United States Senate Committee on Finance Hearing on Medicare:

Its Context and Evolution

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Testimony of John E. Wennberg, M.D., M.P.H.
Director, the Center for the Evaluative Clinical Sciences
Dartmouth College
Hanover, NH 03755

Wennberg Exhibits for 4/25/99 Testimony

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To Alec Phillips	From Martha Smith	
Co./Dept. Finance Ctte/U.S. Senate	Co. CESS/DMS	
Phone # (202) 224-7389	Phone # (603) 650-1684	
Fax # (202) 228-0578	Fax # (603) 650-1225	

LIST OF EXHIBITS. (All are excerpts from the Dartmouth Atlas Series)

Underuse of Effective Medical Care

Underuse represents a failure to provide diagnostic tests, preventive services and treatments that are proven effective in improving health status. The 1999 edition of the Atlas and related studies confirm several of the findings of underuse cited in the Roundtable's report. Among hospital referral regions, there are striking variations in Medicare enrollees' use of:

- Immunizations of demonstrated efficacy in preventing pneumonia (Chapter Four);
- Tests and drugs widely believed to reduce complications in patients with diabetes (Chapter Four);
- Treatments proven effective in lowering mortality rates of patients with heart attacks (below).

For services such as these, there can be little debate over the question, Which rate is right? The interventions are known to be effective, and the benefits far exceed associated risks. Moreover, Medicare enrollees want these benefits. The right rate — the "best practices" benchmark — is the rate when all eligible patients are provided with appropriate care. In actual practice, there is evidence of extensive waste of the opportunity to prevent serious illness (Figures 7.1 and 7.2).

Why is there underuse of services that work — and that patients want — in a nation so amply endowed with medical resources? Underuse cannot be explained by an inadequate supply of either primary care physicians or specialists, because underservice is prevalent in hospital referral regions with both high and low supplies of all these resources. Nor is underuse related to access to physicians or the continuity of ambulatory care (Chapter Four). If undersupply is not the cause of underuse, then spending more is not the cure for the problem (Figure 7.4). There is little consistency in the quality of performance; regions that approach the standard for "best practice" for one preventive service commonly do notably poorly in other measures. Performance seems to vary in an idiosyncratic way, reflecting local physicians' opinions and practice styles (Figure 4.9). The extent of underuse, and the haphazard nature of compliance with recommended guidelines, indicate there is substantial opportunity to improve the quality of care by improving the process by which preventive and therapeutic services are delivered.

Exhibit 1

Screening for Breast Cancer

The United States Preventive Services Task Force recommends routine mammographic screening every one or two years for women age 50 to 69. Clinical trials provide convincing evidence of the effectiveness of this screening in reducing mortality from breast cancer. The Task Force found that there was not enough evidence to recommend universal screening for women over age 69, but opined that healthy women age 70 and over might benefit from routine mammography.

The frequency of mammography among female Medicare enrollees between 65 and 69 fell considerably short of the Task Force's recommendation in 1995-96. The two year rate of mammography in the United States was 28.3%, and varied by a factor of more than four, from less than 12.5% to over 50%.

There were interesting regional patterns of variation: women in the Northeast, Florida and Michigan were much more likely to receive mammography than women elsewhere. In every hospital referral region in Michigan, the mammography rate was substantially higher than the national average. Rates were higher than 40% in ten hospital referral regions, six of them in Michigan, including Traverse City (50.1%); Petoskey (45.2%); and Flint (43.1%). The higher than average rates of mammographic screening in all Michigan hospital referral regions might be the result of local outreach efforts spearheaded by the Centers for Disease Control's National Breast and Cervical Cancer Early Detection Program, in which a principal aim was to increase the use of mammography among the elderly.

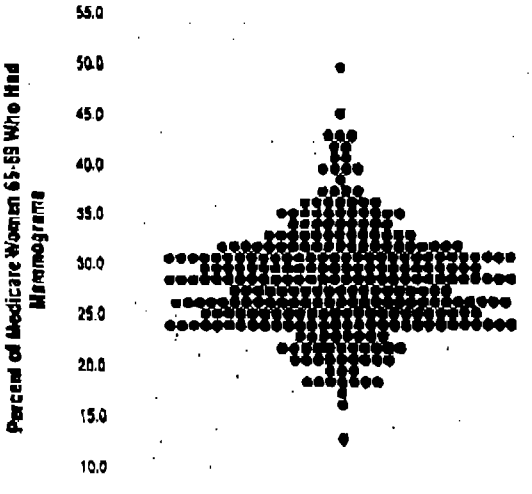
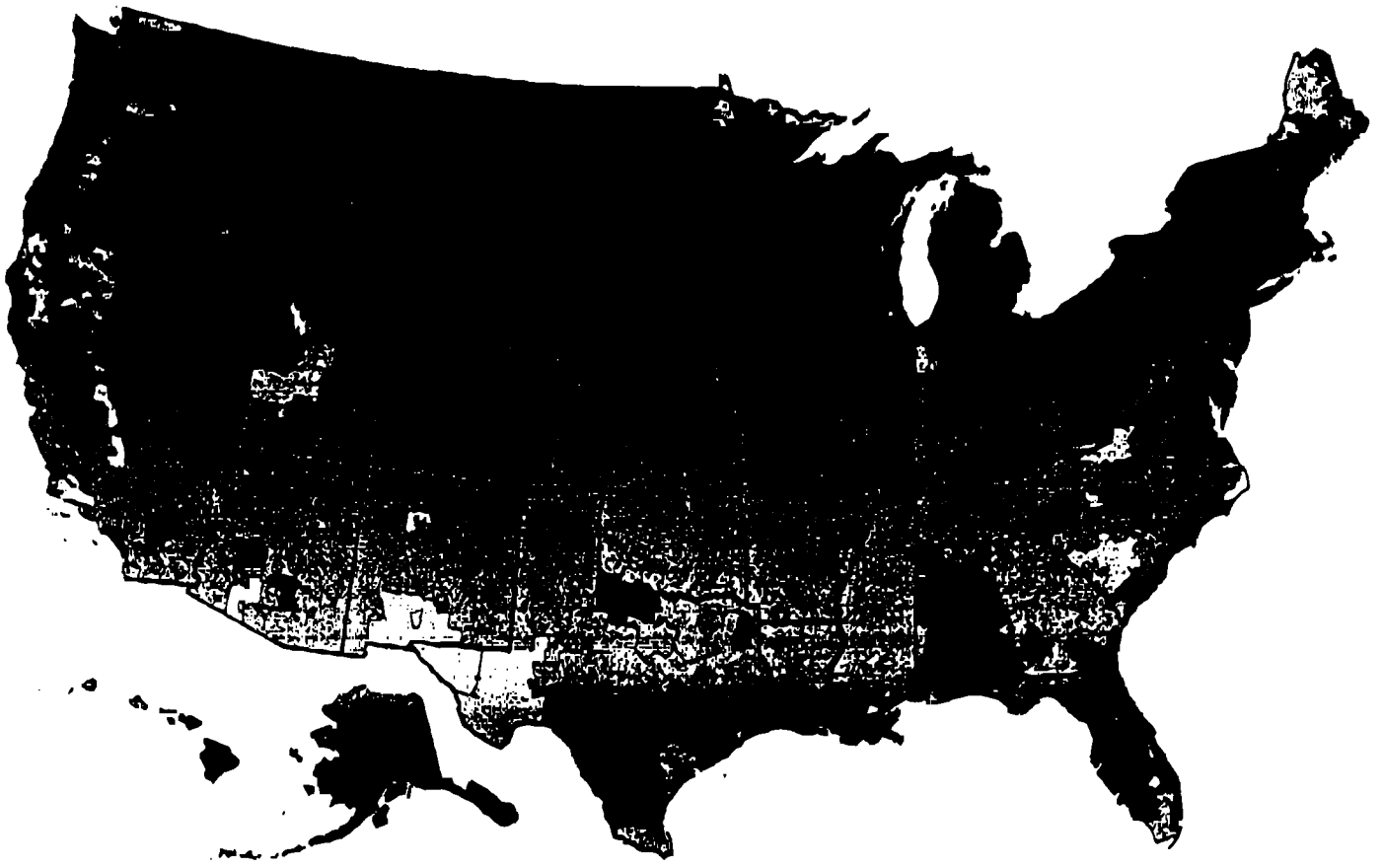


Figure 4.2. Percent of Medicare Women Age 65-69 Who Had Mammograms at Least Once in a Two-Year Period (1995-96)

The target screening rate of the U.S. Preventive Services Task Force is one mammogram every one to two years for women between 65 and 69. Actual rates of screening ranged from less than 15% to 50%. Each point represents one of the 306 hospital referral regions in the United States.

Exhibit 1



Map 4.2. Percent of Medicare Women Who Had Mammograms (1995-96)

Rates of mammography were high among female Medicare enrollees in Michigan, in the Northeast, and in Alabama and Florida. Rates of mammography among eligible women were lower in parts of the Southeast and in several areas in the Southwest.

Percent of Medicare Women Age 65-69 Who Had Mammograms
by Hospital Referral Region (1995-96)

- 40 or More (10)
- 30 to < 40 (99)
- 20 to < 30 (184)
- 10 to < 20 (13)
- Less than 10 (0)
- Not Populated

San Francisco | Chicago | New York | Washington-Baltimore | Detroit

Annual Eye Examinations for Diabetics

In people with both insulin-dependent and non-insulin-dependent diabetes, randomized trials have confirmed that yearly retinal exams and treatment of eye disease reduce the risk of blindness. The Diabetes Quality Improvement Project recommends annual eye exams. In 1995-96, all hospital referral regions fell well short of the guideline recommendation for annual eye examinations for Medicare enrollees who were diabetics. Compliance with the guideline varied by a factor of more than 2.5, from 25.1% to 66.1%.

Among the hospital referral regions with higher than average rates of annual eye examinations for diabetic Medicare enrollees were Fort Lauderdale, Florida (66.1%); Worcester, Massachusetts (62.1%); Ormond Beach, Florida (60.2%); Hudson, Florida (59.9%); and Sarasota, Florida (59.6%).

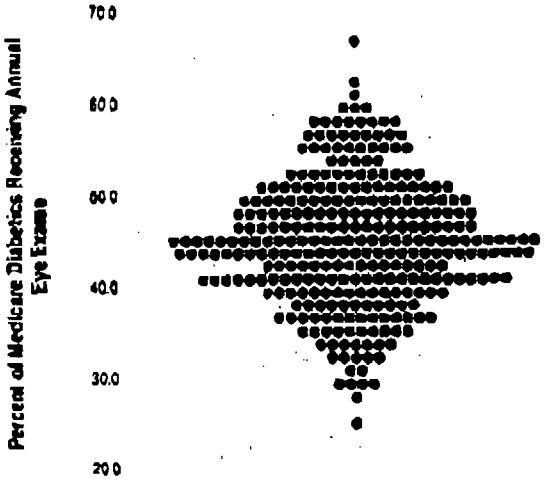
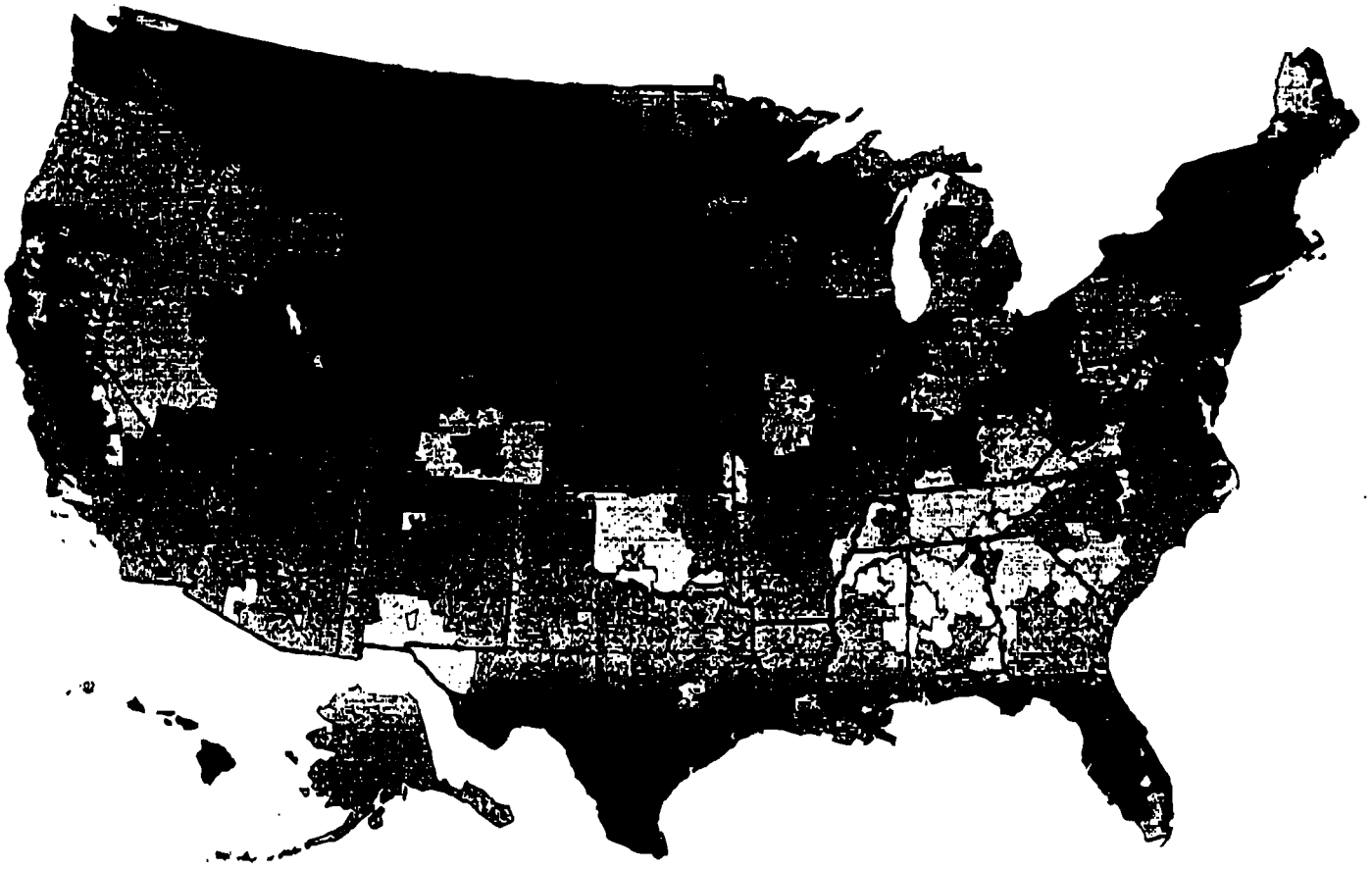


Figure 4.4. Percent of Diabetic Medicare Enrollees Receiving Annual Eye Examinations (1995-96)

The Diabetes Quality Improvement Project recommends annual eye exams for all diabetics. Actual rates of compliance with the guideline ranged from 25% to 66%. Each point represents one of the 306 hospital referral regions in the United States.

