

Teaching High-Value, Cost-Conscious Care to Residents: The Alliance for Academic Internal Medicine–American College of Physicians Curriculum

Cynthia D. Smith, MD, on behalf of the Alliance for Academic Internal Medicine–American College of Physicians High Value, Cost-Conscious Care Curriculum Development Committee*

Health care expenditures are projected to reach nearly 20% of the U.S. gross domestic product by 2020. Up to \$765 billion of this spending has been identified as potentially avoidable; many of the avoidable costs have been attributed to unnecessary services. Post-graduate trainees have historically received little specific training in the stewardship of health care resources and minimal feedback on resource utilization and its effect on the cost of care. This article describes a new curriculum that was developed collaboratively by the Alliance for Academic Internal Medicine and the American College of Physicians to address this training gap. The curriculum introduces a simple, stepwise framework for delivering high-value

care and focuses on teaching trainees to incorporate high-value, cost-conscious care principles into their clinical practice. It consists of ten 1-hour, case-based, interactive sessions designed to be flexibly incorporated into the existing conference structure of a residency training program.

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* For a list of committee members, see the **Appendix** (available at www.annals.org).

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Health care expenditures are expected to reach 19.8% of the U.S. gross domestic product by 2020 (1). Many economists consider the rate of increase in domestic spending on health care to be unsustainable. Up to 30% (\$765 billion) of health care costs was identified as potentially avoidable in a report issued by the Institute of Medicine in 2010 (2). Of this amount, approximately \$395 billion may be physician-controlled costs, including \$210 billion attributable to unnecessary services, \$130 billion attributable to inefficiently delivered care, and \$55 billion attributable to missed prevention opportunities. Physicians have historically received little to no specific training in health care stewardship. In 2010, the American College of Physicians (ACP) announced a high-value, cost-conscious care initiative to provide practicing physicians with tools to make them better stewards of health care resources. One of the important goals of the initiative has been to incorporate the principles of high-value, cost-conscious care into residency training.

After a summit of educational and consumer stakeholders funded by the American Board of Internal Medicine (ABIM) Foundation in July 2011, the Alliance for Academic Internal Medicine (AAIM) and ACP began a year-long collaboration to create a novel curriculum for internal medicine residents that focused on incorporating high-value, cost-conscious care principles into clinical practice. Owens and colleagues (3) outlined these principles in 2011. They suggest that to slow the increase of costs

while preserving high-quality care, clinicians must focus on using medical interventions that provide good value. Specifically, before using an intervention, clinicians should balance the potential benefits against the potential harms and costs. The AAIM–ACP High-Value, Cost-Conscious Care Curriculum Development Committee adapted these principles into a stepwise framework for a new curriculum (Table).

Historically, attending physician behavior has generally modeled the concept that more care is better care. As a result, residents tend to order tests liberally but at the same time they receive very little feedback on their resource utilization and its effect on the cost of care (4). In fact, Medicare reimbursement to teaching hospitals has been based on the assumption that trainees spend more on care than do other physicians (5, 6). Yet, research over the past decade (7, 8) has shown that higher costs of care are not necessarily associated with superior outcomes.

Residency training is an excellent time to introduce the concept of high-value care, because the habits that residents learn during training have been shown to remain throughout their professional lives (9). Although some medical schools have added content related to the economics of health care and its delivery to their curricula, a large knowledge gap remains in these areas for many physicians. Training programs have included little emphasis on stewardship of resources or on practicing in a cost-conscious manner (10, 11). To close this gap, the AAIM and ACP collaborated on a curriculum that introduces a framework for the delivery of high-value care and engages residents and faculty in small-group activities involving real-life clinical scenarios that require careful analysis of the benefits, harms, and costs of a test or intervention as well as use of evidence-based, shared decision making.

See also:

Web-Only
Supplements

The committee that developed this curriculum comprised volunteers from the membership of AAIM and the ACP, including program directors, associate program directors, a department chair, residency faculty, residents, and staff from both organizations. The group collaborated externally with the ABIM, the ABIM Foundation, the American Society of Nuclear Cardiology, and the American Society for Clinical Pathology to create and review selected curricula.

