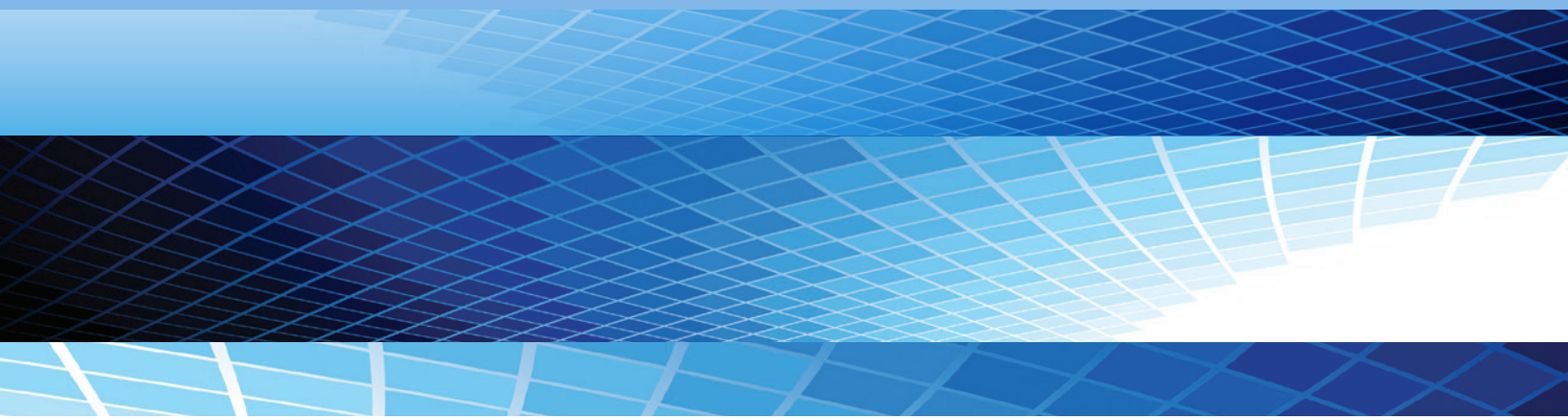
Appropriate Use of Medical Resources



American Hospital Association's PHYSICIAN LEADERSHIP FORUM

American Hospital Association®

SUGGESTED CITATION

Combes J.R. and Arespacochaga E., Appropriate Use of Medical Resources.
American Hospital Association's Physician Leadership Forum, Chicago, IL. November 2013.

CONTACT INFORMATION

Elisa Arespacochaga, director, Physician Leadership Forum, elisa@aha.org or 312-422-3329.

Executive Summary

Over the past two decades, and in the past five years in particular, there has been national discussion concerning the increased cost of health care. Perhaps of greater importance, increased health care costs have not necessarily led to improved outcomes. In fact, overdiagnosis, overuse of treatments, and a "try everything" approach to medical care have increased health care costs with little discernible improvement in health. For example, in a 2011 article in the *Archives of Internal Medicine*, researchers advised against imaging for low back pain within the first six weeks (unless certain severe conditions were suspected) because imaging the lumbar spine before six weeks does not improve outcomes but does increase costs. More recently, the Centers for Disease Control and Prevention reported that approximately half of all antibiotic prescriptions are either unnecessary or used inappropriately. This practice exposes patients to unnecessary side effects and can increase the prevalence of drug-resistant bacteria.

But, we can take steps to manage health care costs while also improving health outcomes. How? The answer is straightforward: use medical resources appropriately. By reducing the utilization of non-beneficial care – care that increases costs without a concomitant increase in value – we can have a delivery system that achieves the Triple Aim...improved health, a quality patient experience, and lowered costs. Recent studies highlighted in *Health Affairs* show that when health care providers are well informed on appropriate care options, and those options are fully discussed with engaged patients, health care improves at reduced costs.

Over the past year, the American Hospital Association (AHA) with guidance from its Committee on Clinical Leadership, Physician Leadership Forum, regional policy boards, and governing councils and committees examined and discussed appropriate use of medical resources. This paper, which is organized in three parts, served as the basis for those policy discussions. First, we identify the drivers of increased health care utilization, including over-diagnosis, overuse of treatments, inappropriate use of high cost care settings, fear of medical malpractice, and unease with ambiguity. Second, we examine current studies and programs that suggest improved health at reduced costs can be achieved through enhanced provider education and increased patient engagement. Finally, we recommend a way to move forward that will place hospitals at the forefront of innovative change for reduced cost, yet improved health care.

Hospital and Health System Approaches

As medical societies, provider organizations, and others look for ways to drive appropriate use of medical resources, hospitals and health systems can play an important role in supporting and guiding these efforts within their organizations. As one of the more intense health care resource users, hospitals and health systems have a responsibility to encourage appropriate and consistent use of health care resources and give providers the tools to better communicate with patients about appropriate use of resources.

As your national association, the AHA is pursuing change via several avenues. Among our efforts, we have developed a "top five" list of hospital-based procedures or interventions that should be reviewed and discussed by a patient and physician prior to proceeding. These are:

- Appropriate blood management in inpatient services;
- Appropriate antimicrobial stewardship;
- Reducing inpatient admissions for ambulatory-sensitive conditions (i.e., low back pain, asthma, uncomplicated pneumonia);
- Appropriate use of elective percutaneous coronary intervention; and
- Appropriate use of the intensive care unit for imminently terminal illness (including encouraging early intervention and discussion about priorities for medical care in the context of progressive disease).

To begin the discussion in your hospital and community, share this paper with your board, medical staff, and community leaders and use the discussion questions at the end to explore the issue together. In the coming months, the AHA will roll out resources targeting each of the five procedures or interventions listed above. We also will share best practices from hospitals and health systems that are already on this path. Equally important, the AHA will continue to work to reduce the barriers that inhibit hospitals' efforts to provide the appropriate care at the appropriate time in the appropriate setting.

Introduction

Medical knowledge has increased exponentially in the last few decades and clinical knowledge doubles as fast as every two years.[1] Cutting edge surgeries, cures for once devastating diseases, and tools to manage chronic illness have all been great boons to society, allowing more productive lives. But with all this knowledge looms a larger debate, when are we doing more than we should and how do we decide?