Among the hospital referral regions with lower than average rates of annual eye exams for diabetic Medicare enrollees were Terre Haute, Indiana (25.1%); Johnson City, Tennessee (27.5%); Portland, Oregon (28.5%); Bloomington, Illinois (28.5%); and Petoskey, Michigan (28.9%).



Map 4.4. Percent of Diabetic Medicare Enrollees Receiving Annual Eye Examinations (1995-96)

Compliance with the guideline for annual eye examinations was less than 60% in all but three hospital referral regions. Compliance was lowest in the East South Central states, parts of the Midwest and Texas, and in Oregon and Western Nevada.

Percent of Diabetic Medicare Enrollees Receiving Annual Eye Examinations

by Hospital Referral Region (1995-96)

- 80 or More (0)
- 60 to < 80 (3)
- 40 to < 60 (232)
- 20 to < 40 (71)
- Less than 20 (0)
- Not Populated

San Francisco

Chicago

New York

Washington-Baltimore

Detroit

Exhibit 1

Capacity of the Health Care System and Use of Screening and Preventive Services

What is the relationship between the capacity of the health care system to provide preventive services and the outcomes of care, measured by the use of services of known effectiveness? What is the relationship between measures of access, continuity of care, and outcomes?

The supply of primary care physicians in 1996 varied from fewer than 34 physicians per 100,000 residents of the McAllen, Texas hospital referral region, to more than 105 per 100,000 residents of White Plains, New York. But the supply of generalist physicians was essentially uncorrelated with the frequency of use for any of the screening and preventive services recommended by the United States Preventive Services Task Force and the Diabetes Quality Improvement Project (Table 4.2). In simple correlation analysis, there was virtually no association between the level of the generalist physician workforce and use of mammography (R^2 = .06); pneumococcal vaccination against pneumococcal pneumonia (R^2 = .00); or eye examinations for diabetics (R^2 = .05); and little relationship with screening for colorectal cancer (R^2 = .13).

The supply of specialist physicians in 1996 ranged from 53 per 100,000 residents of the McAllen, Texas hospital referral region, to 227 per 100,000 residents of White Plains, New York. As with generalist physicians, the supply of specialists was generally uncorrelated with the frequency of use of preventive services recommended by the United States Preventive Services Task Force and the Diabetes Quality Improvement Project. There was virtually no association between the level of the specialist physician workforce and use of mammography (R^2 = .03), pneumococcal vaccinations (R^2 = .00), or eye examinations for diabetics (R^2 = .08); and only a modest relationship between the supply of specialists and rates of colorectal screening (R^2 = .19).

Access to care, as measured by the percent of Medicare enrollees living in a region who had one or more visits to a doctor in calendar year 1995, was only weakly related to use of mammograms (R^2 = .18) and pneumococcal vaccinations (R^2 = .14), and had very little correlation with the frequency of eye examinations among diabetics (R^2 = .03).

An index of the continuity of ambulatory care measures the proportion of patients who see a single physician for the majority of their ambulatory care visits. Continuity of care, measured by the percent of patients in a region who receive at least 50% of their ambulatory care visits from one physician, also bore little relationship to the rates of use of preventive services. There was an inverse relationship between continuity of care and use of mammography, screening for colorectal cancer, and blood lipids testing for diabetics.

Immunization for Pneumococcal Pneumonia (1995-96)	0.00	0.00*	0.14	0.00
Screening for Breast Cancer (Age 65-69) (1995-96)	0.06	0.03	0.16	0.07*
Screening for Colorectal Cancer (1995-96)	0.13	0.19	0.08	0.20*
Eye Examination (Diabetics) (1995-96)	0.05	0.08	0.03	0.13*
HgbA1c Testing (Diabetics) (1995-96)	0.03	0.04	0.01*	0.05*
Blood Lipids Testing (Diabetics) (1995-96)	0.05	0.21	0.02	0.30*

*Indicates inverse association (negative correlation coefficient)

Table 4.2. The Relationships Between the Supply of Generalist and Specialist Physicians, Access to Care, and Continuity of Care and the Frequency of Use of Recommended Preventive Services (R^2 Values) (1995-96)

There was little relationship between the supply of specialist and generalist physicians and access to care, continuity of care, and the use of preventive services. The strongest positive correlation was between the supply of specialist physicians and the rate of blood lipids testing (R^2 = .21); no correlation at all was found between the supply of physicians (generalists or specialists) and the rate of compliance with guidelines for pneumococcal pneumonia vaccination (R^2 = .00). There was a moderately strong inverse correlation between measures of continuity of care and the rate at which diabetics received recommended blood lipids testing (R^2 = .30).

More Medicare Spending Does Not Cure Underservice

The Dartmouth Atlas series has focused on the wide geographic variations in both underservice and variations in overall Medicare resources and utilization. But do areas that have larger per capita expenditures also provide better quality care? This is obviously a complicated and multidimensional question, and we cannot entirely resolve it. However, we can ask whether there is a relationship between areas with higher per capita Medicare expenditures and the rates at which enrollees receive appropriate and recommended screening tests. Figure 7.4 shows per capita Medicare spending by hospital referral regions, adjusted for age, sex, race, regional price levels, and illness burden (on the horizontal axis). The vertical axis is an index of underservice: the average proportion, by hospital referral region, of Medicare enrollees who (1) received immunizations for pneumococcal pneumonia; (2) had at least one mammogram (women age 65-69); (3) were screened for colorectal cancer; and (4)the proportion of diabetics receiving annual eye examinations; (5) the proportion of diabetics receiving glucose (Hgba1c) screening; and (6) the proportion of diabetics receiving LDL blood lipids testing. A score of 100 would mean that each eligible person had received the appropriate screen or tests; a score of zero would mean that no eligible person received the recommended preventive care. A higher index is indicative of better compliance with the guidelines for preventive and screening services.

Figure 7.4 demonstrates that there was no correlation between overall Medicare spending in hospital referral regions and the index of the quality of preventive services (R^2 = .01). It appears that, even in areas that spent up to $3,000 per capita more than other regions, the quality of preventive care was no better (and very slightly worse) than in regions with lower per capita lower spending.

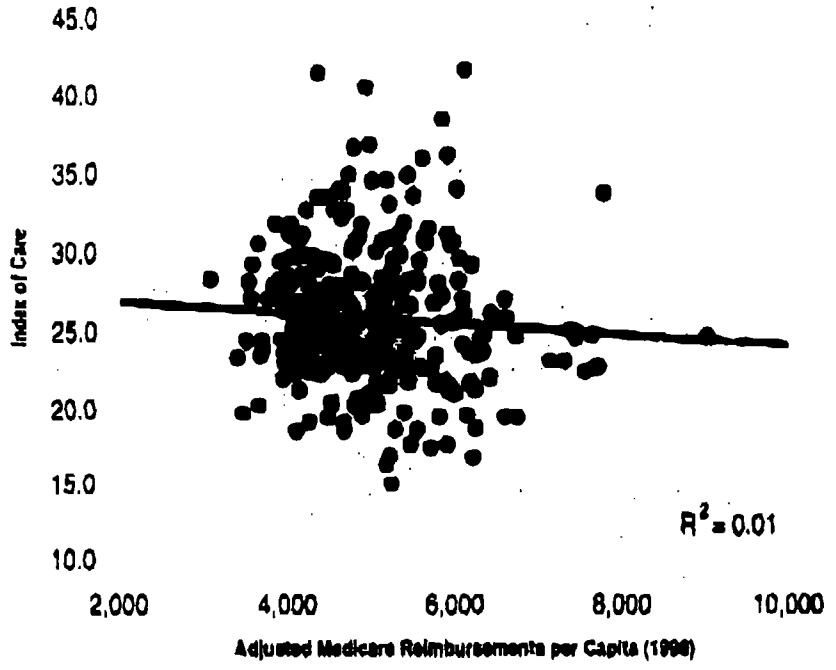


Figure 7.4. The Association Between Age, Sex, Race, Price and Illness Adjusted Medicare Spending (1996) and the Quality of Preventive Care (1995-96)

The vertical axis gives the values for the quality of care index (see text); the horizontal axis gives the fully adjusted Medicare per capita spending. There was little association between spending level and the quality of preventive care ($R^2 = .01$).

Exhibit 2

The Quality of Care in the Last Six Months of Life

The quality of medical intervention is often more a matter of the quality of caring than the quality of curing, and never more so than when life nears its end. Yet medicine's focus is disproportionately on curing, or at least on the ability to keep patients alive with life-support systems and other medical interventions. This ability to intervene at the end of life has raised a host of medical and ethical issues for patients, physicians, and policy makers.

The Dartmouth Atlas demonstrates that, to the extent that end of life issues are addressed in practice, they are resolved in ways that depend on where the patient happens to live, not on the patient's preferences or the power of care to extend life. The American experience of death varied remarkably from one community to another in 1995-96:

- The chance that the decedent was an inpatient in an acute care hospital at the time of death varied by a factor of 2.8, from less than 20% to almost 50%.

- The chance of being admitted to an intensive care unit at the time of death varied by a factor of 4.6, from 6.3% to almost 30% of all deaths.

- Time spent in intensive care varied substantially. In some regions, more than 20% of patients spent a week or more in intensive care units during their last six months of life; in other regions, less than 4% did.

The intensity of care in the last six months of life also varied remarkably in 1995-96:

- The number of visits to physicians varied by a factor of 5.6, from an average of less than nine to almost 50.

- The number of physicians involved in patients' care varied substantially. In some regions more than 30% of patients saw ten or more physicians during their last six months of life; in other regions fewer than 3% were treated by that many different physicians.

Exhibit 2

■ Price adjusted reimbursements by the Medicare program for inpatient care during the last six months of life varied by a factor of three, from about $6,200 to almost $18,000 per decedent.

Like other medical decisions, end of life decisions about the use of resources are influenced by the available supply of acute care hospital resources and by individual physicians' practice styles. But is more better? The intensity of care in the last six months of life is an indicator of the propensity to use life saving technology. The question of whether more medical intervention is better must be framed in terms of the potential gain in life expectancy for populations living in regions with greater intensity of intervention. Research conducted in conjunction with the Atlas project provided evidence that populations living in regions with lower intensity of care in the last six months of life did not have higher mortality rates

More than 80% of patients say that they wish to avoid hospitalization and intensive care during the terminal phase of illness, but those wishes are often overridden by other factors. If more intense intervention does not improve life expectancy, and if most patients prefer less care when more intensive care is likely to be futile, the fundamental question is whether the quality of care in regions with fewer resources and more conservative practice styles is better than in regions where more aggressive treatment is the norm.

Exhibit 2

The Likelihood of Being Admitted to an Intensive Care Unit During the Last Six Months of Life

The chances that the last six months of a Medicare enrollee's life included at least one stay in an intensive care unit varied by a factor of more than three. In one region, less than 15% of Medicare enrollees who died were admitted one or more times to intensive care units (including coronary intensive care) during their last six months of life; in other regions almost one-half of enrollees were admitted to intensive care at least once during their last six months of life.

In 18 hospital referral regions, the likelihood of one or more admissions to intensive care during the last six months of life was greater than 40%, including Miami (49.3%); Munster, Indiana (48.7%); Los Angeles (45.8%); St. Petersburg, Florida (44.2%); Beaumont, Texas (43.9%); and Newark, New Jersey (43.9%).

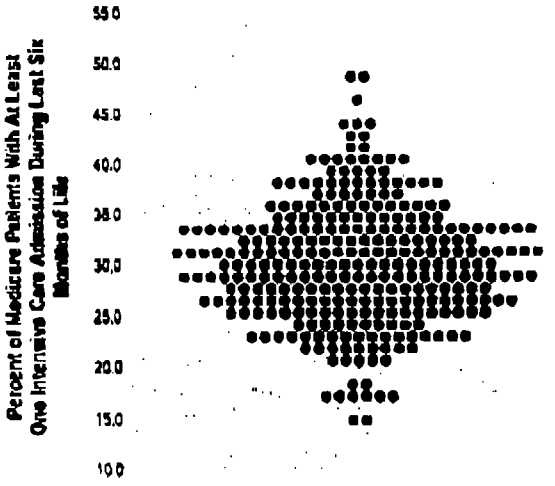
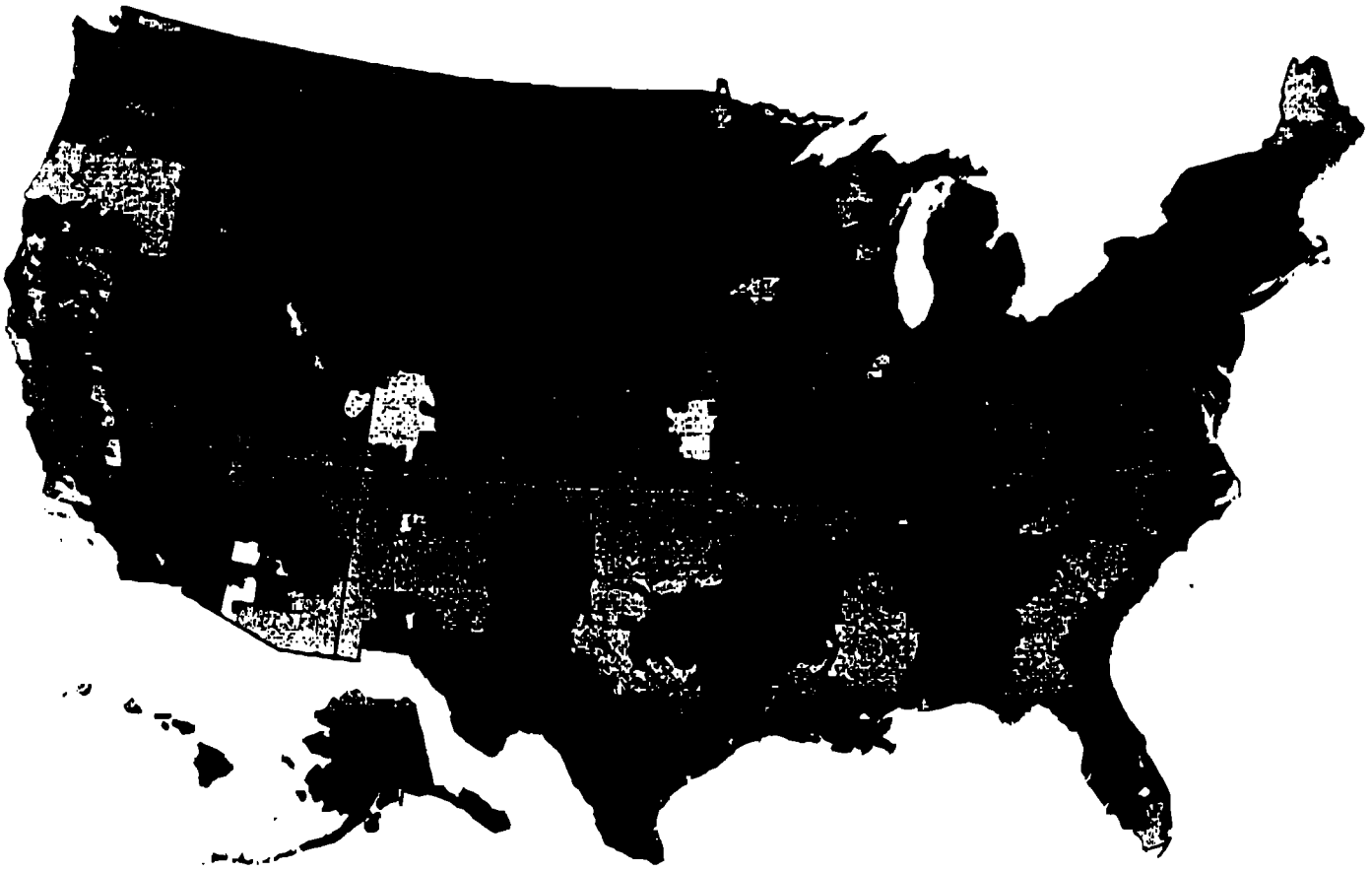


Figure 6.3. Percent of Medicare Enrollees Admitted to Intensive Care During the Last Six Months of Life (1995-96)

The percent of all Medicare decedents who were admitted to intensive care units at least once during their final six months, after adjusting for differences in age, sex, and race, ranged from less than 15% in almost 50%. Each point represents one of the 306 hospital referral regions in the United States.

