostic or therapeutic options. Leading up to and on the day of discharge, house staff prepare patients and their caregivers for the transition to home, rehabilitation centers, or other settings in the patients' communities.

In contrast to usual practice following discharge, residents call all patients within a few days of discharge to answer questions, check their understanding of the hospitalization and treatment recommendations, review their understanding and ability to adhere to the discharge treatment regimen, and offer assistance with any problems that have arisen in the transition.

Finally, the Aliko Initiative provides the most powerful learning opportunity of all: team members learn to know their patients as individuals within their own homes and communities. Five or more patients per month give residents permission to visit them after discharge in their homes or subacute care facilities. Often, patients allow residents to photograph or film these visits, so the house staff can teach their colleagues about these rich, rewarding experiences during a monthly Aliko morning report conference.



Outcome—narrative medicine yields better patient care

Since October 2007, over half of our house staff have participated in the Aliko rotation. During hospitalizations, residents spend more time at the bedside with their patients and patients' loved ones, discussing medications and other treatments and coordinating care with outpatient providers. Interns and residents say they gain their greatest insights during their time with patients after discharge, when they call all of their patients and visit five or six patients at their homes or subacute care facilities.

In addition to enhanced time with patients, team members have the time to reflect on their professional and personal growth, both individually and as a team. Each month, faculty and attendings working with the Aliko house staff meet to debrief the team about their experiences. The most striking and consistent observation is how often house staff report "being surprised" by what they have learned about their patients. Prior assumptions about a patient's preferences, barriers, abilities, or concerns are regularly challenged when

residents take the time to know patients individually. This deeper insight, in turn, has repeatedly led to opportunities to provide better patient care. Below we present some examples of "assumption-challenging" Aliko experiences and how they impacted patients and house staff.

Ms. P: The Home Visit

A few days after discharge from the hospital, the Aliko Team intern and attending visited Ms. P at her home, learning more about her home situation and meeting her mother and son. They discovered that—in an attempt to remind herself to take her medications—Ms. P keeps her medications on her dining room table. Otherwise, she reported, the medications are "out of sight, out of mind." The intern realized that both Ms. P's mother and her son also keep their prescription and over-the-counter medications in the same location, increasing the chances that any of them could take the wrong medication. The intern also learned about the ways Ms. P copes with caring for her family, including the supports she receives from her community. Together, the intern and Ms. P brainstormed about how to organize

Aliko team members Dr. Janet Record (attending physician), Dr. Grant Chow (senior resident), Dr. Justin Chronister (intern), and Dr. Sean Agbor-Enoh (intern). Photo courtesy of the Johns Hopkins Bayview Medical Center.



her medications more safely and help her remember how to take them.

From the home visit the intern learned more about the challenges of integrating a complex medical regimen into a person's daily life and ways to engage patients in finding solutions to these challenges. Ms. P expressed appreciation that the intern took the time to come to her home: "They treated me like I was someone special."

This learning experience is just one of many. Other examples of Aliko experiences include:

- An intern spent significant time with a man facing a difficult decision about treatment for pancreatic cancer. The patient initially told him, "I'll do whatever you say, Doc." Nevertheless, the intern patiently spoke with him every day to learn about his goals of care and preferences. He wasn't sure he was making any difference until one day the patient told him, "Doc, I don't want any of those things. I want to go home." The intern helped him transition to home hospice, and felt certain that this was "the right thing to do for him."
- A former Aliko resident working as the urgent care doctor for the clinic described "an Aliko moment" during which he discovered that a patient with gastrointestinal bleeding was unable to afford his proton pump inhibitor after hospitalization. Experience on an Aliko Team gave him the skill and confidence to ask the patient explicitly and thoughtfully about all barriers to adherence. The resident switched the patient to a generic medication covered by the patient's insurance and spent time counseling the patient about the rationale for this therapy.
- An intern visited a patient with urinary retention in a subacute care facility and learned that the patient's Foley catheter had been removed despite notations not to do so in the "hospital course" section of the discharge summary, and despite the patient's own recall of their recommendations. The team resolved that in the future they would document more explicit instructions with the medications list at the end of discharge summaries and call ahead to subacute care facilities for similar important follow-up issues.