Continuing public concern around the cost of health care and the opportunities to prevent unnecessary harm to patients has prompted clinicians and policymakers alike to take a hard look at the appropriate use of care resources. While specialty medical societies and others have begun to identify areas of overuse and explore methods to measure and reduce it, the role of hospitals and health systems has not been explored in depth. This paper examines the drivers in health care costs, enumerates contributing factors, and suggests ways hospitals and the American Hospital Association (AHA) can play a role in addressing the appropriate use of medical resources.

Several decades ago, utilization review was as essential to health care discussions as quality and patient safety are today; but as safety and quality became an organizational priority, there has been less vigorous review of appropriateness. Health care resources are finite, and if we don't explicitly manage them, we will increase disparities in care. Providers endeavor to deliver the most appropriate care to patients regardless of cost, but all too often there is not enough discussion with patients about what is appropriate. Will this test or procedure improve patient outcomes and is it consistent with the patient's values and goals? And further, how can the health care system equip patients and their families to participate in those discussions and make the most informed decisions in partnership with their caregivers?

: SUPPORTING EVIDENCE :

In 2012, Don Berwick, M.D. and Andrew Hackbarth, M.Phil., published an article in the *Journal of the American Medical Association* highlighting the amount of non-value-added health care provided in the United States, building on the work of *The Dartmouth Atlas of Healthcare* and others. As they state, "The opportunity is immense. In just 6 categories …– overtreatment, failures of care coordination, failures in execution of care processes, administrative complexity, pricing failures, and fraud and abuse – the sum of the lowest available estimates exceeds 20% of total health care expenditures."[2]

In 2008, the Congressional Budget Office director testified before the House Budget Committee that "Researchers have estimated that nearly 30 percent of Medicare's costs could be saved without negatively affecting health outcomes …. With health care spending currently representing 16 percent of GDP, that estimate would suggest that nearly 5 percent of GDP – or roughly $700 billion each year – goes to health care spending that cannot be shown to improve health outcomes."[3]

Factors Driving Overuse

Years of fee-for-service financial incentives, increased information availability, malpractice concerns, and a societal desire to "try everything" have helped drive the levels of procedure-based intervention and treatment we see today. While providers have historically been financially incentivized to deliver more rather than less care, fee-for-service structures will continue to recede as the nation moves from volume-based to value-based reimbursement, triggering shifts in care provision and payment incentives.

Payment incentives

Financial incentives helped shape the delivery of preventive care. For decades, preventive medicine has advocated for annual physicals, testing at specific intervals, and for interventions to prevent or slow disease. This focus on specific interventions has driven volume and in some cases resulted in identifying disease processes that might have little effect on patient outcomes. Rather than the intervention focus of the past, some primary care providers have begun to shift to engaging patients in discussions around lifestyle management to curb the potential for disease.

Discomfort with ambiguity

In today's fast-paced, instant information environment, we have grown increasingly uncomfortable with ambiguity. At the same time, we have failed to ask whether knowing the answer is truly helpful or whether finding the answer is worth the cost. With medical websites offering diagnoses in a few clicks, categorizing symptoms into specific illnesses occurs despite the absence of clear clinical disease. At the urging of patients and with a volume-based reimbursement system, follow up testing and interventions often follow, rather than active surveillance, turning the asymptomatic information-seeking consumer into a patient. Evidence has shown that physicians with less than 10 years experience have 13 percent higher overall costs than their more experienced colleagues. While some of the difference may reflect younger physicians' familiarity with newer and potentially more costly procedures, some of the cost differential may be due to inexperience and driven by uncertainty and a desire to treat more aggressively.[4] This is a circumstance the care system does not discourage, but is financially incentivized to encourage under the current payment structure. It is too early to tell if this trend is one that will dissipate as these younger physicians gain more experience, or if the societal shift towards more information and desire for action might continue to drive higher costs. It is important that as health care becomes more complex and technology driven, we not fall under the spell of identifying and treating those anomalies that have little clinical consequence and might benefit from watchful waiting or less aggressive interventions.

Liability concerns

Another factor driving the levels of testing and procedures is the concern about possible malpractice actions. As a recent study indicated, physicians spend as much as 11 percent of their careers with an open, unresolved malpractice claim, so it is not surprising that the risk of a lawsuit can color ordering patterns to ensure providers leave "no stone unturned."[5] In the context of a fractured health care delivery system, this can lead to duplication of efforts and higher costs.

Utilization management

During the 1990s utilization management, a strong tool to guide the appropriate use of medical resources, became synonymous with cost cutting and denials of coverage. Unfortunately, what was a systematic review and discussion to determine evidence-based guidelines and protocols to ensure that patients received the most appropriate care became tainted with the denials of managed care organizations. At the same time, quality and patient safety efforts began to move to the forefront, driven in part by the release of the Institute of Medicine's *To Err is Human: Building a Safer Health System*, which pushed for a greater focus on quality and patient safety. While work on clinical practice guidelines and protocols has never stopped, it has only recently begun to reach the same level of attention and discussion as previously.

Appropriate setting

Utilization management also encompasses the use of the most appropriate setting for care delivery. As high cost settings, emergency department and inpatient hospital care need to be carefully monitored to ensure the most appropriate use. Significant research has shown that for several "ambulatory sensitive conditions" access to primary care, urgent care clinics, outpatient services, and other sub-acute settings can reduce hospital admissions and readmissions, lower costs and improve patient outcomes. Ambulatory sensitive conditions are defined as hospital admissions due to those medical conditions that could be avoided by provision of adequate primary care,[6] such as asthma and uncomplicated pneumonia.

In addition, the use of intensive care units (ICUs) for patients with imminently terminal illnesses has risen significantly over the last decade. While the use of hospice and palliative care has increased, a recent study highlights that it too often follows on the heels of overly aggressive care, including ICU stays. Hospice care increased from 21 percent to 42 percent from 2000 to 2009, and the usage of ICUs for those at the end of life also increased from 24 percent to 29 percent. What's concerning is that 40 percent of those entering hospice do so for very short periods and only after experiencing repeated emergency department, hospital, and ICU stays in the last several months of life. [7]

As the nation moves to transform the health care delivery system, all participants need to ensure that finite resources are not used for interventions that do not add to quality of care, but instead channel resources to settings where they can provide the greatest benefit to patients. Caution needs to be taken to preserve clinical judgment on the most appropriate use of testing, intervention, and care setting for each individual patient.