In ten hospital referral regions, the likelihood of admission to intensive care during the last six months of life was less than 20%, including Sun City, Arizona (14.2%); Bloomington, Illinois (15.2%); Bend, Oregon (16.6%); Wausau, Wisconsin (16.9%); Mason City, Iowa (16.9%); and Grand Junction, Colorado (17.4%).



Map 6.2. Percent of Medicare Enrollees Admitted to Intensive Care During the Last Six Months of Life (1995-96)

The likelihood of at least one admission to intensive care during the last six months of life was generally higher in the Eastern and Southern United States than in the Western and Northwestern states.

Percent of Medicare Enrollees Admitted to Intensive Care During the Last Six Months of Life
by Hospital Referral Region (1995-96)

- 40 or More (18)
- 30 to < 40 (137)
- 20 to < 30 (141)
- 10 to < 20 (10)
- Less than 10 (0)
- Not Populated

San Francisco | Chicago | New York | Washington-Baltimore | Detroit

Physician Visits During the Last Six Months of Life

Although people in the last six months of their lives are generally quite sick, the intensity of physician care that Medicare enrollees in their last six months of life were likely to receive, as measured by the average number of visits to physicians, varied from fewer than nine visits per decedent to almost 50. The national average was 24.4. About 90% of physician visits in the last six months of life were with either primary care physicians or medical specialists; surgeons were visited much less frequently.

The average number of physician visits during the last six months of life was almost double the national average among residents of the Miami hospital referral region (47.9). Rates of visits were also high in the New York-Northern New Jersey metropolitan area, including Newark, New Jersey (45.5); Ridgewood, New Jersey (43.0); New Brunswick, New Jersey (42.4); Paterson, New Jersey (42.2); East Long Island, New York (40.0); and Manhattan (39.4).

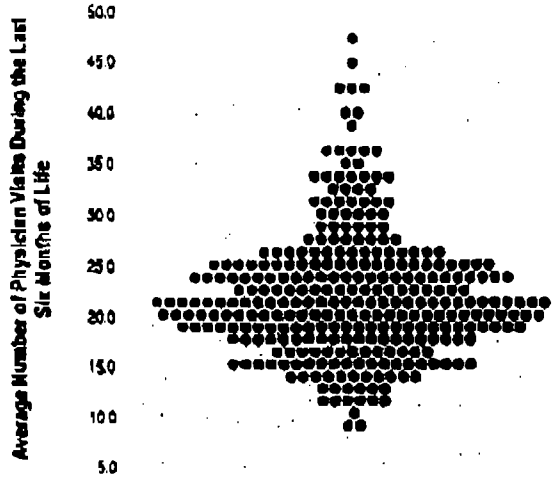
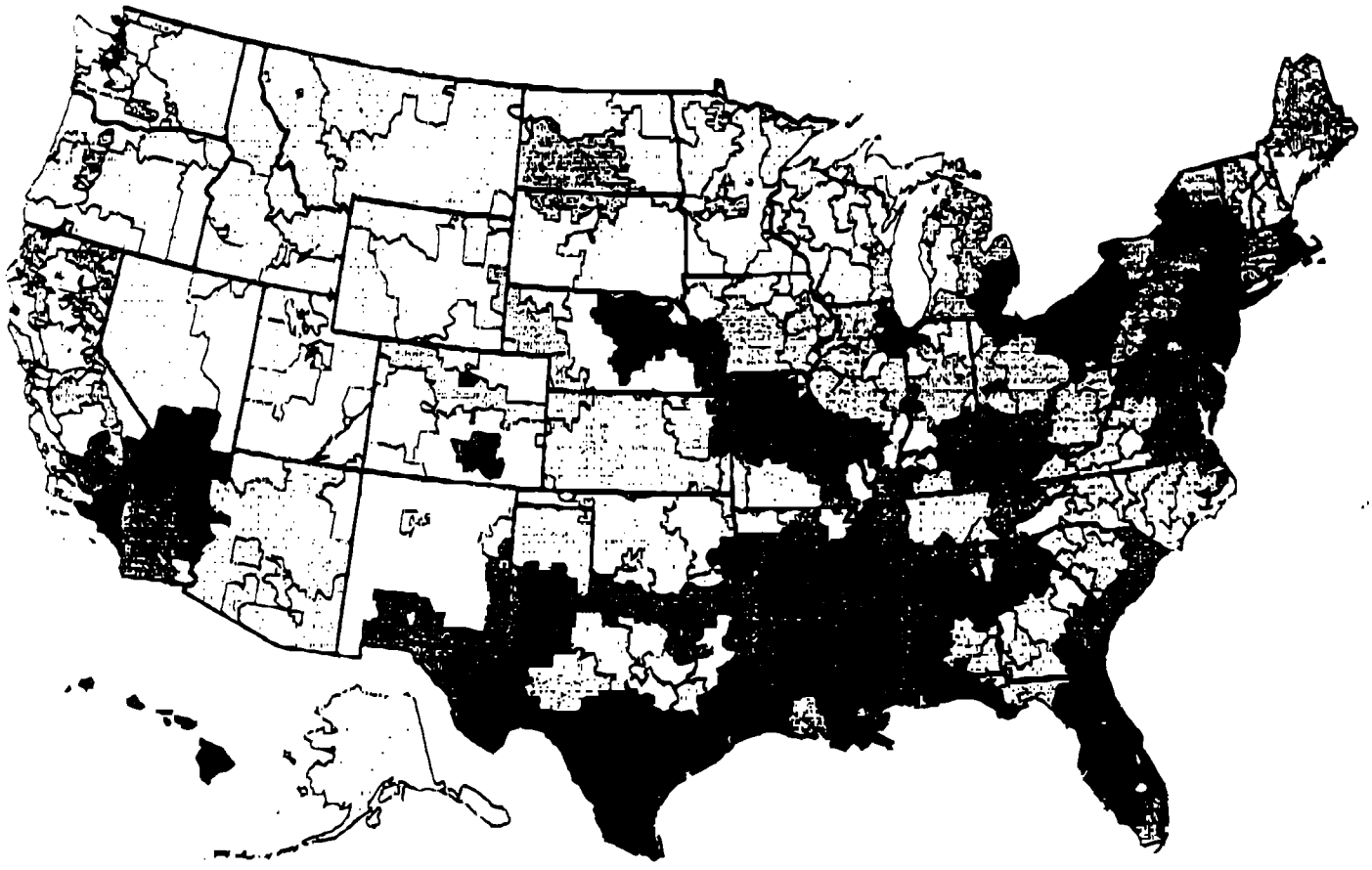


Figure 6.6. Average Number of Physician Visits per Decedent During the Last Six Months of Life (1995-96)

The number of physician visits during the last six months of life varied by a factor of about five, from fewer than 10 to almost 50, after adjustments for differences in population age, sex, and race. Each point represents one of the 306 hospital referral regions in the United States.

Dying residents of other hospital referral regions were much less likely to make multiple visits to doctors during the last six months of life. Hospital referral regions where rates of visits were low included Grand Junction, Colorado (8.5); Ogden, Utah (8.6); Salt Lake City (10.9); Mason City, Iowa (11.0); and Salem, Oregon (11.0).



Map 6.5. Physician Visits During the Last Six Months of Life (1995-96)

Rates of physician visits during the last six months of life were higher than the national average in the Eastern United States, and lower in the West and Northwest. Rates were at least 30% higher than the national average in 27 hospital referral regions, most of which were in Florida, New York, New Jersey, Texas and California.

Ratio of Rates of Physician Visits During the Last Six Months of Life to the U.S. Average

by Hospital Referral Region (1995-96)

- 1.30 to 1.97 (27)
- 1.10 to < 1.30 (27)
- 0.90 to < 1.10 (85)
- 0.75 to < 0.90 (91)
- 0.34 to < 0.75 (76)
- Not Populated

San Francisco | Chicago | New York | Washington-Baltimore | Detroit

Exhibit 2

How Effective is Medicare Spending in the Last Six Months of Life?

There were wide differences in the treatment provided to people who spent their last six months of life during 1995-96. Did the greater intensity provided in some hospital referral regions actually save lives, or increase the survival of the elderly sick? At the very heart of the question is the economics of the end of life, and the question, What are we getting for our investment in the very aggressive care provided to some members of the Medicare population?

Answering this question is complex, since sicker people might be expected to account for more health care spending, and also are more likely to die. But the treatment of people in their last six months of life is an excellent marker for the treatment being given to everyone in the Medicare population who is seriously ill. For example, there was a strong relationship between the intensity of inpatient health care spending in the last six months of life and average per capita Medicare reimbursements for all enrollees (Figure 6.13).

Despite the fact that this indicator of intensity of care is highly correlated with overall per capita spending among the Medicare population, it is not closely associated with standard measures of health status, such as population-based rates of acute myocardial infarction, stroke, and hip fracture. In other words, how people are treated in the last six months of their lives is a good indicator of the overall intensity of medical intervention in the population, but it does not reflect the underlying level of illness or sickness.

In turn, the intensity of care, while raising spending, does not appear to have had an impact on the overall mortality level of the community. Regions providing more intensive levels of medical interventions to the elderly sick yielded no discernible improvement in life expectancy, suggesting that the United States might be on the "flat of the curve" in terms of the relationship between spending (inputs) and survival (outputs).

Simply measuring mortality does not capture the entire spectrum of possible benefits of end of life spending. The quality of health care includes more than the ability to prevent or postpone death; it also includes the capacity to improve the quality of life. While the extra resources devoted to health care intensity in some regions might provide comfort, if not life extension, to the population of people who are near death, it is unclear by what measure or mechanism more intensive acute care per capita resulted in improved quality of care at the end of life.

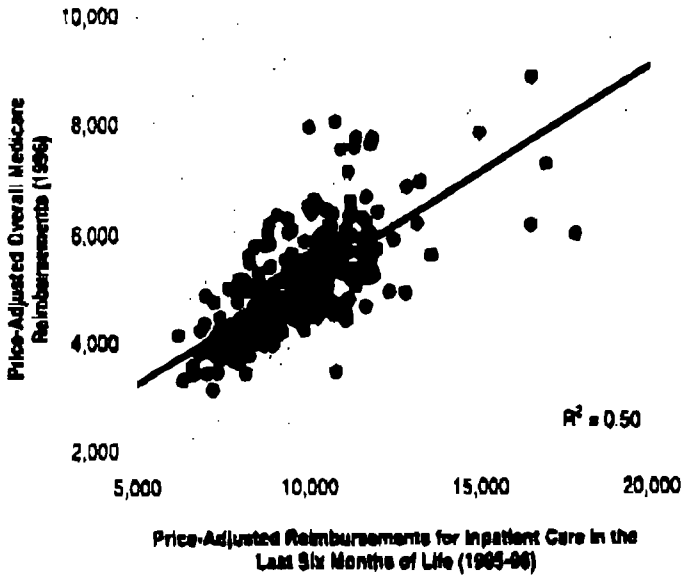


Figure 6.13. The Association Between Inpatient Medicare Spending in the Last Six Months of Life and Overall Per Capita Spending in the General Medicare Population (1995-96)

The intensity of care in the last six months of life, measured by Medicare Part A spending, is closely correlated with overall Medicare per capita spending (Part A and B) for the entire Medicare population.

Exhibit 2

Capacity, Patient Preferences and the Likelihood of a Hospitalized Death

Quality medical care includes respect for the patients' preferences about the end of life. There is growing concern in the United States about the quality of how we die. In two Gallup polls, one in 1992 and a second in 1996, nine out of ten Americans said they would prefer to be cared for at home if they were terminally ill. Of course, answers to this hypothetical question might not correspond to the preferences of those actually facing death. Another study, called SUPPORT (Study to Understand Preferences for Prognoses and Outcomes of Treatments) examined preferences about the place of death among patients who were facing death — those with very serious, life-threatening illnesses. The vast majority — 82% — reported that if a doctor told them they had "very little time to live," they would prefer death at home, rather than in a hospital. In most cases, however, those who die do not know with certainty that they will die within a certain time frame. Different people might place different degrees of importance on the (perhaps small) chance of surviving, versus the discomforts and risks of high-technology interventions. Some people die in intensive care units not because they prefer them to other settings, but because they were willing to take the risk of intense intervention in exchange for the chance of recovery.

The degree of regional variation in how many people die in hospitals, and how many have been admitted to intensive care units at least once during the last six months of their lives, however, is surprising, given the almost universal expression of a desire for death to happen elsewhere, and otherwise. Can this be explained by patient preferences — are people in some areas are more willing to take the risks associated with intensive medical interventions than similar people living elsewhere? Probably not. The SUPPORT study is unique among studies of terminal care and advance directives because it sought to "re-engineer" the clinical setting in order to respect and incorporate into the care plan the individual patient's own preferences at the time of death. The core of the intervention was specially trained and philosophically committed nurses who "spent all of their time counseling patients and families, convening meetings with physicians and others, eliciting preferences, making plans for future contingencies and ensuring that the best possible information about prognosis and preferences was available to the care team."

Exhibit 2

The intervention failed. The majority of patients who had expressed their preference for dying at home were actually in the hospital at the time of death, despite the best efforts of the SUPPORT group to redirect the clinical pathway.

