
Issues Related to Utilization of Health Care at the End of Life

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Healthcare providers in the United States can deliver highly sophisticated and technologically advanced care that can treat and cure many diseases and conditions. However, some conditions reach a point beyond which they cannot be effectively treated, and healthcare providers, as well as patients and their families, should recognize that the patient is nearing death and consider how much care is appropriate.

The Dartmouth Atlas Project, originally under the leadership of John Wennberg, MD, MPH, and currently led by Elliott Fisher, MD, MPH, has performed and published analyses of small area variation in healthcare utilization for the past 10 years, using claims from Medicare Fee-for-Service (FFS) beneficiaries. These researchers have worked with a database that includes almost all Medicare claims in the United States.^{*} One of their reports, *The Care of Patients with Severe Chronic Illness: An Online Report on the Medicare Program, The Dartmouth Atlas of Health Care 2006*, describes care received by FFS Medicare enrollees who died between 2000 and 2003 and who had at least 1 of 12 chronic diseases or conditions, such as cancer, congestive heart failure (CHF), diabetes with end-organ damage, and dementia.¹ It concludes that there is

wide variation in the amount of services these Medicare beneficiaries received during their last 6 months of life that is unlikely to be explained by patient-related differences (Table 1). For example, Medicare beneficiaries who died in Hawaii spent more than twice as many days in the hospital during the 6 months before they died than did beneficiaries in Utah. The variation in the amount of care received was even greater when care was compared by regions much smaller than states, such as Dartmouth Atlas-defined hospital referral regions or by individual hospitals.

Interested individuals can download customized tables with these and other measures by going to www.DartmouthAtlas.org and clicking on the Data Tools tab.

Although there may be some differences in the acuity of illness or care-seeking behavior of Medicare

beneficiaries in different parts of the country, the amount of variation in health care actually provided is very wide. Substantial variation was also found when academic medical centers were compared.² The Dartmouth researchers concluded that the variation in the utilization of all health care by Medicare beneficiaries is directly related to the supply of healthcare resources, such as hospital capacity and physicians per capita.¹

The Centers for Medicare & Medicaid Services (CMS) recently funded a pilot project to begin to address this variation. The remainder of this article considers possible factors identified through this project that may explain why patients in some parts of the US receive care at the end of life that may not be warranted.

VALUE Project

From October 2006 through March 2008, the Variation Analysis by Location and Understanding Efficiency (VALUE) project was conducted to test interventions that can potentially reduce unnecessary utilization of all care for FFS Medicare beneficiaries. The Medicare Quality Improvement Organizations (QIOs)[†] in 4 states (Califor-

* Only a 20% sample of physician claims is included in the database

[†]QIOs are CMS-designated organizations that represent the 50 US states, the District of Columbia, and several US territories, including the Virgin Islands and Puerto Rico. They work with CMS to achieve transformational improvement in the quality and effectiveness of healthcare at a community level. The California QIO is Lumetra, the Colorado QIO is The Colorado Foundation for Medical Care, the New Jersey QIO is Healthcare Quality Strategies, Inc., and the New Mexico QIO is the New Mexico Medical Review Association.

nia, Colorado, New Jersey, and New Mexico), with the Colorado QIO—The Colorado Foundation for Medical Care—serving as the lead, worked with 13 hospitals, ranging from ones with low utilization rates for Medicare patients in the last 6 months of life to others with high utilization rates. Information about the VALUE project can be found at <http://www.cfmc.org/value/about.htm>.

The 4 QIOs helped the participating hospitals and communities identify causes of potentially unnecessary utilization of healthcare and develop and implement interventions to reduce it. The California and New Jersey projects focused on inpatient care, while the Colorado and New Mexico QIOs took a community-based approach.

Potential Reasons for Unnecessary Care

The QIOs worked with the hospitals by providing them with hospital-specific utilization data, both from the Dartmouth Atlas and from more recent Medicare claims data. They then supported discussions among key hospital staff, reviewed hospital systems, and analyzed other data sources such as ICU logs to determine the reasons why Medicare beneficiaries were receiving potentially unnecessary care. Possible reasons for overutilization of unnecessary care identified by the VALUE project participants, particularly the QIO and hospital participants from California and New Jersey, are listed in Table 2 and discussed below.