Increased Scrutiny

In the context of health reform efforts shining a light on appropriate use of medical resources, federal and state regulators as well as private payers are watching closely to curb the rising costs of the Medicare and Medicaid programs. The appropriate use of medical resources sits squarely at the intersection of medical judgment and the oversight and regulation of payment, potentially leading to conflicts around medical decision making and the need to be careful stewards of limited health care resources.

Some issues have received legal scrutiny over the last few years, including close examination of increases in imaging studies, and lawmakers have put measures in place to curb excessive use of imaging. For example, the Medicare Payment Advisory Commission recommended that Medicare require pre-approval for advanced imaging services for those physicians deemed to have high utilization in an attempt to curb excessive usage.[8] Imaging represents one of the fastest growing costs for Medicare patients, yet one study indicated that "20% to 50% of all 'high-tech' imaging provide no useful information and may be unnecessary."[9]

In several states, inquiries by regulatory agencies regarding the "medical necessity" of certain procedures, including the use of cardiac stents, have been initiated and some have become the subject of Senate committee investigations and lawsuits for "unnecessary" care. In addition, scrutiny has increased around the use of observation status versus inpatient admission. While this scrutiny exists for certain procedures with more evidence-based guidelines, many other issues have not been as clear cut. Given the relatively narrow list of existing evidence-based protocols, clinical judgment as to the most appropriate use of care resources is essential. While some interventions

and testing may not directly improve patient outcomes, they may be the most reasonable course of action at the time of treatment.

Clinical Evidence for Change

Studies are emerging that show an increase in diagnosis of disease due to more sensitive diagnostics as well as the potential for increased harm through unneeded treatment. But how do we determine what care is truly unneeded? Clinical evidence and disease treatment protocols exist for just a subset of care needs, and many care decisions are not easily categorized into existing protocols. There are, however, some clear areas where overdiagnosis; overuse of certain tests, procedures and interventions; and inappropriate use of higher cost settings are emerging.[10]

Increased screening and overdiagnosis of disease

As recent studies have shown, while the incidence of several cancer diagnoses has increased, there has not been a corresponding drop in their mortality rates. More people are living with a cancer diagnosis and more importantly receiving treatment that may not prolong their survival but could reduce their quality of life. For years, the war on cancer has focused on earlier detection, under the assumption that if we could detect the disease process early enough, we could stop it.[11] Unfortunately, as the following studies conclude, while we have become extremely adept at identifying cancer earlier and earlier, for some patients, we have been unable to stem the disease progression or reduce mortality (longer survival in these instances is attributed to "lead time bias" not better control of disease), and the treatment has adversely affected their quality of life. This finding puts in sharp focus the question of whether earlier and more aggressive treatment is warranted.

Studies of lung, ovarian and breast cancer screenings for low-risk populations have shown little impact on mortality rates. While more sensitive testing has increased the rate of diagnosis through earlier identification of disease, there has been little to no corresponding reduction in mortality. In addition, the increased sensitivity of testing has resulted in more false positive diagnoses, requiring additional interventions that could cause harm. As the authors of a 2007 study regarding computed tomography screening for lung cancer concluded, "Until more conclusive data are available, asymptomatic individuals should not be screened…"[12] To highlight the need for clear protocols and clinical judgment, results such as these cannot be extrapolated beyond their scope. For example, lung cancer screening for high-risk populations has decreased their mortality rates, but did not correlate to the general population. A recent update confirmed that annual screenings for low-risk populations did not reduce lung cancer mortality as compared with usual care.[13]

The *New England Journal of Medicine* recently published a review of data from 1976 through 2008 of mammography screenings indicating a significant overdiagnosis of breast cancer. "Despite substantial increases in the number of cases of early-stage breast cancer detected, screening mammography has only marginally reduced the rate at which women present with advanced cancer. … The imbalance suggests that there is substantial overdiagnosis, accounting for nearly a third of all newly diagnosed breast cancers, and that screening is having, at best, only a small effect on the rate of death from breast cancer."[14] These earlier diagnoses are leading to longer apparent survival rates because many are diagnosed before symptoms appear, but mortality rates have not significantly changed. So while a patient might live with a cancer diagnosis for 10 years

instead of five (a doubling of the survival rate), early detection has not slowed the disease progress and only subjected the patient to additional, possibly unnecessary treatment, anxiety, and poor quality of life. That is, a patient may be diagnosed with cancer five years earlier than previously; however, she still succumbs to the cancer at the same age, despite having undergone treatments for twice as long. Similar results have been found for ovarian cancer, where screening has not reduced mortality and the diagnostic follow up for false-positives has been associated with serious complications.[15]

These studies are appearing in the mainstream media and news reports. Recently, for example, the U.S. Preventive Services Task Force recommended against the use of prostate screening exams because evidence suggests "that screening of asymptomatic men often leads to the overdiagnosis and overtreatment of prostatic tumors that will not cause illness or death."[16] While studies found that screening slightly reduced mortality, it also was associated with a high risk of overdiagnosis, which might lead to serious complications, including incontinence and impotence.[17,18] In addition to overdiagnosis, identification of early stage prostate cancer has involved more aggressive treatment than might be warranted given the associated side effects and toxicities. A 2009 study highlighted the improved quality of life for those undergoing active surveillance versus several treatment options for low-risk, localized prostate cancer, concluding that active surveillance is a reasonable approach.[19]

An August 2013 *BMJ* study concluded that new imaging methods and biopsies of smaller nodules has led to an increase in the diagnosis of thyroid cancer but no corresponding increase in mortality, indicating that many papillary thyroid cancers treated today may never progress to cause symptoms or death. Thyroid cancer, the most common endocrine malignancy, also is one of the fastest growing diagnoses due in part to the use of imaging studies.[20]

Earlier this year, a working group for the National Cancer Institute recommended several strategies to refine the current approach to cancer screening and prevention, including changing cancer terminology based on companion diagnostics, creating observational registries for low-malignant potential lesions, working to mitigate over-diagnosis and expanding the concept of how to approach cancer progression. "The recommendations of the task force are intended as initial approaches. Physicians and patients should engage in open discussion about these complex issues. The media should better understand and communicate the message so that as a community the approach to screening can be improved."[21]

The Institute of Medicine (IOM) updated its work on the quality of cancer care with a new report in September 2013 indicating that "care often is not patient-centered, many patients do not receive palliative care to manage their symptoms and side effects from treatment, and decisions about care often are not based on the latest scientific evidence." IOM's framework for improving the quality of cancer care includes many of the elements discussed below in "Approaches Underway to Curb Overuse," such as engaging patients, training and educating the health care workforce to coordinate care and engage patients, strong use of evidence-based practices and quality measurement and performance improvement."[22] The committee's work also included a resource for patients to begin discussions with their physicians.