Why did this happen? Probably the best explanation is that the local supply of hospital resources, and local physicians' practice styles, are far more dominant determinants of how care is given at the end of life than either patient preferences or the best clinical strategies to avoid unwelcome interventions. The SUPPORT study took place at five different hospitals in five different hospital referral regions. The percent of study patients who died in hospitals ranged from a low of 29% to a high of 66%. The variations were not explained by sociodemographic characteristics, clinical profiles, or patients' preferences.

Among the Medicare population, there was a strong, and apparently prevailing, association between acute care hospital capacity and the likelihood of a hospitalized death. Indeed, the supply of acute care hospital beds per 1,000 residents explained 71% of the variance among sites in place of death, and patient days per 1,000 Medicare enrollees explained 88% of the variance among sites in place of death. As with medical care and surgical interventions, in death geography is destiny. The place of death and the intensity of interventions provided depend much more on the region's patterns of use of acute care hospital resources than on what dying patients say that they want.

Population-based studies strongly suggest that greater intensity of medical care does not yield benefits, either in terms of longevity or in terms of providing patients with the kinds of deaths that they want. Clearly, below some critical level, less care is harmful because treatable illnesses go untreated or are under-treated; and we might be unable to identify such groups in population-based studies. Nevertheless, the evidence presented in this chapter characterizes a system in which large amounts of money are spent on medical intervention that provides no benefit, whether that benefit is measured in longevity or in honoring patients' preferences.

Exhibit 3

Practice Variations and the Quality of Surgical Care for Common Conditions

Quality in health care means doing the right things right. Traditional efforts to improve the quality of surgical care have concentrated on improving surgical performance — ***doing things right.*** Performance quality in surgery is usually measured in terms of mortality or complication rates, and problems are indicated by variations in outcome rates. Efforts to improve quality usually focus on improving processes of care, from how skillfully the operation is performed to how well patients are cared for after surgery.

Although performance quality is important, so too is the quality of clinical decision making — ***doing the right thing.*** To measure this aspect of quality, it is necessary to ask whether the initial decision to proceed with surgery was correct. Measuring decision quality is much more difficult than tracking mortality or complication rates. However, as with performance quality, variation is an important indicator of problems in the quality of decision making. From a population perspective, variation in surgical decision making becomes apparent from the large regional variations in the rates at which populations undergo specific surgical procedures. Population-based rates of many common procedures vary by as much as a factor of ten (sometimes even more) — that is, residents of some parts of the country are as much as ten times more likely to receive particular surgical procedures than people with the same disease profiles who live elsewhere.

This chapter explores how both these components of quality — decision making and performance — are reflected in the patterns of surgical care across the United States. The chapter first describes the current degree of regional variation of ten common surgical procedures, identifying the procedures in which there is the greatest opportunity for improving decision making. The chapter then profiles two procedures, surgery for stroke prevention (carotid endarterectomy) and invasive treatment of coronary artery disease, to describe the factors that determine quality in surgical decision making and the quality of the surgery being performed — the outcomes of surgery.

Exhibit 3

Variations in the Surgical Treatment of Common Diseases

Ten surgical procedures — repair of hip fracture, colectomy for colorectal cancer, cholecystectomy, angioplasty, coronary artery bypass surgery, hip replacement, lower extremity bypass surgery, carotid endarterectomy, back surgery, and radical prostatectomy — represented approximately 42% of Medicare inpatient surgery and accounted for 44% of reimbursements for surgical care in 1995-96.

The ten procedures had very different variation profiles. For example, rates of colectomy for colorectal cancer varied by only a factor of two, from 1.5 per 1,000 Medicare enrollees in the Harlingen, Texas hospital referral region to 3.2 per 1,000 Medicare residents of the Sioux City, Iowa hospital referral region. There were only ten hospital referral regions with rates of colectomy for colorectal cancer less than 25% lower than the national average, and only one with a rate more than 30% higher than the national average.

There was far more variation in rates of most other common surgical procedures. Rates of radical prostatectomy for prostate cancer varied by a factor of more than nine, from 0.5 per 1,000 Medicare enrollees in the Binghamton, New York hospital referral region to 4.7 in the Baton Rouge, Louisiana hospital referral region. There were 67 hospital referral regions which had rates of prostatectomy more than 25% lower than the national average, and 62 hospital referral regions where male Medicare residents underwent prostatectomy at rates more than 30% higher than the national average. According to the systematic component of variation, rates of radical prostatectomy were more than 12 times more variable than rates of colectomy for colon cancer (Table 5.1). Rates of lower extremity bypass surgery for Medicare enrollees with inadequate circulation to their legs, carotid endarterectomy for stroke prevention, and back surgery were also highly variable among hospital referral regions.

Why Procedures Vary to Different Degrees

Although regional variation in health care is ubiquitous, not all surgical procedures vary to the same degree. Procedures which are not very variable are generally applied to clinical conditions for which treatment is constrained to a single clinical approach. For example, there is wide consensus that surgery is the primary treatment for both hip fracture and colorectal cancer. The geographic variation in the use of surgery for these two conditions is largely due to variations in illness rates — for example, colorectal cancer is slightly more common among residents of the Mountain states and parts of the Southeast than among residents of other parts of the country (Chapter Three).

The amount of regional variation for most procedures, however, is too large to attribute to chance or variation in illness rates; the rates of surgery described in Table 5.1 and Figure 5.1 have been adjusted for regional differences in illness rates, but still vary substantially. Variations in the rates of the use of these procedures reflect variations in practice style and in how physicians diagnose and treat common clinical conditions.

Table 5.1. Quantitative Measures of Variability of Ten Common Surgical Procedures by Hospital Referral Region (1995-96)

	Hip Fracture Repair	Colectomy for Colorectal Cancer	Cholecystectomy	Coronary Artery Bypass Grafting	Hip Replacement	Back Surgery	Carotid Endarterectomy	Percutaneous Transluminal Coronary Angioplasty	Lower Extremity Bypass	Radical Prostatectomy
Index of Variation										
Systematic Component of Variation (SCV)	10.3	15.7	28.5	38.0	61.8	86.0	86.6	102.0	104.8	130.3
Ratio to SCV of surgical repair of hip fracture	1.0	1.5	2.8	3.7	6.0	8.3	8.3	9.9	10.2	12.7
Range of Variation										
Extremal Ratio (highest to lowest region)	2.0	2.2	2.7	3.7	4.9	5.7	7.7	6.9	8.0	9.4
Interquartile Ratio (75th to 25th percentile region)	1.2	1.2	1.3	1.3	1.4	1.5	1.5	1.5	1.5	1.6
Number of Regions with High and Low Rates										
Rates more than 25% below the national average	1	10	10	19	40	41	54	61	60	67
Rates 30% or more above the national average	0	1	19	21	48	63	53	54	29	62

Exhibit 3

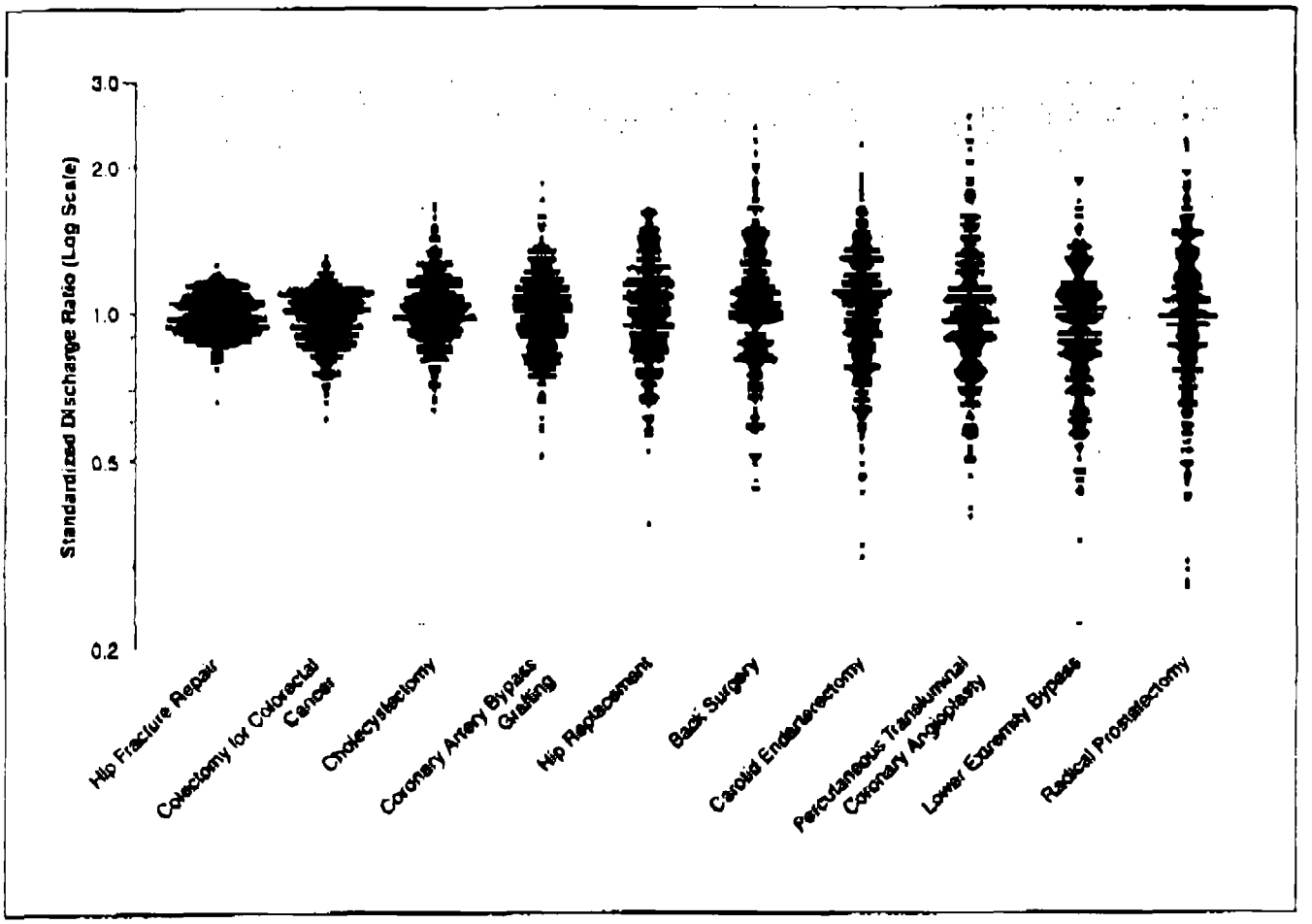


Figure 5.1. Profiles of Surgical Variation for Ten Common Surgical Procedures (1995-96)

■ **Variation in diagnostic intensity.** Surgery rates might vary because physicians in different regions vary in how aggressively they look for surgically treatable disease. For example, because early-stage prostate cancer frequently has no symptoms, the diagnosis is increasingly being made through a screening test for prostate-specific antigen. There is a great deal of regional variation in the frequency of use of this controversial screening test; as a result, there is also variation in the rate at which men are diagnosed (screening more men means that more men are diagnosed with early-stage disease) and variation in how often men undergo surgery (where more men are diagnosed with early-stage disease, more undergo surgical treatment for the condition).

Exhibit 3

■ **Problems with medical science.** For some procedures, regional variation in the use of surgery is due to gaps in medical science and professional uncertainty about the implications of alternative treatments. For example, variation in rates of radical prostatectomy might be partly attributable to the lack of controlled clinical trials comparing the risks and benefits of surgery, radiation therapy, and watchful waiting. For other procedures, even the best clinical trials are often not sufficient to eliminate variation in procedure rates: physicians vary in how they interpret and apply findings from the carefully controlled settings of clinical trials to decision making for individual patients in other settings.

■ **Failure to incorporate patient preferences into treatment decisions.** Although medical science is necessary for quantifying risks and benefits, some of the trade-offs involved in surgical decisions can only be assessed by patients. For example, the major risks of radical prostatectomy are urinary incontinence and impotence. Only patients themselves can weigh the importance of these side effects against the potential benefits of surgically removing the prostate cancer. Table 5.2 lists the treatment options available to patients and the clinical trade-offs patients face in terms of the risks and benefits for the ten conditions for which the procedures in Figure 5.1 are commonly performed.

Exhibit 3

Table 5.2. Trade-Offs, Risks and Benefits of Treatment Options for Selected Conditions

Clinical condition	Treatment Options	Trade-Offs Among Alternatives
Hip fracture	Surgical repair	No alternatives
Colorectal cancer	Colectomy	No alternatives
Chronic cholecystitis (intermittent abdominal pain from gallstones)	Watchful waiting	Avoids surgery, but carries a risk of a later serious attack (acute cholecystitis) and the need for urgent, open surgery
	Cholecystectomy (usually laparoscopic rather than open surgery)	Very effective, but there are small risks of serious complications
Chronic stable angina (chest pain or other symptoms from coronary artery disease)	Medical treatment	Avoids the downsides of interventions, but is less effective at improving symptoms and some patients have shorter survival
	Angioplasty	Lower procedure risks than surgery, but symptom relief is not as long lasting
	Bypass surgery	Effective and durable in relieving symptoms, but there are significant risks of mortality and disability, including stroke
Hip osteoarthritis	Medical treatment	Low risk, but not very effective in relieving symptoms
	Hip replacement	Very effective, but there are modest risks of mortality and complications, as well as a long recovery period
Claudication (exertional leg pain from peripheral vascular disease)	Medical treatment, exercise	Low risk, but only modestly effective
	Angioplasty	Effective at improving symptoms, but there are risks of complications and subsequent interventions are often necessary
	Bypass surgery	Very effective and durable, but there are significant risks of complications and death
Carotid stenosis (stroke risk from narrowing of carotid artery)	Aspirin	Lower short-term risks, but higher risks of stroke over the long term
	Carotid endarterectomy	Reduces overall stroke risks, but there are significant risks of mortality and of perioperative stroke
Herniated disc or Spinal Stenosis (causing back pain or other symptoms)	Medical treatment, chiropractic, other	Symptoms often resolve without surgery, but might not
	Back surgery	Frequently relieves symptoms, but has complication risks and is not always effective
Early-stage prostate cancer	Watchful waiting	Many prostate cancers never progress to affect quality of life or survival, but some do
	Radiation (conventional or implant seeds)	Shrinks or eliminates cancer in the prostate, but there are risks of side effects
	Radical prostatectomy	Removes prostate cancer entirely, but there are substantial risks of incontinence and impotence

Discretionary Surgery and the Question of Which Rate is Right

Sparing patients from surgery that experts believe is actually harmful obviously improves the quality of care; and on purely ethical grounds, such care should not even be offered. However, the overuse of harmful care or care that patients do not want does not explain geographic variations, and the elimination of overuse would not be sufficient to define what care patients actually want.