The curriculum consists of ten 1-hour interactive sessions designed to be flexibly incorporated into the existing conference structure of a program (academic half-day, noon conference, morning report, or preclinic conference). The sessions are organized around real-life inpatient and outpatient cases gathered by the Curriculum Development Committee and incorporate the best estimates of corresponding hospital and professional charges or costs derived from several sources. Because a combination of educational methods has been shown to be more effective for achieving higher-order cognitive objectives, such as changing clinical behavior, the sessions include both small-group interactive learning and didactic components (12). Materials for each session include teaching slides, small-group discussion questions, and a facilitator's guide (Supplement 2, available at www.annals.org). Faculty development materials beyond the session-specific facilitator's guides include an introductory guide for the entire curriculum, two 1-hour recorded webinars, and a live workshop that will be offered in October at the AAIM national meeting. All curricular materials are free and publicly available at www.highvaluecarecurriculum.org at the beginning of the 2012 to 2013 academic year.

Ten percent of the curriculum consists of a local quality improvement activity centered on high-value, cost-conscious care topics. A participating program can choose to complete a basic or advanced version, depending on the program's existing quality improvement curriculum. The basic activity requires a group of second-year residents, participating faculty, and local hospital administrators to meet and review institutional data related to high-value care. This could include identification of misuse or overuse of diagnostic testing and treatments, such as cardiac stress testing rates for patients admitted with chest pain and urinalysis and culture for asymptomatic patients in the hospital, or an inappropriate location of care, such as use of the emergency department for nonurgent conditions by patients whose primary providers are in the resident clinic. The local team will identify a specific area of overuse or misuse that the team members work together to improve. During the 10th and final session of the curriculum, the local team must present how and why they selected the improvement project and their action plan to improve performance. A more advanced quality improvement activity will be available for programs that already have an established quality improvement curriculum. All programs will be encouraged to develop a presentation describing their

Table. Curriculum Framework: Steps Toward High-Value, Cost-Conscious Care*

- Step 1: Understand the benefits, harms, and relative costs of the interventions that you are considering
- Step 2: Decrease or eliminate the use of interventions that provide no benefits or may be harmful
- Step 3: Choose interventions and care settings that maximize benefits, minimize harms, and reduce costs (using comparative effectiveness and cost-effectiveness data)
- Step 4: Customize a care plan with the patient that incorporates their values and addresses their concerns
- Step 5: Identify system-level opportunities to improve outcomes, minimize harms, and reduce health care waste

* Adapted from reference 3.

quality improvement projects and to share this presentation with other participating institutions on the curriculum Web site.

The AAIM-ACP Curriculum Development Committee has identified several metrics to assess utilization and effectiveness of the curriculum. Surveys will gather data from program directors, faculty, and residents on their knowledge, skills, and attitudes about high-value, cost-conscious care. Survey responses will be compared between persons who were or were not exposed to the curriculum. The Committee has developed a method to identify questions on high-value care in the Internal Medicine In-Training Exam so that a subscore for high-value care can be generated for each resident and for the residency training program, starting with the 2012 examination. The AAIM and ACP will compare this high-value, cost-conscious care subscore between programs that do and do not implement the curriculum, and these data will be tracked over 3 years. In addition, program directors on the Curriculum Development Committee have agreed to pilot-test the curriculum at their institutions and provide ongoing feedback on a shared curriculum development site.

The AAIM-ACP curriculum on high-value, cost-conscious care is an initial attempt to address a vital educational need for internal medicine residents (13). Our hope is that the curriculum will help to instill the principles of high-value care into young physicians, who can then incorporate them into their practices over their professional lifetimes. Yet, the importance of high-value care is not limited to internal medicine or to residency training. Medical students also benefit from learning these concepts, and many experienced physicians who trained during times when prudent use of health care resources was not an issue may need this education more acutely than current students and trainees. Thus, if successful in internal medicine residency programs, AAIM and ACP will explore expansion of the curriculum to include a broader array of cases pertinent to other specialties and adaptation of the format to make it useful to medical students, resi-

dents in other specialties, fellows, and practicing physicians (14).

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