Overtreatment and the incidentaloma[23]

While the overdiagnosis of cancer has garnered attention due in large part to the invasive and debilitating effects of unneeded treatment, there are numerous other investigations into the overdiagnosis and overtreatment of less life-threatening conditions. For example, ear infections are often over-treated with antibiotics when watchful waiting would suffice, or antibiotics are inappropriately used to treat a viral condition that does not involve bacterial disease. Unfortunately, the overuse of antibiotics not only leads to public health concerns around the rise in antibiotic-resistant infections, it also brings serious side effects more debilitating than the initial disease.[24] The American Academy of Pediatrics recently updated their guidelines to apply stricter diagnostic criteria and broader use of observation for ear infections.[25] Similarly, a study in *BMJ* concluded that the use of tympanostomy tubes in children with recurrent ear infections varied widely from recommended guidelines and likely represented an overuse of surgery.[26]

Overtreatment with antibiotics has risen to national prominence with news stories of deaths due to antibiotic resistant strains. Antimicrobial stewardship programs, which are "coordinated interventions designed to improve and measure the appropriate use of antimicrobials by promoting the selection of the optimal antimicrobial drug regimen, dose, duration of therapy, and route of administration,"[27] have increased in recent years. The Society for Healthcare Epidemiology of America, the Infectious Diseases Society of America, and the Pediatric Infectious Diseases Society issued a policy statement in 2012 calling for the development and broad dissemination of antimicrobial stewardship programs stating that "antimicrobial stewardship must be a fiduciary responsibility for all healthcare institutions across the continuum of care."[28]

In addition, the inappropriate use of blood and blood products has drawn some attention. The cost of blood and blood products continues to rise as additional testing is needed to ensure safety and there is a decreasing pool of donors.[29] Blood management programs have increased in recent years to ensure the safety of the blood supply and proper usage. Blood management programs involve the "implementation of evidence-based transfusion guidelines to reduce variability in transfusion practice, and the employment of multidisciplinary teams to study, implement, and monitor local blood management strategies."[30]

The AABB (formerly the American Association of Blood Banks) has developed guidelines on the proper use of red blood cell transfusions.[31] Recognizing the importance of appropriate blood management to the inpatient hospital setting, the Society of Hospital Medicine has included in their *Choosing Wisely* list for adult inpatient care, "Avoid transfusions of red blood cells for arbitrary hemoglobin or hematocrit thresholds and in the absence of symptoms of active coronary disease, heart failure or stroke."[32]

Percutaneous coronary interventions also have come under review for inappropriate use. The Department of Justice recently conducted inquiries regarding the "medical necessity" of certain interventional cardiology procedures. Cardiac stent usage became the subject of a Senate Committee on Finance investigation that ultimately resulted in several lawsuits for "unnecessary" care. The American College of Cardiology Foundation, in partnership with others, released revised guidelines outlining standards for cardiac catheterization in 2012.[33]

Further, the drive for increased information has affected the use of many health care technologies, particularly scanning technology such as ultra-

sound, computed tomography (CT), and magnetic resonance imaging (MRI). These tests, which provide detailed and useful clinical data, also are able to show anomalies that have no clinical significance, or incidentalomas. Unfortunately, once discovered, many lead to additional testing and may result in harm. In three separate studies looking at imaging of asymptomatic patients, findings included: 10 percent had gallstones present, 40 percent had damaged meniscal cartilage, and 50 percent had bulging lumbar discs.[34] These three studies highlight the difficulty in using scans for diagnosis given the prevalence of these findings in asymptomatic patients. Concerns also are emerging regarding the increased exposure to potentially unnecessary levels of radiation, not to mention the potential harm from diagnostic and therapeutic interventions that follow the finding of a non-clinically relevant anomaly.

Appropriate setting

Overuse potential exists in many areas of the health care delivery system, and inappropriate use of hospital care can quickly result in high costs. For example, lack of coordination of care across settings has led to the increased potential for hospital readmissions. While experts agree optimum management of chronic disease should happen outside of the hospital, lack of coordination, coupled with potential gaps in primary care access, may result in increased use of hospital care. Efforts to ensure that patients are treated in the most appropriate setting for their needs and work by hospitals to reduce 30-day readmissions in particular are showing some positive results.[35] Appropriate use of resources also needs to be monitored for the ICU, where use in imminently terminal patients may not be warranted. It is essential that providers and patients discuss the prognosis and likely course of all serious illnesses, the patient's wishes and priorities in the context of the progressive disease(s), the options for palliative care co-management at the same time as disease directed treatment, and the benefits of hospice care once disease prognosis is under six months (patient and family care needs met at home, symptoms managed, prevention of crises leading to repeated hospitalization), and the goals preferred (remain independent at home, symptoms well controlled versus hospitalization).

Lowering diagnostic thresholds

Overuse of care also occurs through the lowering of diagnostic treatment thresholds. Several chronic conditions have seen a lowering of threshold values, such as what constitutes hypertension or diabetes, turning more of the population into patients. In fact, changes in thresholds for diabetes, hypertension, hyperlipidemia, and osteoporosis have resulted in more than 64 million new cases of the four diseases, with 42 million alone diagnosed with high cholesterol, according to Gilbert Welch, M.D., professor of medicine at the Dartmouth Institute for Health Policy and Clinical Practice and author of *Overdiagnosed: Making People Sick in the Pursuit of Health*. While there are many reasons to control these chronic conditions early, Welch argues that the lowering of the diagnostic thresholds exposes large numbers of people to becoming patients, with all the attendant side effects and long-term implications of medication regimens.[36] There are conditions where lowering of thresholds is warranted, for example with co-morbid conditions, but caution needs to be exercised in applying those lowered thresholds in initial diagnosis of the general population.