Increasingly, outcomes researchers are documenting the importance of patients' preferences in deciding which treatment best meets the individual patient's needs and wishes. A treatment is discretionary precisely because medical practice offers patients at least one other option. A woman with breast cancer, for example, has a choice between breast sparing surgery and mastectomy. Extensive clinical trials have shown that improvement in survival (the main goal of either treatment) is about the same for both options. However, other outcomes of the two interventions are not the same, and the choice between them involves trade-offs. The patient who undergoes lumpectomy will need radiation therapy, and faces a risk of local recurrence of her breast cancer. The patient who undergoes mastectomy avoids radiation and local recurrence, but must deal with the loss of her breast. Individual women differ substantially in how they evaluate the risks and benefits of these two treatment options. Breast sparing surgery is appropriate for some patients, and mastectomy is the right choice for others. Since the trade-offs must be made according to the preferences and values of individuals, the decision rightfully belongs to the patient — and not to panels of experts, managed care companies, surgeons, or patient advocates. The definition of unnecessary care must be expanded to include care that does not reflect what individual patients actually want.

Benign prostatic hyperplasia is a common disease in men over the age of 50, and there is considerable debate about how — and whether — the condition should be treated. Traditionally, men with benign prostatic hyperplasia have relied on their physicians to decide on the course of treatment for them, assuming that "the doctor knows best." Outcomes research has clarified the theoretical reasons for treatment, which is primarily to improve the quality of life by reducing the inten-

Exhibit 3

sity of symptoms. For most men, surgery does not increase the length of life and, in fact, might shorten life expectancy slightly because of the risk of operative mortality. The importance — the necessity — of the patient's active involvement in the choice of treatment is illuminated by these outcomes studies, because they have shown that the most important consideration for the patient is the tradeoff between risks and outcomes. Surgery is superior in improving urinary tract symptoms; foregoing surgery is superior to surgery in avoiding surgical complications, including impotence, incontinence, and retrograde ejaculation. Individual patients differ substantially in how they assess their own situations, including their feelings about sexual activity. There is nothing in a given patient's physical examination, clinical history, or laboratory test results that would allow a physician to prescribe the treatment that a patient who was informed and involved in the decision making process would prefer. The patient must be actively involved in the decision process.

An observational study of treatment choice for benign prostatic hyperplasia conducted in two health maintenance organizations showed that in a program of shared decision making, treatment choice was determined by the individual patient's own assessment of two subjective factors: how much his symptoms bothered him (not the severity of symptoms, but the extent to which symptoms at any level of severity were considered bothersome) and his concern about side effects, particularly the impact of surgery on sexuality.

Shared Decision Making and the Right Rate for Discretionary Surgery

If patients were informed about the risks and benefits of available treatments, and were actively involved in the decision making process, surgical rates would be based on patient choice among the "appropriate" options, rather than the preferences of individual physicians or the recommendations of panels of experts. The rates of surgery that would result from the incorporation of informed patients' choices into the decision making process would then be available as measures of how much surgery is necessary according to patients. We would also know whether the amount that informed patients want is less or more than the amount now being prescribed by physicians and experts.

Several studies have found that the level of demand for surgery that results from shared decision making is different and sometimes substantially less than in circumstances in which patients are not involved in decisions about surgical options. When informed about the risks and benefits of the alternative treatments, and invited to make decisions according to their own preferences, patients with benign prostatic hyperplasia and coronary artery disease demanded more conservative treatments and less surgery than was being performed before shared decision making was implemented (Figure 7.5).

Rates of prostate surgery in the two health maintenance organizations were already substantially lower than the national average when the study began. Among men who participated in the study, rates dropped even lower — more than 40% below the health maintenance organization's baseline. There was no reduction in demand among men in the control groups. (A subsequent randomized clinical trial showed a similar result, but the trial was underpowered and the result was not statistically significant.)

Current rates of other kinds of surgery might, by the same token, be lower than the rates that would be demanded by patients who were informed and actively engaged in decision making. The point is that learning which rate is right (and how much underuse or overuse of surgery there is in the United States) depends on improving the

Exhibit 3

quality of clinical decision making. The extreme variations in the rates of most surgical treatments (Chapter Five) is evidence of the extent of the decision quality aspect of the problem of overuse, underuse, and misuse of care.

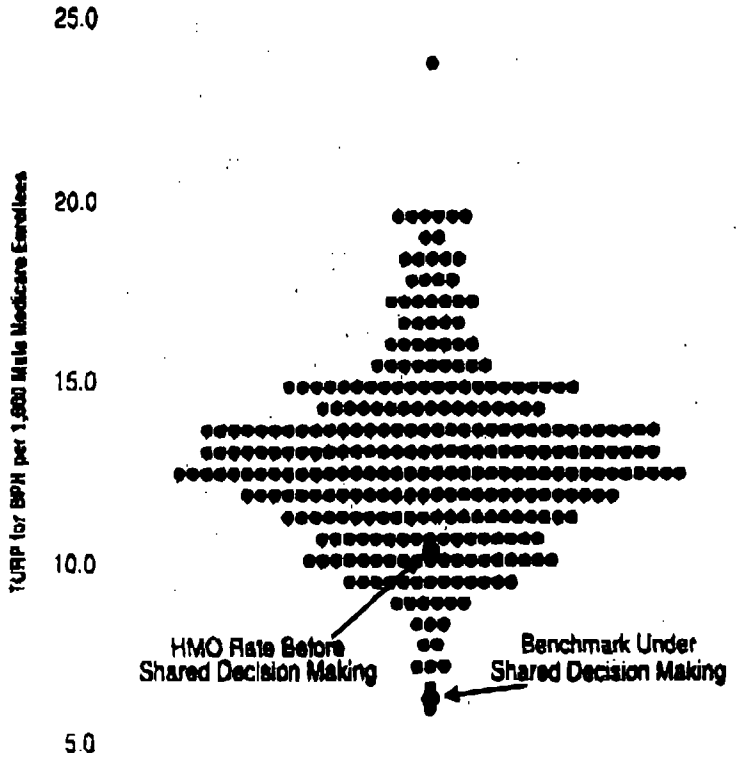


Figure 7.5. Distribution of Transurethral Prostatectomies for Benign Prostatic Hyperplasia Among Hospital Referral Regions (1992-93) Compared to Shared Decision Making Benchmark in Two Staff Model HMOs

The rate of surgery fell about 40% after implementation of shared decision making, although the rate prior to the intervention was lower than the national average. Rates in the control region did not change.

Exhibit 3

The Shared Decision Making Benchmark: Patient Demand for Surgery for Benign Prostatic Hyperplasia

The experience of the health maintenance organization in implementing shared decision making provides a benchmark for addressing the question, Which rate is right? In 1992-93, the last years of the shared decision making observational study, the rates of surgery for benign prostatic hyperplasia among men participating in shared decision making were comparable to the rates in the hospital referral regions with the lowest rates in the United States (Figure 7.5). If the preferences about surgical treatment of the men who participated in the shared decision making study reflect the preferences of most men, then the amount of surgery for benign prostate disease being performed in the United States in those years substantially exceeded the amount that informed men would actually have wanted. In 1992-93, 309,000 operations for benign prostatic hyperplasia were performed among men enrolled in fee-for-service Medicare. The health maintenance organization benchmark predicts that patient demand was less than half the amount supplied — that about 160,000 more procedures were performed on Medicare men than would have been wanted, had shared decision making been the standard of care in those years.

The quality problem of surgery that patients don't really want has another dimension: the misapplication of resources. For example, in 1992-93, Medicare reimbursements for hospital care alone related to surgery for benign prostatic hyperplasia exceeded $1.08 billion. The level of spending predicted by the health maintenance organization benchmark — the amount of surgery patients actually wanted — was $511 million, less than half that amount. More than 1.6 million days of hospitalization were allocated to the care of patients having surgery for benign prostatic hyperplasia; had the health maintenance organization benchmark prevailed throughout the United States, such patients would have used almost 800,000 fewer hospital days.

The health maintenance organization benchmark can be used to estimate the extent of excess use of surgery for benign prostatic hyperplasia by hospital referral regions (Figure 7.6).

Exhibit 3

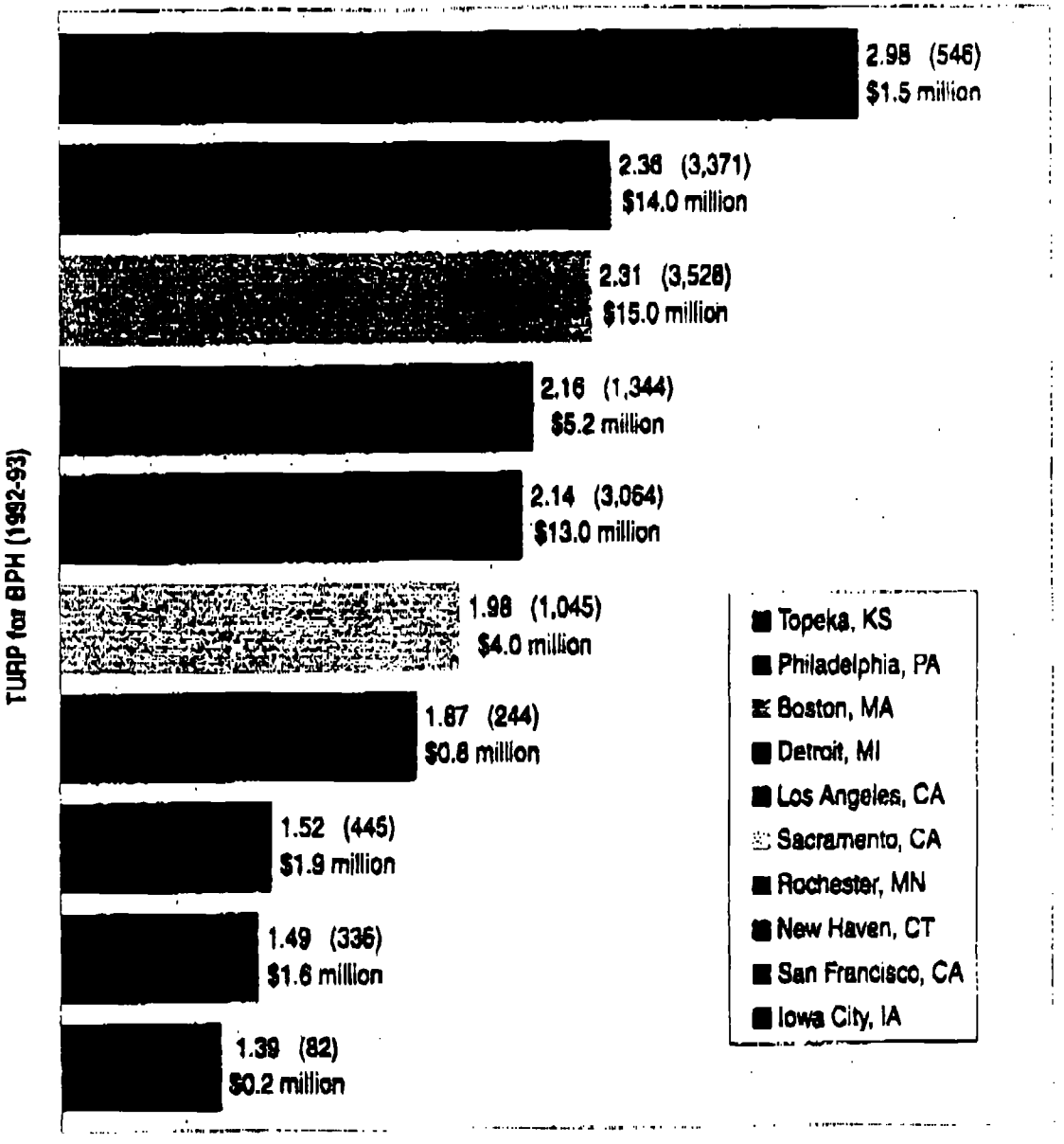


Figure 7.6. Predicted Overuse of Surgery for Benign Prostatic Hyperplasia in Selected Hospital Referral Regions According to a Shared Decision Making Benchmark (1992-93)

The figure gives the ratio of the rate of surgery in the selected hospital referral regions to the rate in two health maintenance organizations after the implementation of shared decision making. It also indicates the numbers of surgical procedures (in parentheses) and the reimbursements for hospitalization in excess of that predicted by the health maintenance organization benchmark. For example, in the Boston hospital referral region, the rate of prostate surgery in 1992-93 exceeded the benchmark rate by a factor of 2.3. If the rate of surgery had been the same as in the benchmark health maintenance organization, 3,371 fewer procedures would have been performed and Medicare reimbursements for inpatient care would have been $15.0 million less.

Exhibit 4

Summing Up: Inefficiency in the Allocation of Medicare Spending

Per capita Medicare spending varies substantially among the nation's hospital referral regions, even after adjustments for differences in regional prices and illness rates, but there is little evidence that greater spending brings better health. In the example of the underuse of services known to be effective (Figure 7.4), more spending does not result in less underservice. In other words, the "cure" for underservice, as demonstrated by the best practice health maintenance organization benchmark, appears to be better management of resources, not more spending. In the case of spending for discretionary surgery, more does not appear to be better: in the case of surgery for benign prostate disease, the amount provided by fee-for-service Medicare exceeds the amount demanded by informed patients (Figure 7.5). In the case of use of hospitals for medical conditions and for treatment of the seriously ill, greater use and greater spending does not appear to improve life expectancy. While populations living in regions with greater supplies of physicians have more visits per capita and greater spending per capita for physician services, more physicians do not assure less underservice (Chapter Four) or the participation of patients in shared decision making.

Improving Quality and Achieving Efficiency

The evidence in this edition of the Dartmouth Atlas confirms the conclusion of the National Roundtable that "serious and widespread quality problems exist throughout American medicine." Some of these problems can be addressed by improving the management of care. This is particularly the case for errors of omission, such as the failure to provide effective care that patients want, including immunizations, mammograms, eye care for diabetics and the timely use of effective drugs for patients who have had heart attacks. But many quality problems require a different focus. Those that derive from poor science require improvement in the quality of clinical science. Those that emerge from inefficiency in medical spending and resource use require improvement in the quality of resource allocation.

Exhibit 4

The Quality of Clinical Science

The evaluative sciences need to be applied in a systematic way to medical innovation, whether it arises from biomedical research or from the efforts of practicing physicians to adopt existing technologies to new purposes. We must assure that medical theory is tested in an orderly way in order to make accurate prognoses and to improve the process of care.

The Quality of Clinical Decision Making

Quality problems that emerge from failure to base the choice of discretionary care on the preferences of the patient require improvement in the quality of clinical decision making. The subtle, often unrecognized influences that physicians have on choices among available treatments is the major cause of variations in the rates of surgery and of many other common interventions. Discretionary interventions involve trade-offs that only patients can make, and to make good decisions patients must have access to up to date, evidence-based assessments of the outcomes that matter to them. Moreover, patients must be encouraged to choose according to their own preferences, particularly in situations where individuals have very different attitudes and preferences.