Although residents were initially concerned that fewer patients would mean less opportunity for traditional medical learning, in fact, they report having more time for evidence-based and bedside teaching. One team decided to focus on physical diagnosis skills. The teaching attending physician on this team described the experience as "the first time I am sure that the interns really knew how to examine a patient by the end of my weeks with them." The supervising residents also relished the additional time to search the literature for articles and prepare teaching for the team.

House staff participating in the Aliko team feel greater pride and more fulfilled in their work. In the words of one intern, "It's given me time to be the kind of doctor I've always wanted to be and do the things I should be doing for all my patients."

Ms. P: Epilogue

Asked about the home visit, Ms. P said, "I thought those days were over. You know, how the doctors used to come to your house. They came down, sat down to talk, to see how I was getting out of the hospitalization. And that made me feel good because some doctors don't have that interest or do a follow-up to find out how the patients are doing . . . That's letting the patients know that someone else cares. That made me feel that I was important, and they're learning from me! . . . They treated me like I was the only patient they had to see that day. They treated me like I was someone special."



Where from here?
More opportunities for
innovative medicine

Our early experience suggests that the Aliko Initiative has the potential to increase residents' skills and motivation to deliver patient-centered care. Ongoing and planned evaluations of the program's outcomes include:

- An assessment of Aliko residents' self-assessed behaviors, attitudes, and skills before and after participation in the experience.
- Trainees' perceptions and understanding of medication adherence and cost.
- An audit of the medical records of patients cared for by an Aliko team, compared with patients cared for in other settings, to evaluate prespecified aspects of inpatient care, transitions of care, and the quality of discharge documentation.

In addition, we will examine the impact of the Aliko Initiative on such patient outcomes as hospital length of stay, quality and safety of the transition from hospital to home or to another care team at a skilled nursing facility, rates of rehospitalization, patients' knowledge about their medical conditions and medications, and patients' perspectives about the quality of their care and health care providers. These evaluations may help educators at other institutions determine what parts of this curriculum to try at their own institutions, and to secure grant funding to support such efforts. In addition, such evaluations may prove helpful to policy makers as they shape the future funding structure of GME.

Like the Flexner Report a century ago, the Aliko Initiative resulted from private philanthropy directed to improving medical training for the public good. When doctors and private citizens together view medicine and medical education as a public trust, everyone benefits. It also reminds medical educators that we cannot accept the *status quo* and need to show the public what our vision for patient-centered care can and must be. As Molly Cooke and her coauthors write, "No one would cheer more loudly for a change in medical education than Abraham Flexner. . . . He would undoubtedly support the

fundamental restructuring of medical education needed today. Indeed, we suspect he would find it long overdue.”¹⁹