Thus far, we have discussed the need to curb overuse of medical resources; however, we must be careful to not swing the pendulum too far in the other direction. Many screening and diagnostic tests, such as colonoscopies, have been

extremely effective in detecting and reducing cancer mortality. While focused effort is needed to reduce lower-value treatments, we must ensure that high-value interventions with strong clinical evidence of efficacy are broadly adopted.

Approaches Underway to Curb Overuse

As the February 2013 *Health Affairs* highlights in several studies, there is growing evidence that patient involvement and engagement in their health care results in a better patient experience, lower costs and improved outcomes.[37] Empowering patients with greater knowledge of what to expect with disease progression, their options for treatment, and stimulating a more honest dialogue about their desired priorities and outcomes helps minimize discomfort and potential harm from overuse of services while providing truly patient-centered care. In addition, others are working to reduce overuse of certain medical services through increased coordination of care and awareness campaigns about the most appropriate use of health care resources. The *Health Affairs* studies also examined the tools and methods used to reach out to clinicians and patients to begin the dialogue around the appropriate use of health care resources.

Patient engagement

Shared decision-making, whether through national campaigns or more localized approaches, has been hailed as a strong tool in reducing costs and increasing engagement. *The Patient Protection and Affordable Care Act* calls for Shared Decision-Making Resource Centers to help increase patient engagement and improve the use of shared decision-making as part of the clinical practice.[38]

The American Institutes for Research recently proposed a framework for patient and family engagement that defines the levels of engagement as well as the steps across the continuum to help providers, hospitals, and health care delivery systems to develop tools to engage their patients.[39] Informed Medical Decisions Foundation, which develops decision aids, identified several barriers to shared decision-making including overworked and insufficiently trained providers and information systems not equipped to prompt providers about tools or able to track patient involvement. The authors concluded that the use of electronic medical record prompts and the involvement and training of clinicians beyond the treating physician might improve providers' adoption of shared-decision making.[40]

Another study looking at the use of enhanced decision-making support through contact with health coaches "found that patients who received enhanced support had 5.3 percent lower overall medical costs … 12.5 percent fewer hospital admissions … and 9.9 percent fewer preference-sensitive surgeries, including 20.9 percent fewer preference-sensitive heart surgeries."[41] This strong evidence shows that remote intervention by phone and email can improve quality and reduce costs. Another recent report highlights a "patient activation measure" that rates the level of patient engagement in their health care. Reviewing more than 30,000 patients, the study showed the patient activation score was a significant predictor of health care costs with those least engaged incurring the highest costs.[42]

Provider education

Educational offerings for providers around the appropriate use of medical resources are becoming more prevalent and showing positive results. At the same time, work is being done to determine the best ways to disseminate and broadly communicate comparative effectiveness research findings as clinical guidelines and protocols. One study found that academic detailing, "direct outreach education that gives clinicians an accurate

and unbiased synthesis of the best evidence for practice in a given clinical area,"[43] is an effective means of translating findings into clinical actions. Academic detailing appears to improve patient outcomes, reduce costs, and is well received by clinicians. Several states have begun government-sponsored academic detailing programs, and in Canada and Australia, medical professional societies provide these types of programs with support from the government.[44]

The American College of Physicians recently shared recommendations for use of evidence-based performance measures to assess the costs, benefits and potential harms of diagnostic and therapeutic treatments. Many measures to date have focused on the underuse of high-value services, but as more scrutiny is placed on the overuse of low-value services, the report provides guidance on how measures of overuse can be applied in clinical practice.[45] By also focusing on quality measures for overuse, providers would be able to analyze, track, and understand cases of overuse and design quality improvement efforts, which would improve outcomes and reduce costs.

EXAMPLE:

Choosing Wisely

In early 2010, Howard Brody, M.D., Ph.D., director of the Institute of Medical Humanities at The University of Texas Medical Branch, challenged physician specialty societies via the *New England Journal of Medicine* to agree to a list "of five diagnostic tests or treatments that are very commonly ordered … that are among the most expensive services provided, and that have been shown… not to provide any meaningful benefit to at least some major categories of patients for whom they are commonly ordered."[46] Dr. Brody felt that the best way to approach health care reform and the potential for cost cutting was to have physicians take the lead in identifying the places where reductions in cost would not adversely affect care delivery.

Several others took up the challenge, including an article series in the *Archives of Internal Medicine* entitled "Less is More," which tried to dispel the myth that more care is always better. The National Physicians Alliance also took the challenge through its *Promoting Good Stewardship in Clinical Practice* project that outlined steps primary care physicians could take to promote more effective use of health care resources.

In April 2012, the American Board of Internal Medicine Foundation (ABIMF), as part of their ongoing work to help physicians become better stewards of finite health care resources, launched the *Choosing Wisely* campaign, lists of five common procedures or tests whose necessity should be discussed by patients and their physicians. The lists, developed by numerous U.S. medical specialty societies, create a structure for patients and physicians to discuss the appropriateness of certain interventions. The specialty societies' involvement adds credibility, and provides "cover" and legitimacy for physicians and delivery systems to address resource use.

ABIMF also partnered with *Consumer Reports* to create consumer-friendly resources to help patients understand when more care is not better. ABIMF also is working with medical universities to develop tools to assist physicians in beginning these types of conversations with their patients.[47] In February 2013, 17 additional medical specialty societies joined the *Choosing Wisely* movement in releasing recommendations to bring the total to about 130 specific evidence-based recommendations that physicians and patients should consider as part of health care decisions. Currently, more than 42 specialty societies are involved in the campaign, and growing.