The Quality of Resource Allocation Decisions

For decades, the health care debate has taken place against the background assumption that more is better; but from the perspective of patients and the welfare of populations, the Atlas provides ample evidence that this assumption is not necessarily true.

Exhibit 4

The Economics of Quality

Improving the quality of clinical science, decision making, and resource allocation is linked to the problem of growth in Medicare spending. A recent study by the Congressional Budget Office projects a rapid increase in the proportion of the gross domestic product invested in medical care, if Medicare's current defined benefit (fee-for-service) program is left unchanged. An increase of this magnitude in total costs of care is widely regarded as politically unsustainable. One proposal for reducing this increase is to move the age of eligibility for the Medicare program to 67 by 2025 and to 70 by 2032. A second proposal is to change the benefit package from the present fee-for-service plan to a defined contribution plan. Under this option, spending per capita would increase 4% per year after the baseline year, 2000.

The Congressional Budget Office has examined the effect of these options on projected increases in the proportion of the gross domestic product allocated to Medicare. Delaying retirement helps a little, reducing spending by 11% in years 2030 and beyond. But the best strategy for reducing the rate of growth is the defined contribution approach, which results in a 38% reduction in the projected increase in proportion of gross domestic product.

The projections are based on average per capita spending — which assumes that average spending is somehow the efficient amount to spend. But the national average has no inherent validity; it is simply the weighted average of all hospital referral regions (Figure 7.7). In 1995, price adjusted Medicare spending for residents of the Miami hospital referral region was $7,955 per enrollee, a rate which if nationalized would be equivalent to about 4.2% of gross domestic product. Spending in the Minneapolis hospital referral region for the fee-for-service defined benefit plan was $3,528, or about 1.9%.

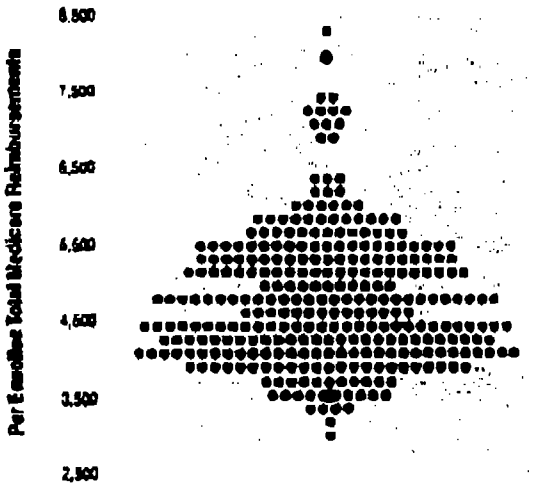


Figure 7.7. Total Medicare Spending per Enrollee (1995)

Per enrollee spending varied from less than $3,000 to more than $8,000. Levels of the Minneapolis and Miami hospital referral regions are indicated in red. Other hospital referral

Exhibit 4

Spending projections are clearly sensitive to the health care market used as a benchmark. When Minneapolis, rather than the national average, is used as a benchmark, projections of the percent of gross domestic product allocated to the defined benefit fee-for-service program are very different. Indeed, if all regions in the United States were to spend at the level of Minneapolis, spending would be lower than the Congressional Budget Office's projection for the defined contribution plan until late in the 2020s (Figure 7.8).

It is important to link the problem of Medicare spending with the issues of improving the quality of care. Much of medical care is not governed by well-articulated medical theory, much less by empirical evidence about the outcomes of care. Although our medical culture is dominated by the assumption that more is better, greater total per capita spending does not buy better outcomes. There is no apparent advantage in terms of life expectancy of spending more on acute hospital care or intensive care, and no relationship between spending and the quality of ambulatory and preventive care.

The implications for the quality debate seem straightforward. We must pay attention to the quality of medical science, making sure that common treatments that now escape systematic evaluation are brought under protocol. Likewise, the quality of clinical decision making should focus on the empowerment of patients to participate in the choice of their own treatments. Finally, we must review the quality of resource allocation decisions.

Exhibit 4

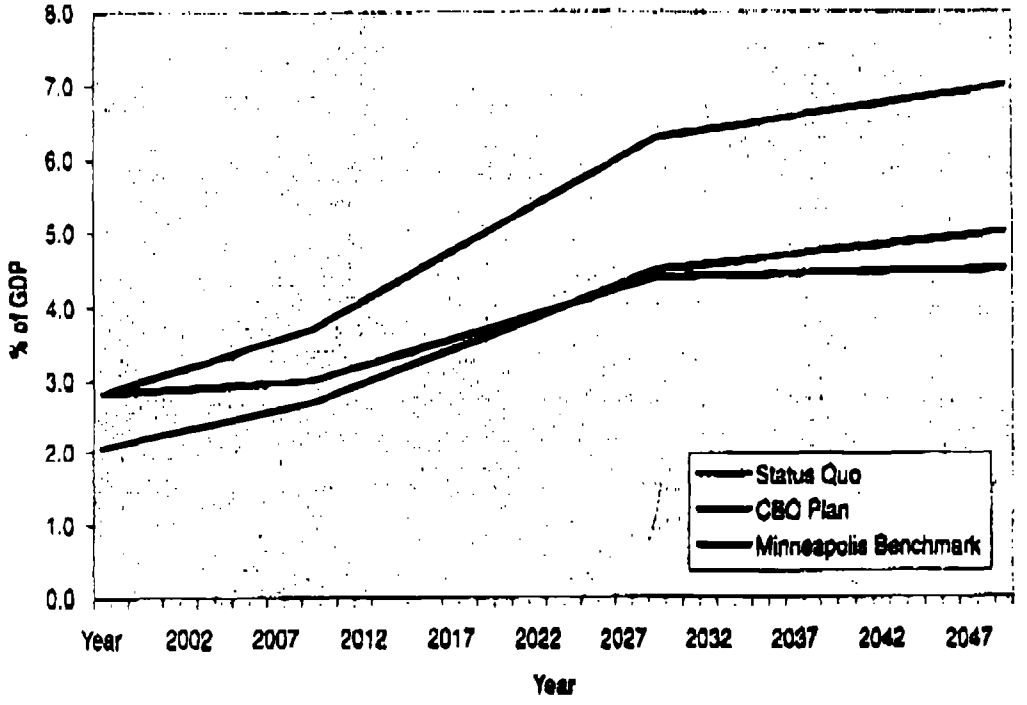


Figure 7.8. Projections of Spending Using Congressional Budget Office Projections for Defined Contribution Plan Spending, and Projections Based on Current per Enrollee Spending in the Minneapolis Hospital Referral Region (1996-2050)

Exhibit 4

Chapter Seven Table

The data in the table provide benchmarks for each hospital referral region. The benchmarks are used to answer the question: If all regions with higher rates were brought down to the rate of the benchmark region, and all regions with rates below the benchmark remained the same, how many excess admissions to ICUs, hospitalizations, specialist visits, etc, would there have been in the United States during the designated year(s)? For example, if in 1996 the suppply of generalists in all regions with more generalists per 100,000 residents than were allocated to the Birmingham, Alabama hospital referral region had been reduced to the level of the Birmingham benchmark, the calculated surplus number of generalists in the United States would be 28,816.

This approach to benchmarking was used in developing the maps and tables in this chapter. The benchmark question can, of course, be framed differently. One strategy poses the obverse question: if all regions with lower rates were brought up to the benchmark (and those with higher rates were left the same), how many additional visits or physicians or admissions would be required? And the benchmark question can also be framed in a another way: If all regions with higher rates were brought down to the benchmark, and those with lower rates were brought up to the benchmark, how many physicians, admissions, or visits would there be in excess (or deficit) of the current supply or rate?

The Dartmouth Atlas Data Viewer makes it possible to calculate, using any of the above strategies, the surpluses or deficits in the resources and utilization of any hospital referral region, including such measures as hospital beds, employees, physicians, surgical procedures, admissions to hospitals and to intensive care units, and the use of preventive and ambulatory care.

HEALTH CARE FINANCING ADMINISTRATION

ADDRESSEE: Deborah Adler **PHONE:** _____	**FROM:** Peter Lachapelle **OFFICE OF THE ADMINISTRATOR** **200 INDEPENDENCE AVE., S.W.** **ROOM 314G** **WASHINGTON, DC 20201** **PHONE: 202-690-6726** **FAX : 202-690-6262**

TOTAL PAGES:	ADDRESSEE'S FAX MACHINE NUMBER:	DATE:

REMARKS:

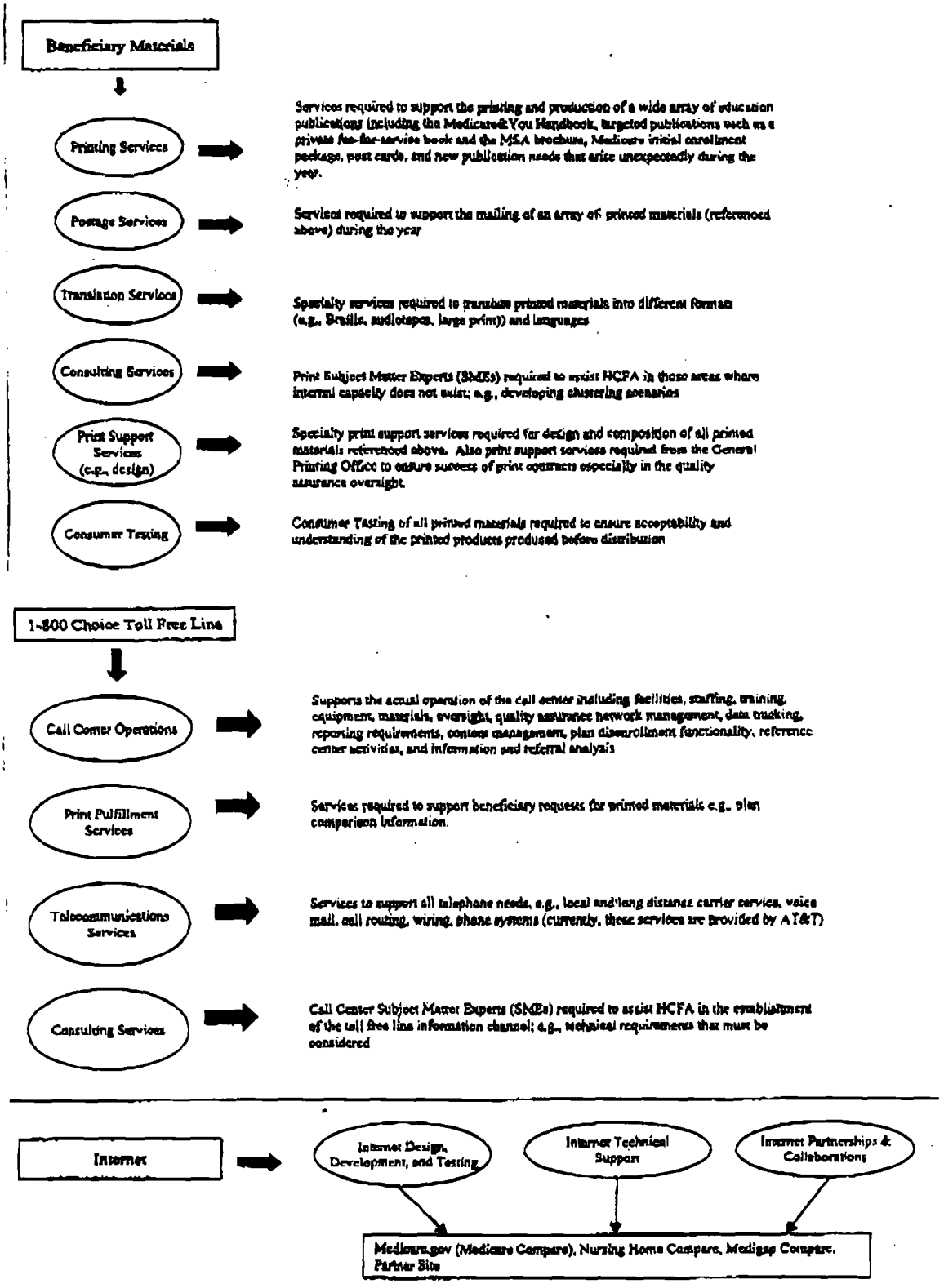
Health Care Financing Administration
Center for Beneficiary Services
Funding Snapshot of FY 1999 Beneficiary Awareness and Education Outreach Activities

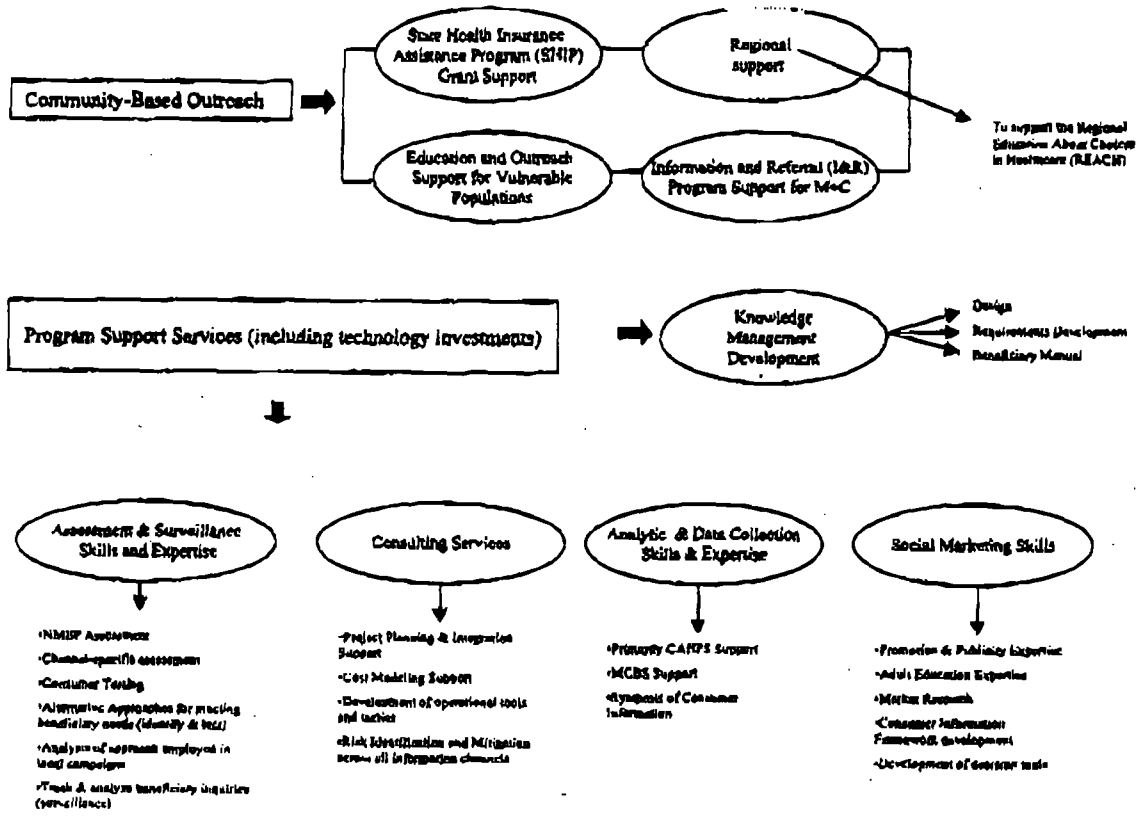
Outreach Topic	Total FY 99 Funding	M+C User Fee Funds	Program Mgt. Funds	PRO Funds	BBA Funds	Admin Funds
Education Program: Beneficiary Materials	$48.1M 1/	$33.9M	$14.2M			
Education Program: Toll Free Line	$26M 1/	$26M				
Education Program: Internet	$4.1M 1/	$3.4M	$600K	$100K		
Education Program: Community-Based Outreach	$26.7M 1/	$15.7M	$11M			
Education Program: Program Support Services	$28.5M 1/	$18.7M	$2.2M	$7.6M		
Grassroots Rights and Protections Outreach Project	$1.3M 2/					
Health Promotion: Prevention Projects	$1.39M 3/			$1.39M		
Health Promotion: Maternal Aids Consumer Information	$218K					$218K
Special Nursing Home Initiatives	$2.6M			$2.6M		
Special QMB/SLMB Outreach Projects	$2.8M		$2.8M			
Health Promotion: Video Production	$1M				$1M	
Special Y2K Beneficiary Outreach	$5.4M (Millenium funding source)					
TOTAL	$148.1M					