Patients and their families often have strong feelings about doing everything that they can to keep their loved ones alive, and these

Table 1. Care Received by Medicare Beneficiaries During the Last 6 Months of Life, 2000–2003

Measure	Highest State	Lowest State	Ratio of Highest to Lowest State
Number of hospital days	16.4 (Hawaii)	7.3 (Utah)	2.25
Percent admitted to an ICU	25.1% (New Jersey)	11.7% (South Dakota)	2.15
Number of ICU days	4.6 (California)	1.5 (North Dakota)	3.07
Number of physician visits	41.5 (New Jersey)	17.0 (Utah)	2.44
Percent seen by 10 or more physicians	38.7% (New Jersey)	10.8% (Wyoming)	3.58
Percent enrolled in hospice	44.7% (Arizona)	6.7% (Alaska)	6.67

From Dartmouth Medical School Center for the Evaluative Clinical Sciences. *The Care of Patients with Severe Chronic Illness: An Online Report on the Medicare Program by the Dartmouth Atlas Project*. Lebanon, NH: The Dartmouth Institute for Health Policy and Clinical Practice; 2006. Dartmouth Atlas Web site. http://www.dartmouthatlas.org/atlas/2006_Chronic_Care_Atlas.pdf. Accessed April 10, 2008.

Table 2. Issues Related to Potential Overutilization of End-of-Life Care

- Culturally based beliefs (of patients, family, or healthcare providers) about end-of-life care
- Healthcare provider professionally based beliefs about withholding care
- Lack of accurate short-term predictors of mortality
- Poor communication between healthcare providers and patients about end-of-life decisions
- Lack of incentives for physicians to withhold potentially inappropriate care
- Lack of knowledge about hospice and palliative care
- Healthcare provider concerns about legal issues related to withholding care
- Lack of advanced care planning

feelings may be culturally based. VALUE project participants noted that simply offering palliative care or hospice services to a family with these beliefs without a serious discussion of the patient’s low probability of survival or of recovering significant function is not likely to get a family to accept these services. In fact, the family may see the offer of palliative care or hospice as an attempt to deny needed care.

The hospital staff participating in the VALUE project pointed out that physicians, nurses, and other healthcare professionals also can have strong cultural and religious beliefs regarding the need to keep their patients alive. A physician who puts an emphasis on preserving life over quality of life would be likely to admit a patient to the ICU even if that individual had a minimal chance of recovery.

Physicians and other healthcare providers may also have professionally based beliefs about the need to use all available therapeutic options to preserve life and that it is inappropriate, in most cases, to withhold care from their patients. These beliefs may be communicated to patients and families either explicitly or in more subtle ways and may discourage the family from asking that their loved one be removed from a ventilator, for example.

For some patients, such as very elderly, debilitated patients with severe infections or patients with minimal brain function after a traumatic injury, it may be clear that they are not going to survive their acute illnesses or recover function. However, for many other acutely ill patients, it is not possible to accurately identify those individuals who have a very low likelihood of recovery. Physicians who feel strongly about their responsibility to provide aggressive care for their patients, when appropriate, may be uncomfortable bringing up the likelihood of death with the patient's family.

Physicians who feel that providing aggressive care in a particular situation may not be appropriate may, nevertheless, be uncomfortable discussing withholding or removing care with their patients or their family members. The patient and family members may be waiting for the physician to tell them when the time has come to consider allowing the patient to die peacefully. They may also not be aware that the patient has reached that point and, therefore, cannot consider that decision without effective communication by the patient's physician. (See "Ask the Experts" on page 39 of this issue for

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more discussion on this topic.)

While reimbursement incentives may not be responsible for potential overutilization of care, reimbursement systems often do not discourage physicians from continuing to provide care when it might not be warranted. FFS Medicare does not reimburse hospitals any more for a day in an ICU than one in a regular bed. However, physicians caring for patients with FFS Medicare coverage are paid for each patient encounter and procedure performed. In communities where private physicians (as opposed to hospitalists and intensivists) care for many hospitalized patients, hospitals may have to reach out to these private physicians to address whether potentially unnecessary inpatient care is being provided.