EXAMPLE:

National Summit on Overuse

In fall 2012, The Joint Commission and the American Medical Association-convened Physician Consortium for Performance Improvement held a National Summit on Overuse to begin a dialogue around the quality and patient concerns related to overuse of certain procedures. The session shared the work of five advisory panels, each focused on a different intervention, to review the existing evidence on overuse, discuss guidelines and quality measures, and identify strategies key stakeholders could adopt. The groups studied:

- **Elective percutaneous coronary intervention,**
- **Typanostomy tubes for middle ear effusion of brief duration,**
- **Early term non-medically indicated elective delivery,**
- **Appropriate blood management, and**
- **Antibiotics for uncomplicated viral upper respiratory infection.**[48]

***The Proceedings from the National Summit on Overuse,* published in July 2013, provides detailed recommendations on curbing overuse of the above interventions and an overview of the program. In addition to specific steps for each of the five areas, the report suggests strategies to inspire physician leadership, support a culture of safety, promote patient education, align incentives to address overuse, and encourages further study and collaboration.**[49]

EXAMPLE:

Safe Use of Medical Imaging

The American Board of Radiology Foundation has held a series of national summits on the safe use of medical imaging to develop a systematic and patient-centered approach. The summits have involved representatives from key stakeholder groups, including patients, regulators, imaging professionals, payers, manufacturers, and systems and facilities management staff. The participants worked to define steps for safe and appropriate use of medical imaging, identify gaps in the process, and agree on approaches to address the gaps. The programs hope to use a consensus approach to develop imaging decision making criteria for patients and physicians to determine the most safe and effective use of imaging studies.

Use of measures

A recently concluded study of ambulatory care services from 1999 to 2009 sought to determine the underuse, misuse, and overuse of 22 quality indicators. The authors found that while the measures for underuse (aspirin for patients with coronary artery disease, use of beta blockers, statin use) improved for six of the nine measures, only two of the 11 overuse measures improved. There were appropriate decreases in cervical cancer screening for women over 65 and in the overuse of antibiotics for asthma, but there was an increase in prostate screening in men older than 75. The authors argue that clinical practice guidelines have been focused on process measures and correcting for underuse rather than overuse. The study indicates that underuse

measures have been easier to track and thus develop more robust guidelines, but the researchers stressed the need to broaden the work to include overuse. Reducing inappropriate care will require the same level of clinical guideline development that has been focused on underuse. While the authors cite efforts by specialty societies to develop appropriateness criteria around specific procedures and tests (such as *Choosing Wisely*), they argue that these have not been widely implemented.[50] However, results are promising thus far on work done using the prevention quality indicators developed by the Agency for Healthcare Research and Quality, which look at admission rates for ambulatory-sensitive condition including diabetes, circulatory diseases, pneumonia and others. From 2005 to 2010, reductions of more than six percent for preventable admissions were recorded.[51]

Hospital and Health System Approaches

As medical societies, provider organizations, and others look for ways to drive appropriate use of medical resources, hospitals and health systems can play an important role in supporting and guiding these efforts within their organizations. As one of the more intense health care resource users, hospitals and health systems have a responsibility to encourage appropriate and consistent use of health care resources and give providers the tools to better communicate with patients about appropriate care.

A thoughtful approach with gradual implementation and conscious effort to minimize unnecessary volatility could reshape health care delivery without causing unnecessary turmoil to what has become a $2.5 trillion industry. Payment reforms will be a factor in this discussion, but to have the greatest opportunity for success in reducing costs and improving health care, we need to ensure that the underlying systems are in place for education around appropriate use of resources, sharing of comparative effectiveness data, the development and adherence to evidence-based clinical protocols, and shared decision-making with engaged patients.

Since health care delivery occurs in the context of a larger system, it is imperative that all parts of that system commit to adherence to appropriateness guidelines and that analysis of practice patterns should be as essential to the efficient operation of a hospital as quality measures and patient safety data. Hospital executives should work in close partnership with their clinical leadership to ensure a coordinated and joint focus on reducing non-beneficial care.

Below are some potential avenues for hospitals and health systems to reduce non-beneficial care and provide support to efforts already underway:

- As more quality measures for overuse of lower value services are developed, hospitals should employ these measures as part of their overall quality efforts and report on findings to their board, medical staff and the field.

- Hospital management should ensure that clinicians are aware of the specialty society clinical practice guidelines and employ them in their clinical decision-making.

- Hospitals should encourage the use and adoption of clinical decision aids and other resources to help physicians better communicate with patients about the most appropriate care pathways.

- Hospitals should provide a structure for patients and their providers to have meaningful conversations about appropriate use of resources. For example, electronic medical records might prompt providers to discuss with patients their care goals and available resources. Hospitals also should identify opportunities for patient engagement.

- Hospitals should employ provider educational opportunities to communicate the implications of shared decision-making and the importance of reducing non-beneficial care.

The AHA with guidance from its Committee on Clinical Leadership, Physician Leadership Forum, regional policy boards, and governing councils and committees examined and discussed appropriate use of medical resources. As a result of our year-long study, the AHA is working to put hospitals at the forefront of innovative change for reduced cost, yet improved health care.

The AHA's Committee on Clinical Leadership, a policy advisory group of clinicians, approved a "top five" list of hospital-based procedures or interventions that should be reviewed and discussed by a patient and physician prior to proceeding**:**

- Appropriate blood management in inpatient services

- Appropriate antimicrobial stewardship[52]

- Reducing inpatient admissions for ambulatory-sensitive conditions (i.e., low back pain, asthma, uncomplicated pneumonia)[53]

- Appropriate use of elective percutaneous coronary intervention[54]

- Appropriate use of the ICU for imminently terminal illness (including encouraging early intervention and discussion about priorities for medical care in the context of progressive disease)[55]

To support efforts by hospitals and health systems to implement this top five list and to better equip our members to engage in the most appropriate use of health care resources, the AHA also is pursuing the following steps:

- Partnering with the medical specialty societies engaged in the *Choosing Wisely* project to more broadly disseminate the lists, tools, and resources available.

- Collecting and disseminating best practices developed to provide a structure for patients and physicians to engage in a dialogue on potential benefits and harms of interventions related to their care.

- Collecting and disseminating sample hospital policies concerning the adherence to clinical practice guidelines in pursuit of more appropriate use of resources.