1/ Reapportionment request for funding amounts pending OMB approval
2/ Funding Source not yet determined--project pending approval
3/ Specific prevention projects are Bone Mass Measurement, Cervical Cancer Prevention, Colorectal Cancer Screening, Diabetes Self-Education Information, and Prostate Cancer Screening

Explanation of FY 1999 Funding Snapshot

- CBS is buying the following services and products to support the education program (represented by the first 5 lines on the Funding snapshot, entitled Beneficiary Materials, Toll Free Line, Internet, Community-Based Outreach, and Program Support Services--total $133.4M). The purpose of the education program is to *educate Medicare beneficiaries so that they can make informed health decisions and protect them from making these decisions based on inaccurate or misleading information.*





o Following is a brief explanation of the remaining line items represented on the funding snapshot.

+ **Grassroots Rights and Protections Outreach Project--$1.3M**

The purpose of this project is to promote health care quality through the development of culturally competent information infrastructures with the Asian, Native American, Indian and Eskimo population. The objective is to disseminate information to the groups listed above regarding rights and protections under Medicare/Medicaid in the states of Washington, Idaho, and Alaska and the over 85 frail population in order to improve quality of care. It includes the creation of and focus testing of culturally competent handbooks in various languages as a way to empower beneficiaries and developing a grassroots mechanism to reach beneficiaries. Once the infrastructure system is established to carry out this work, HCFA can use this mechanism for other information dissemination.

+ **Health Promotion: Prevention Projects--$1.39M**

Collaborative efforts are underway with other government agencies to support prevention research and campaigns.

Bone Mass Measurement $240K: HCFA will participate with CDC and/or the National Institutes of Health (Intra-agency agreement) on the development of a health promotion strategy around osteoporosis and the use of bone mass measurements.

Cervical Cancer Prevention $400K: To supplement an existing agreement with the National Cancer Institute to refine, disseminate, and evaluate current prevention materials related to

cervical cancer.

Colorectal Cancer Screening $350K: To supplement an existing agreement with CDC and Prevention to continue with the implementation of a campaign to promote colorectal cancer screening.

Diabetes Self-Education Information $300K: Continuation of an intra-agency agreement with the National Institute of Digestive, Diabetes and Kidney Diseases to conduct a national media campaign. This effort will include the implementation of media activities nd the development and dissemination of educational materials on diabetes-related Medicare benefits to beneficiaries and the health care providers who treat them.

Prostate Cancer Screening $100K: This involves an intra-agency with CDC and Prevention to perform formative research for launching a health promotions effort focused on the benefit of screening for prostate cancer.

+ **Maternal Aids Consumer Information--$218K**

A HIV/AID video will be developed to focus on pregnant women and women of childbearing age. The video will focus on the importance of HIV counseling and testing and the significant reduction of HIV transmission from mother to child when there is early detection, viral load testing, "C" section versus normal birth and prophylaxis usage. These efforts aim to prevent fewer HIV infections among newborns, reduce related infant mortality, improve the quality of life for families and reduce expenditures for HIV-infected newborns.

+ **Nursing Home Initiatives--$2.6M**

HCFA has embarked on a campaign of "Assuring Quality for America's nursing home residents" by focusing its attention on the detection and prevention of neglect and abuse. The integrated components of the campaign fall under the rubric of Enforcement (assures quality), Education (understands quality), and Empowerment (demands quality). The goal is to support the development of a system that will foster quality in nursing homes where residents can live in a safe, clean and home-like environment. Products developed and services purchased include: interactive database for nursing home compare information; social marketing support; printing and dissemination of publications; campaign materials; poster programs; training programs; interactive training CDs; consumer testing, and collaborations with others such as the Administration on Aging.

+ **QMB/SLMB Outreach Projects--$2.8M**

In partnership with the Center for Medicaid and State Operations, CBS will conduct outreach activities relative to Medicare beneficiaries who are dually eligible for Medicaid benefits. HCFA will develop relationships with other federal and private entities to conduct model ombudsman projects; produce a counselor training module on QMB/SLMB; establish, evaluate and promote best practices which have resulted in higher QMB/SLMB/QI enrollment; develop outreach kits, refresh current brochures, develop CD-ROMs in both English and Spanish; conduct frail and vulnerable pilots; develop and disseminate outreach strategies for low-income Asian American and Pacific Islander, Native American Indian and Native Alaskan populations; and conduct promotion and publicity

efforts around this topic.

+ **Health Promotion--Video Production--$1M**

A contract is being procured for video production and professional and technical support. Specifically, special use videos will be created such as video news releases, training programs, health fair promotions, special event use, interactive computer programming, and other identified and targeted needs. The skills and services to be purchased fall into five distinct categories: video production; distribution; promotion; monitoring; and quality assurance.

+ **Y2K Beneficiary Outreach--$5.4M**

HCFA has launched a Y2K Beneficiary and General Public Communications Plan. The primary objective is to provide accurate, reliable information to beneficiaries about Y2K and to assure them that HCFA will be ready; that their benefits are safe, that necessary health care services will be available, and that their health care bills will be paid. Many outeach strategies will be employed including teaming arrangements with other agencies; e.g., SSA; news media; additions to extant HCFA communications vehicles (such as publications, toll free lines); use of external publications; Internet; partner mechanisms, and State activities.

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Health care access, health promotion, and older women of color
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ABSTRACT: Yee and Capitman discuss the longevity advantage of women and its implications for economic insecurity, underinsurance of health care, health status, functional disability, access to care and service use. A discussion is offered of the challenges and opportunities presented as health care reform and the devolution of federal roles continue to unfold.
TEXT:

Headnote: Abstract: The U.S population is becoming increasingly older due to steady increases in longevity, especially among women. Statistics show that older women, those 65 and over, outnumber older men by three to two. It is likely that as this trend in longevity continues, older women will continue to outnumber older men. The health care system must respond to these changes in the population by incorporating appropriate modifications into every aspect of the system, including financing mechanisms, service organization and delivery, consumer-centered care approaches,

Headnote: quality assurance mechanisms, and health promotion efforts. This article discusses the longevity advantage of women (particularly women of color) and its implications for economic insecurity, underinsurance of health care, health status, functional disability, access to care, and service use. The article concludes with a discussion of the challenges and opportunities presented as health care reform and the devolution of federal roles continue to unfold.

Headnote: Key words: Aging, race, ethnicity, gender, health care access, health promotion

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Three demographic trends affect both health care access for older persons in this country and the formation of health policy: (a) the cultural diversity of elders, (b) the number of women elders, and (c) steady increases in longevity accompanied by increased disability and comorbid chronic conditions that lead to long-term care needs.1,2 The 20th century stands out as an era when a majority of the U.S. population

matured. Increases in the average age of Americans has been accompanied by rapid growth within communities of African Americans, Latinos, Asian/Pacific Islanders, Native Americans, and other persons of color.* As the civil rights generation approaches a new century, America will be anything but monocultural and monolingual.

The 65 and over age group continues to grow faster than other age groups, with an increasing number of elders surviving to age 85 and older. Among elders there is a female majority. Women aged 65 and over are a heterogeneous group of survivors, born between the turn of the century and the depression. Older women outnumber older men by three to two. Among the oldest old (those 85 years and older) women outnumber men by three to one. It is likely that as longevity increases, older women will continue to outnumber older men.3,4 Elders are surviving accidents and diseases that would have been fatal only a few decades ago. Many, however, are living their extended years with specific health care needs due to chronic illness and physical disability.4,5

Women experience old age differently than men. Women aged 65 and over are likely to live their later years alone with substantially lower incomes, more vulnerability to poverty and more chronic health conditions and disability compared with men in the same age group.6,7,8 Fewer financial resources for needed health care and the diminished availability of informal (family) care resources to assist with personal health, self-care, and health service access also result in poorer health and greater functional limitations.3,9 This article discusses women's longevity advantage and its impact on economic insecurity, underinsurance for health care, health status and functional disability, and access to care and service use, particularly for women of color. It concludes with a discussion of the challenges and opportunities presented as health care reform and the devolution of federal roles in health and social services continue to unfold.

Is longevity an advantage?

On average, a woman at age 65 can expect to live 18 more years compared with a man's expected 14 more years of life. Females have greater life expectancy at every year past age 65 compared with men. White elders live longer than elders of color, and white women live longer than white men and all elders of color. Among the factors contributing to a gender gap in life expectancy are a higher incidence of fatal disease for men, which is often linked to occupational and social roles, less healthy lifestyles and health-seeking behavior, and high-risk or violence-related behavior. Although life expectancy is often used as an indicator of "life quality," there is much data to suggest that longevity also represents women's exposure earlier in life to fewer favorable chances that support life quality in old age.5,10

Studies of factors that contribute to older women's challenges in maintaining their health and independence, such as living arrangements,

economic security health status, and health care access, lend support to suggestions that women's longevity advantage is not necessarily the best measure of health or quality of life.6,11-17 Women also enter old age with different personal and social resources that are the result of life chances. Most older women live out their lives as widows or single women, alone or in the homes of others, and in poverty or economic insecurity and at risk for becoming poor.3,18,19Studies show that living with others appears to insulate individuals from illness. Living alone and being poor are risk factors for poor health regardless of gender and race, and they exacerbate health-related needs for care.20

Risk factors for poor health. Low income and poverty interact with nutrition, stress, occupational risk, and neighborhood safety in ways that define one's relationship to the health care system and determine whether health care needs will be met.10,21,22 Income, assets, and health insurance are the primary economic resources that elders rely on to meet their acute health care needs. For older women, especially women of color and the oldest old, policies that rely on a combination of these resources are not a viable solution for preventing disease or promoting health. For those with low incomes, out of pocket expenses can create hardships that result in postponing care or not seeking care at all.23,24

Women bear a disproportionate burden of poverty and poor health in old age compared with men. The poverty rate for older white females is about 12 percent compared with almost 7 percent for white males. For older women living alone, 25 percent of whites and 63 percent of African Americans live below the poverty line.25 African American and Hispanic women also have lower median incomes than their white counterparts. Compared with white women, a larger proportion of African American and Hispanic women receive public assistance. Among unmarried women aged 65 and over, as many as 33 percent of African American and 35 percent of Hispanic women are on public assistance, compared with only 8 percent of white women. In the last decade, at least 60 percent of African American women lived alone and in poverty.18

Generally, those who are poor and live alone are also in worse health than those with greater financial resources or those who live with a spouse or their children. Social security is the most important source of income for persons over 65, especially for unmarried women, persons of color, and nonprofessional retirees. It provides 80 percent of their income. Supplemental Security Income (SSI) supplies only 14 percent of income for poor elders. In 1988, 31 percent of African American unmarried women aged 65 and older were on SSI, although 45 percent of unmarried African American women were eligible.18,26

Underinsured health care. Medicare is a health insurance program that pays most hospital bills and some doctor bills for almost all persons 65 and over. Despite almost universal coverage for persons 65 and over, many women face serious financial burdens in meeting their health care expenses.

Medicare is for many an essential but inadequate protection against health care expenses. Although some elders have access to multiple resources for hospital care costs, Medicare is the first resource available to 95 percent of elders 65 and over. Yet it only covers some costs for hospital or outpatient care. Lack of coverage for prescription drugs, eyeglasses, and other services, coupled with Medicare deductibles and Medicare Part B premiums, make the purchase of additional private health insurance (i.e., medigap policies) prudent for those desiring to minimize the risk of spending large amounts of savings, pensions, or social security income on uncovered care and required cost-sharing. The escalating cost of private medigap policies, however, make it increasingly difficult for elders to afford monthly premiums.21,24

While 96 percent of all elders 65 and over are enrolled in Medicare, only 83 percent of Hispanic elders are covered. Among those covered, only 21 percent of Hispanics compared with 69 percent of all elders purchase private insurance policies.27 Twenty percent of those 65 and over rely solely on Medicare for assistance with their medical bills. They have neither Medicaid nor private insurance and pay for all Medicare cost-sharing and medical services not covered by Medicare. Almost half of those with no supplemental insurance have low incomes; 22 percent are poor and as many are near poor (i.e., their income is within 130 percent of the poverty line). Only 42 percent of poor elders have private insurance in contrast to over 72 percent of all elders. Among poor elders, only 29 percent are covered by Medicaid. Lack of Medicaid coverage for the full population in poverty, coupled with variations in state Medicaid programs leave over two-thirds of the poor without the safety net supposedly provided by national health policy over the last 30 years.23

Older women are somewhat less likely than older men to have insurance to supplement Medicare and are more likely to have Medicaid than older men. Because older men are generally more affluent and more likely to have job-related health coverage than older women, they are also more likely to have private health insurance as part of their pension benefits. Persons of color are the least likely to have private health insurance and are twice as likely as older whites to have only Medicare without supplemental insurance. Only 39 percent of elders of color have private insurance to supplement their Medicare, compared with more than three-fourths of white elders who have such coverage.28,29 Underinsurance, for poor and low-income elders, particularly the oldest old and women of color, continues to be a key factor in the accessibility and use of health care services.