Patients, as well as healthcare providers, may not be well educated about hospice care. They may think that hospice is a way to help people die rather than a way to try to help them live the remainder of their life with as few symptoms and as little pain as possible.³

Some patients may not yet be near death, but have a condition that is not curable and only somewhat treatable. Patients and healthcare providers may also not be knowledgeable about palliative care, in which treatment is not expected to be curative.⁴ For example, under

palliative care guidance, a patient with a cancer with a very high mortality rate might choose not to undergo chemotherapy, but instead choose to have surgery to reduce symptoms by de-bulking the tumor.

Because of the medicolegal climate in many states, physicians and hospital administrators may be concerned about offering patients and families the option of providing less intensive care for fear of being seen as medically negligent. Whether or not this is a legitimate concern, it can feel like a real one to physicians and hospital administrators.

Finally, in some situations families may not be willing or available to discuss whether a patient should continue to be treated aggressively. A patient may not have any known family or, after an acute event, family members may not be able to agree on what their family member would have wanted. Advance directives allow families and providers to feel comfortable that the patient is getting appropriate care.

Potential Interventions

The hospitals and QIOs that participated in the VALUE project gained useful information about what interventions were or were not effective in reducing potentially unnecessary end-of-life care. For example, one of the hospitals in New Jersey, which had a palliative care service in place at the start of the VALUE project, found that few patients other than those with cancer were being referred for palliative care consults. This hospital chose to work with its hospitalists to increase referrals of patients with end-stage heart failure for palliative care. The hospital's palliative care coordinator

PROVIDER ACTION

Impact to You

The Dartmouth Atlas Project found large variations in the amount of care received by patients during their last 6 months of life. It concluded that providing more care does not necessarily mean providing better care.

What You Need to Know

The wide variation in services received by Medicare beneficiaries at the end of life cannot be explained by patient-related differences alone. Some differences are related to the supply of healthcare resources and philosophies of providers.

What You Need to Do

Providers can improve end-of-life care for their patients by encouraging their patients to think about how aggressively they want to be treated and create advance directives. Physicians can also refer their patients to palliative care programs and hospice.

and hospitalists used current patterns of referral to adopt criteria for referral of their heart failure patients to palliative care, and to create a questionnaire for the hospitalists (and other physicians) to provide feedback to the palliative care program. During the 7 months this intervention was in place, 18% of end-stage CHF patients received palliative care referrals, whereas previously these patients may not have been referred. In addition, the total number of all referrals for palliative care increased by 64% from 2006 to 2007.

The VALUE project participants suggest that providers take simple steps to provide opportunities for their patients to improve their end-of-life care:

- Physicians can encourage their patients, particularly those with chronic conditions, to think about how aggressively they would want to be treated if they were nearing death and to develop advance directives before they become critically ill, if possible.
- Physicians can refer patients with nontreatable and/or progressive conditions to palliative care teams, being mindful of cultural appropriateness. Palliative care specialists can help patients accept their expected course of illness and decide how they want to address problems that are likely to occur.
- Physicians can refer patients who are nearing death to hospice. While not all patients will be interested in hospice services, all patients nearing the end of life should have the option.
- Sometimes when patients are being treated in an ICU, acute

problems are treated without consideration of whether aggressive care is the best course for the patient. Physicians can help develop policies to require that all ICU patients with poor prognoses receive a palliative care referral. Policies regarding the use of ICU beds for patients receiving comfort care only can also be developed.

Summary

The Dartmouth Atlas Project has found large variations in the amount of care received by patients during their last 6 months of life, while concluding that providing more care does not necessarily mean providing better care. Healthcare providers, patients, and their families need to be aware of and use options regarding end-of-life care, such as palliative care, hospice, and advance directives, in a way that is sensitive to the beliefs of patients, families, physicians, and other healthcare providers. **MPM**

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