- Encouraging the medical education community to review whether additional training in medical schools, residency and continuing medical education on reducing non-beneficial care might be warranted.

In addition to assistance with resources, outreach, education, and other approaches, the AHA will continue its advocacy work to ensure that laws and regulations foster a close working relationship between hospitals and providers and health care resources are used as efficiently as possible.

Appropriate Use of Medical Resources

Discussion Guide

Medical knowledge has increased exponentially in the last few decades and clinical knowledge doubles as fast as every two years. Cutting edge surgeries, cures for once devastating diseases, and tools to manage chronic illness have all been great boons to society, allowing more productive lives. But with all this knowledge looms a larger debate, when are we doing more than we should and how do we decide? While specialty medical societies and others have begun to identify areas of overuse and explore methods to measure and reduce it, the role of hospitals and health systems has not been explored in depth.

Appropriate use of medical resources will require a coordinated effort across the care continuum and in partnership with consumers. To begin the discussion in your hospital and community, share the Appropriate Use of Medical Resources white paper with your board, medical staff and community leaders and use the discussion questions below to start to explore the issue together.

Summary of Recommendations

- **The AHA has developed a "top five" list of hospital-based procedures or interventions that should be reviewed and discussed by a patient and physician prior to proceeding:**
  - **Appropriate blood management in inpatient services**
  - **Appropriate antimicrobial stewardship**
  - **Reducing inpatient admissions for ambulatory-sensitive conditions (i.e., low back pain, asthma, uncomplicated pneumonia)**
  - **Appropriate use of elective percutaneous coronary intervention**
  - **Appropriate use of the ICU for imminently terminal illness (including encouraging early intervention and discussion about priorities for medical care in the context of progressive disease)**
- As more measures for overuse are developed, hospitals should employ these as part of their overall quality efforts and report on findings.
- Hospital management should be aware of clinical practice guidelines and ensure that clinicians are aware and employ the guidelines.
- Hospitals should encourage the use and adoption of clinical decision aids and other communication resources.
- Hospitals should provide a structure and method for patients and their providers to have meaningful conversations about appropriate use of resources.
- Hospitals should employ available educational opportunities for staff and providers on appropriate use of resources.

Questions	
Rate the readiness of our organization to accept the AHA's "top five" recommendations. (5 = very prepared, 1 = not at all prepared)	
What do you see as the key challenges for our organization to reducing non-beneficial care?	
How do the recommendations affect our organization's business model and planning?	
What tools and resources will we need to implement the recommendations?	
How can we begin to engage our community and patients in this discussion?	

Endnotes

[1] Densen, P. Challenges and Opportunities facing Medical Education. Trans Am Clin Climatol Assoc. 2011; 122: 48–58.

[2] Berwick, DM, Hackbarth, AD. Eliminating waste in US health care. *JAMA.* 2012;307(14):1513-1516.

[3] Congressional Budget Office, Statement of Peter R. Orszag, Director. Increasing the Value of Federal Spending on Health Care, before the Committee on the Budget U.S. House of Representatives. July 16, 2008.

[4] Mehrotra, A, Reid, RO, Adams, JL, Friedberg, MW, McGlynn, EA, and Hussey, PS. Physicians with the least experience have higher cost profiles than do physicians with the most experience. *Health Affairs,* 31, no.11 (2012):2453-2463.

[5] Seabury, SA, Chandra, A., Lakdawalla, DN, Jena. AB, On average, physicians spend nearly 11 percent of their 40-year careers with an open, unresolved malpractice claim. *Health Affairs*, 32, no.1 (2013):111-119.

[6] Basu, A, Brinson, D. The Effectiveness of Interventions for Reducing Ambulatory Sensitive Hospitalizations: A Systematic Review. Christchurch, New Zealand: University of Canterbury, Health Sciences Centre, Health Services Assessment Collaboration. 2008.

[7] Teno, JM, et. al., Change in end-of-life care for Medicare beneficiaries: Site of death, place of care, and health care transitions in 2000, 2005, and 2009. *JAMA.* 2013;309(5):470-477.

[8] Carey, MA, Serafini, MW. Doctors balk at proposal to cut Medicare's use of imaging. *Physicians News Digest.* June 15, 2011.

[9] Rao, VM, Levin, DC. The overuse of diagnostic imaging. *Annals of Internal Medicine.* 2012;157(8):574-576.

[10] Welch, HG, Black, WC. Overdiagnosis in cancer. *Journal of the National Cancer Institute.* 2010;102:605-613.

[11] Schwartz, LM, Woloshin, S. Endless screenings don't bring everlasting health. *New York Times.* Apr. 16, 2012.

[12] Bach, PB, et. al. Computed tomography screening and lung cancer outcomes. *JAMA.* 2007;297(9):953-961.

[13] Oken, M.M., et.al. Screening by chest radiograph and lung cancer mortality: the prostate, lung, colorectal, and ovarian (PLCO) randomized trial. *JAMA.* 2011;306(17):1865-1873.

[14] Bleyer, A, and Welch, HG. Effect of three decades of screening mammography on breast-cancer incidence. *N Engl J Med.* 2012; 367:1998-2005.

[15] Buys, SS, et. al, Effect of screening on ovarian cancer mortality: the prostate, lung, colorectal and ovarian (PLCO) cancer screening randomized controlled trial. *JAMA;*305(22):2295-2303.

[16] Moyer, CS. Task force recommends against PSA test for prostate cancer. *American Medical News.* May 25, 2012.

[17] Schroeder, FH, et. al. Screening and prostate cancer mortality in a randomized european study. *N Engl J Med.* 2009;360:1320-1328.

[18] Schroder, F.H., and others. Prostate cancer mortality at 11 years of follow-up. *N Engl J Med*. 2012;366(11):981-990.

[19] Hayes, JH, et. al. Active surveillance compared with initial treatment for men with low-risk prostate cancer: a decision analysis. *JAMA.* 2010;304(21):2373-2380.

[20] Brito, JP, Morris, JC, Montori VM. Thyroid cancer: zealous imaging has increased detection and treatment of low risk tumours. *BMJ.* 2013;347:f4706.