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References

1. Taylor RB. *White Coat Tales: Medicine's Heroes, Heritage, and Misadventure*. New York: Springer; 2007: 126.
2. Ludmerer KM, Johns MM. Reforming graduate medical education. *JAMA* 2005; 294: 1083–87.
3. Flexner A. *Medical Education: A Comparative Study*. New York: Macmillan; 1925.
4. Fabre J. Hip, Hip, Hippocrates: Extracts from The Hippocratic Doctor. *BMJ* 1997; 315: 1669–70.
5. Reynolds RC, Stone J, editors; Nixon LL, Wear D, associate editors. *On Doctoring: Stories, Poems, Essays*. New York: Simon & Schuster; 1991.
6. Engel GL. The need for a new medical model: A challenge for biomedicine. *Science* 1977; 196: 129–36.
7. Roter D. The enduring and evolving nature of the patient-physician relationship. *Patient Educ Couns* 2000; 39: 5–15.
8. Stewart M, Brown JB, Donner A, et al. The impact of patient-centered care on outcomes. *J Fam Pract* 2000; 49: 796–804.
9. Sweeney L, Halpert A, Waranoff J. Patient-centered management of complex patients can reduce costs without shortening life. *Am J Manag Care* 2007; 13: 84–92.
10. Get better care from your doctor: What 39,090 patients and 335 doctors have to say about how to make the most of your next appointment. *Consum Rep* 2007 Feb; 72: 32–6.
11. Makaryus AN, Friedman EA. Patients' understanding of their treatment plans and diagnosis at discharge. *Mayo Clin Proc* 2005; 80: 991–94.
12. Calkins DR, David RB, Reiley P, et al. Patient-physician communication at hospital discharge and patients' understanding of the post discharge treatment plan. *Arch Intern Med* 1997; 157: 1026–30.
13. Tarn DM, Heritage J, Paterniti DA, et al. Physician communication when prescribing new medications. *Arch Intern Med* 2006; 166: 1855–62.
14. Kripalani S, LeFevre F, Phillips CO, et al. Deficits in communication and information transfer between hospital-based and primary care physicians: Implications for patient safety and continuity of care. *JAMA* 2007; 297: 831–41.
15. Committee on Quality of Health Care in America, Institute of Medicine. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington (DC): National Academies Press; 2001.
16. Committee on the Health Professions Education Summit, Board on Health Care Services. Institute of Medicine of the National Academies. Greiner AC, Knebel E, editors. *Health Professions Education: A Bridge to Quality*. Washington (DC): National Academies Press; 2003.
17. ABIM Foundation, American Board of Internal Medicine; ACP-ASIM Foundation, American College of Physicians-American Society of Internal Medicine; European Federation of Internal Medicine. *Medical professionalism in the new millennium: A physician charter*. *Ann Intern Med* 2002; 136: 243–46.
18. Coleman EA, Berenson RA. Lost in transition: Challenges and opportunities for improving the quality of transitional care. *Ann Intern Med* 2004; 141: 533–36.
19. Cooke M, Irby DM, Sullivan W, Ludmerer KM. American medical education 100 years after the Flexner report. *N Engl J Med* 2006; 355: 1339–44.
20. Feudtner C, Christakis DA, Christakis NA. Do clinical clerks suffer ethical erosion? Students' perceptions of their ethical environment and personal development. *Acad Med* 1994; 69: 670–79.
21. Hundert EM, Hafferty F, Christakis D. Characteristics of the informal curriculum and trainees' ethical choices. *Acad Med* 1996; 71: 624–42.
22. Wear D, Aultman JM, Varley JD, Zarconi J. Making fun of patients: Medical students' perceptions and use of derogatory and cynical humor in clinical settings. *Acad Med* 2006; 81: 454–62.
23. Haidet P, Kelly PA, Bentley S, et al; Communication, Curriculum, and Culture Study Group. Not the same everywhere. Patient-centered learning environments at nine medical schools. *J Gen Intern Med* 2006; 21: 405–9.
24. Ratanawongsa N, Bolen S, Howell EE, et al. Residents' perceptions of professionalism in training and practice: Barriers, promoters, and duty hour requirements. *J Gen Intern Med* 2006; 21: 758–63.
25. Mann K, Gordon J, Macleod A. Reflection and reflective practice in health professions education: A systematic review. *Adv Health Sci Educ Theory Pract* 2007 (epub ahead of print: <http://www.springerlink.com/content/a226806k3n5115n5/?p=e2fc8c07b27e4377bcc1d2c487e5ab58&pi=0>).
26. Branch WT Jr, Paranjape A. Feedback and reflection: Teaching methods for clinical settings. *Acad Med* 2002; 77: 1185–88.
27. Branch WT Jr. Use of critical incident reports in medical education. A perspective. *J Gen Intern Med* 2005; 20: 1063–67.
28. Hewa S. Rockefeller philanthropy and the “Flexner Report” on Medical Education in the United States. *Int J Sociology Soc Pol* 2002; 22: 1–47.
29. Flexner A. *Medical Education in the United States and Canada: A Report to the Carnegie Foundation for the Advancement of Teaching*. New York: The Carnegie Foundation for the Advancement of Teaching; 1910. Available on-line at books.google.com.

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