[21] Esserman, LJ, Thompson, IM, Reid, B. Viewpoint. *JAMA*. Published online July 29, 2013.

[22] Institute of Medicine 2013. *Delivering high-quality cancer care: Charting a new course for a system in crisis.* Washington, DC; The National Academies Press.

[23] Defined by McGraw-Hill Concise Dictionary of Modern Medicine as, "An incidentally discovered mass or lesion, detected by CT, MRI, or other imaging modality performed for an unrelated reason."

[24] Tarkan, L. Ear infections too often misdiagnosed, then overtreated. *New York Times.* Feb. 12, 2008.

[25] Lieberthal AS, et al. The diagnosis and management of acute otitis media. *Pediatrics* 2013;131, e964–e999.

[26] Keyhani, S, et al. Overuse of tympanostomy tubes in New York Metropolitan Area: Evidence from five hospital cohort. *BMJ.* 2008; 337, a1607.

[27] Society for Healthcare Epidemiology of America; Infectious Diseases Society of America; Pediatric Infectious Diseases Society, *Infection Control and Hospital Epidemiology*, Vol. 33, No. 4, Special Topic Issue: Antimicrobial Stewardship (April 2012), pp. 322-327.

[28] Ibid. p. 322.

[29] Hannon TJ, Paulson-Gjerde K. Contemporary economics of transfusions. In: Spiess BD, Spence RK, Shander A, eds. Perioperative Transfusion Medicine. Philadelphia: Lippincott Williams & Wilkins, 2005.

[30] Boucher BA, Hannon TJ., Blood management: A primer for clinicians. *Pharmacotherapy*. 2007;27(10):1394-411.

[31] Carson, JL, et.al., Red blood cell transfusion: a clinical practice guideline from the AABB. *Ann Intern Med*. 2012;157(1):49-58.

[32] Society for Hospital Medicine, *Choosing Wisely* list, February 2013.

[33] Bashore, TM, Balter, S., et. al. 2012 American College of Cardiology Foundation/Society for Cardiovascular Angiography and Interventions expert consensus document on cardiac catheterization laboratory standards update. *J Am Coll Cardiol*. 2012; 59(24):2221-2305.

[34] Welch, HG, Schwartz, LM, and Woloshin, S. Over-Diagnosed: Making People Sick in the Pursuit of Health. Boston: Beacon Press, 2011. P. 36.

[35] Glass D, Lisk C, Stensland J. Refining the Hospital Readmissions Reduction Program. Washington, DC: Medicare Payment Advisory Commission, September 2012.

[36] Welch, HG, Schwartz, LM, and Woloshin, S. Over-diagnosed: Making people sick in the pursuit of health. Boston: Beacon Press, 2011. P. 23.

[37] Health Policy Brief: Patient Engagement, *Health Affairs*, Feb. 14, 2013. Accessed 2/19/13 at http://www.healthaffairs.org/healthpolicybriefs/brief.php?brief_id=86.

[38] Ibid.

[39] Carman, KL, Dardes, P, Maurer, M, et. al. Patient and family engagement: A framework for understanding the elements and developing interventions and policies. *Health Affairs*; 32, no.2 (2013): 223-31.

[40] Friedberg MW, Van Busum K, Wexler R, Bowen M, Schneider EC. A demonstration of shared decision making in primary care highlights barriers to adoption and potential remedies. *Health Affairs;* 32, no. 2 (2013):268-75.

[41] Veroff, D, Marr, A, Wennberg, DE, Enhanced support for shared decision making reduced costs of care for patients with preference-sensitive conditions. *Health Affairs;* 32, no.2 (2013):285-293.

[42] Hibbard, JH, Greene, J, Overton, V. Patients with lower activation associated with higher costs; delivery systems should know their patients' scores. *Health Affairs*; 32, no.2 (2013):216-22.

[43] Fischer, M, Avorn, J. Academic detailing can play a key role in assessing and implementing comparative effectiveness research findings. *Health Affairs*; 31, no. 10 (2012):2206-2212.

[44] Ibid.

[45] Baker DW, Qaseem A, Reynolds PP, Gardner LA, Schneider EC. Design and use of performance measures to decrease low-value services and achieve cost-conscious care. *Ann Intern Med.* 2012 Oct 30.

[46] Brody, H. Medicine's ethical responsibility for health care reform — the top five list. *N Engl J Med.* 2010; 362:283-285.

[47] Choosing Wisely press releases. Accessed 2/21/13 at www.choosingwisely.org.

[48] Press release. Accessed 2/1/13 at http://pwrnewmedia.com/2012/joint_commission/national_overuse_summit/

[49] "Proceedings from the National Summit on Overuse." Accessed 2/21/13 at http://www.jointcommission.org/overuse_summit/

[50] Kale, MS, Bishop, TF, Federman, AD, Keyhani, S. Trends in the overuse of ambulatory health care services in the United States , *JAMA Intern Med.* 2013;173(2):142-148.

[51] Stranges, E, Stocks, C. Potentially Preventable Hospitalizations for Acute and Chronic Conditions, 2008. Statistical Brief [HCUP Healthcare Cost and Utilization Project]; 99, Nov. 2010.

[52] American Geriatrics Society recommended against antimicrobials to treat bacteriuria in older adults unless specific urinary tract symptoms are present. Several other societies also referenced reducing antibiotic use.

[53] Several medical societies have included references in their lists to treating low back pain less aggressively.

[54] The Society for Vascular Medicine's list suggested refraining from percutaneous or surgical revascularization of peripheral artery stenosis in patients without claudication or critical limb ischemia. The American College of Cardiology list suggested not stenting non-culprit lesions during PCI for uncomplicated hemodynamically stable ST-segment elevation myocardial infarction (STEMI).

[55] The American Academy of Hospice and Palliative Care Medicine list included urging to not delay palliative care for a patient with serious illness who has physical, psychological, social or spiritual distress because they are pursuing disease-directed treatment.

Chicago Office:
155 N. Wacker Drive
Chicago, IL 60606
312.422.3000

Washington Office:
325 7th Street, N.W.
Washington, DC 20004
202.638.1100

www.aha.org

American Hospital Association's PHYSICIAN LEADERSHIP FORUM

American Hospital Association®

11/2013