Health status and functional disability

Gender and race differences in health status and functional impairment suggest that the benefits of medical and technological breakthroughs in the last several decades are not equally enjoyed among elders.2,14,22,30-33 It is unclear whether this is because they do not have adequate access to care (including not being offered new treatment modalities) or because the

breakthroughs do not substantially treat the kinds of chronic conditions common in older women. Differences in rates of mortality, morbidity, and disability between groups persist. Women, compared with men, have higher prevalence rates for many chronic conditions, experience more co-occurrences of multiple chronic conditions, and experience more short- and long-term disability due to health problems. Older women may be in poorer health than men because they are troubled by daily symptoms (acute and chronic) and report more difficulty performing social, physical, and mobility activities.11 The proportion of women with two or more of nine chronic conditions (arthritis, hypertension, cataracts, heart disease, varicose veins, diabetes, cancer, osteoporosis, and stroke) is higher than the proportion of men with two or more conditions.2,5,8,11,30

Elders of color experience higher morbidity and mortality due to three major causes of death: heart disease, cancer, and stroke. Native American, Latino, and African American elders have a higher incidence than white elders of cardiovascular disease, diabetes, hypertension, asthma, and stroke.31,32,34-36 For some cancers, such as lung and prostate cancer, the age-adjusted death rates are greater for African American males than for white males. In 1989, lung cancer and prostate cancer deaths were twice as great for African American men as for white men. Although the prevalence of breast cancer among white women is greater than among African Americans, the age-adjusted death rate for African American women was 14 percent higher than for white women.34,37 Between 1980 and 1987, breast cancer mortality rates for African American women were twice as high as those for white women and for this eight-year period mortality rates increased with age for both African American and white women.38 Studies have also shown that even when insurance is controlled as a factor in getting care for breast cancer, African American women have worse outcomes due both to over-treatment and undertreatment.33,39 Stroke rates declined for white males by 58 percent between 1980 and 1989; however, in 1989 the age-adjusted death rate for African Americans of both sexes remained almost twice as high as for white women and men.

Data are somewhat inconsistent or unavailable for some groups, particularly Native American and Asian/Pacific Islanders. Most analysts, however, conclude that women of color have a disproportionate share of illness and that gender disparities in health status are widespread across all ethnic groups. Available health indices and data show that women of color generally experience greater prevalence of chronic diseases such as diabetes, hypertension, cardiovascular disease and certain types of cancer, and lower life expectancy than their white counterparts.34 Such general trends, however, belie the importance of identifying and understanding bimodal trends within populations. For example, first-generation Chinese elders who have lived in the U.S. since the 1920s may have different health risks than first-generation Vietnamese elders who arrived in the U.S. in 1968. Collecting data on Asian/Pacific Islanders as a group (when done at

all) leads to expectations that all Asian/Pacific Islander elders are alike. Such information can have negative consequences in planning and launching health promotion and screening activities as well as diagnostic and treatment protocols, and can lead to inaccurate measures of community health and treatment outcomes. Data aggregation and a lack of data across and within diverse groups of elders in this country are not only unhelpful and misleading,6,40,41 they can lead to inadequately targeted interventions.

Functional disability. Death rates and rates of chronic disease are only part of the story on differences in heath status between older men and women. Physical and functional impairment generally increase for men and women with advancing age. These impairments are often accompanied by frequent illness and hospitalization, in part because they occur secondary to sustained inactivity and general weakness. For elders this often means, in the short term, that help is needed following hospital discharge or prolonged bed stays as much to increase strength, agility, and endurance, as to continue treatment regimes linked with the specific illness episode. In the long term, older persons with chronic illnesses and disabling conditions often require continued assistance with personal care, a type of help often provided by family and friends. Over 90 percent of the cost of short and long-term assistance is borne by elders and their caregivers who are themselves female and often over 65 years of age. When informal caregivers are unavailable, though, such care is often not affordable or difficult to arrange. As a result, many elders go without assistance and take the risk of complicating existing health conditions.3,19,42 It has been reported that over five million ill and disabled older persons, mostly women, live in communities throughout the United States and require some help with personal assistance and everyday activities. Those needing assistance were, for the most part, younger than their counterparts in nursing homes.43,44

Women are slightly more likely to have disabilities at each age level than men, and elders of color have disability rates that are consistently higher at every age. A significantly higher proportion of African American, Latino, and Native American elders have difficulty with "basic activities of daily living" that include getting in and out of bed, bathing, getting to the bathroom, and eating, as well as "instrumental activities of daily living" such as meal preparation, household maintenance, getting around outside, and money management.45-50

Karon and Capitman,51 using 1984 data from the Survey of Income and Program Participation (SIPP) conducted by the U.S. Bureau of the Census, found that for both men and women between ages 65 and 69, nearly ten percent of the white population had disabilities. African American and Native American elders reached and exceeded that disability rate at a much younger age, and Asian/Pacific elders of that age had a lower disability rate. By age 70, however, all groups of elders of color exceeded the

prevalence of disability found among whites. By contrast, for women, prevalence of disability is lower for whites than for African Americans at all ages and for all women of color groups after age 40. Those with disabilities had lower incomes than those without; persons of color between the ages of 50 and 65 with disabilities were particularly at risk because of low income. Among women of color, the rate of disability was greatest in this age group (i.e., 50-65). Gender and race differences in patterns of disability and chronic disease have profound implications for health care. A central challenge is to prevent or postpone disability while sustaining efforts to care for those who are already disabled.52,53

Data indicate that patterns of acute and long-term care service use may be influenced by provider behavior and practice patterns. Access and service use evidence suggest that the primary barriers to health service use are cost, cultural barriers, convenience, and availability. Once elders enter the health care system, the factors that influence provider practice and patient outcomes have been linked to provider attitude and behavior as well as the financing, organization, and service delivery.51,54-61 Equally important are patient or consumer health beliefs and practices, as well as their beliefs about the meaning of old age and aging. These factors can interact with provider bias and attitudes to create additional utilization barriers.36,62-67

Health care access and service use

It is well documented that medical services can slow the disease process and improve the quality of life.22,68 Improved medical services and disease prevention efforts have been one of the major contributors to improved longevity in the United States. Yet older women, elders of color, and the oldest old-who are most in need-often find themselves the least able to afford these services. They may not know, understand, or be encouraged to participate in programs and take actions designed to promote health and well-being and mediate daily problems associated with the chronic conditions.21,69 This challenge is made more difficult in many communities by the inadequate supply of providers willing to treat older women of color and to adequately care for their health needs.

Data describing patterns of health service use (physician, hospital, and preventive care) and physician behavior and practice patterns provide evidence that service utilization is associated with gender and race/ethnicity There is persistent underuse of health services by persons of color despite higher rates of illness and disability. Although comparable data on service use patterns between all groups of women of color are not available, evidence suggests that there are differences by gender in the use of physician and hospital, in-home, nursing home, and preventive services.56,57,70,71

Physician and hospital services. Older women tend to have more physician visits per year than older men. White men tend to use hospital services more than white women, but when white women use hospitals the

length of stay is longer and they are more frequently discharged to the care of an adult child.10,72There are also data to suggest racial differences in the use of hospital services. When compared with white elders, women of color are more likely to get hospital services and to have a lower number of physician visits in a given year. Low-income older African Americans and Hispanics in poor health had fewer physician contacts, fewer short-stay hospital discharges, but more serious acute conditions than did whites.37 Available information suggests that African American and Hispanic women are more likely to get regular sources of care from hospital outpatient units, emergency rooms, and neighborhood health centers than from private physicians.73

Preventive care. Participation by elders in early detection and health screening programs and appropriate follow-up care and health promotion activities can result in a significant reduction in morbidity and possibly prevent or postpone functional disability.7,52,74The literature on health promotion and disease prevention suggests that education, awareness, and health screening programs to detect risk factors for chronic diseases have not met with much success in poor and rural communities and communities of color or among older women. Hispanic and African American women are less likely to use preventive services such as pap smears, blood pressure checks, mammography, and routine eye examinations than white women." One reason may be their inability to pay for preventive care and treatment, even when both are needed.24,79

Another reason for underuse of preventive services and screening may be program design, marketing, and service approaches. Participation rates in prevention and screening programs rarely meet the expectations of providers, and the prevalence of the risk factors associated with chronic disease among underserved populations remain constant. Factors affecting access and acceptability that may impede care are largely ignored, particularly for older women of color. There is evidence that elders, particularly older women, are not treated the same as younger patients. Health care professionals may not discuss the advantages of risk factors and lifestyle change with older patients and elders of color, and referrals to educational activities may not be made.80-83

Health promotion and screening programs that have been most effective in poor and communities of color are those that (a) have gained the support of the target group; (b) are offered in cooperation with acknowledged and familiar trusted community members and institutions; (c) are offered, when appropriate, in nontraditional settings; and (d) take into account the attitudes, values, cultural norms and language of the target population.27,68,77,84-91

Provider practices and treatment bias. Provided they seek help and can access a physician who is willing to provide care, elders who enter the treatment process may find that the quality of care they receive and the way care is provided are influenced by their gender and race/ethnicity. One

explanation for differences in physician utilization patterns between men and women, and between women from communities of color and white women, focuses on attitudes and behaviors of physicians and other health care providers. Wingard suggests that physicians diagnose and treat women differently than men. For example, women are seen as hypochondriacal. As a result, women receive less thorough diagnostic work-ups and receive more unnecessary and sometimes inappropriate follow-up care.16

Many medical professionals still regard the complaints of older women as emotional outbursts rather than potential indicators of physical disease. Providers may be influenced by gender stereotypes and thus miss an opportunity to alleviate the pain brought on by a chronic condition or overlook reversible elements of the patient's condition. Male physicians may not be receptive to particular needs of older women to have rapport with their doctors, to report health problems expressively, and to participate in decisionmaking. While research is limited and inconclusive on this issue, the American Medical Association's Council on Ethical and Judicial Affairs92,93 issued directives charging physicians to examine their practices and attitudes and directing physicians to be sure that gender is not used inappropriately as a consideration in clinical decision making. In the same vein, neither should physicians treat women exactly like men. Much medical knowledge about disease etiology and treatment is based on male subjects in clinical trials. Due to potential fetal and pregnancy risks that research sponsors seek to avoid, for example, women are frequently systematically excluded from studies that test treatment efficacy. Women's perspectives and experiences are largely absent from much of medicine's knowledge base, and it is generally assumed that findings of studies on men can be generally applied to women.94-97

The literature on physician attitudes and behavior toward persons with low incomes and persons of color more clearly demonstrates treatment differences. Race, age, and gender stereotypes have been found to affect physician abilities to diagnose and provide appropriate care. Research consistently shows that less information from physicians about conditions, positive lifestyle changes that could improve or modify conditions, and less communication overall is provided to low-income patients and persons of color than those with higher incomes.75,98,99 This is a particularly critical problem for older women of color and those who do not speak English as their primary language.100 Physicians and health care professionals frequently know and understand little about their patient's living situation, health beliefs, and attitudes toward illness. How care is provided, information is communicated, and treatment plans are developed and understood by both the provider and patient is critical.59 The patient's health beliefs and views on the salience of treatment must be recognized and incorporated into treatment and care plans.48,58,62,63,65,67,87,101-103

Physicians' social class is also known to foster inappropriate

judgment. Patterns of behavior and communications may be more similar for patients who are male and white, that is, when patients are more like the practitioner 104 The interpretation of symptoms may depend on patients' communication style. Physicians often ascribe emotional causes to symptoms reported by patients who have an expressive style.105 There is also evidence that clinical decisions are being made based on patients' age, income, race/ethnicity, and gender. For example, Greenfield and colleagues found that older women with breast cancer often get less treatment because of their age. In an analysis of 374 breast cancer cases, both patient age and comorbidity status significantly and independently affected treatment. It was concluded that physicians may manage patients with highly treatable disease according to chronological age without regard for physiological condition and that this age bias may result in a less favorable prognosis than could be achieved using currently recommended therapy.39

The Centers for Disease Control and Prevention reports that the survival rates of African American women with cervical cancer are much lower than of white women, even though they have Pap smears31-raising questions about appropriate follow-up and treatment. Similar evidence documenting less aggressive management approaches for coronary disease in women than in men by physicians, despite greater cardiac disability in women, was documented by Steingart and colleagues.106 Ayanian and Epstein95 report findings demonstrating that women who are hospitalized for coronary heart disease undergo fewer major diagnostic and therapeutic procedures than men. Similarly, it has been found that coronary care unit admissions are often restricted for older patients.107* Goldberg and colleagues108 studied the difference in rates of coronary artery bypass grafting between white and African American male and female Medicare patients and found that sex and race were associated with rates of bypass surgery Fleming and colleagues" studied patients 75 years or older with acute myocardial infarction. The findings suggest that physicians may intentionally restrict access to coronary care for older patients. These examples provide further evidence that women, elders, and persons of color are disadvantaged because of gender, age, and race and point to an inadequate attention to diagnosis and treatment of their health care problems.

Institutional reviews are in place to oversee provider practice patterns and to assure that outcomes with regard to efficacy are within professional norms. Patterns of care that present barriers to diagnosis or treatment differ from policies to ration access to care. While some may favor chronological age as a criteria for access to procedures, neither public policy nor standards of professional practice limit access criteria to age. The effects of race/ethnicity, gender, and age on decisions about kidney transplantation, cardiac bypass, or chemotherapy, for example, have not been established by public policy or professional practice standards as primary criteria for access to care. If a study suggests that these factors explain differences in access to procedures, questions should be raised

with regard to the adequacy of oversight functions that assure equity and fairness.

Institutional long-term care service use. No national studies on long-term care use systematically examine Native American and Asian/Pacific Islander use of nursing homes.51 Existing studies, however, consistently predict nursing home use for the general population. White females who are older, without an informal support network, greater functional impairment, and deteriorating cognitive function have the highest likelihood of admission.109,110 The literature also indicates that (a) three out of every four nursing home residents is a woman who is likely to be white. Women are also more likely than men to be transferred to a nursing home than home when discharged from the hospital; 10 (b) women nursing home residents appear to be older, have more functional and cognitive impairment, and are less likely to be married or have children than their male counterparts; 109 (c) African American, Latino, and Asian/Pacific Islander elders are less likely to use nursing homes than white elders; 110-115 and (d) lower rates of nursing home use among African Americans are sustained even after controlling for differences in health status, demographic, and informal support factors.51

Commonly accepted are the ideas that elders of color are and prefer to be cared for by family caregivers and are thus not placed in institutions; and provider practices, including racism, may result in failure to place elders of color with disabilities in nursing homes when such care is appropriate and needed. These ideas, though, have not been adequately tested in the literature.51 Successful efforts at the community and state level to redirect long-term care dollars (i.e., Medicaid) away from care in institutional settings toward community-based settings also contribute to difficulties in developing models to test these ideas, particularly when elders of color are disproportionately represented among poor/low income and community-dwelling elders in a community

Community long-term care use. When asked, most elders prefer to live in noninstitutional community settings. Despite hardships experienced in getting and affording care, most prefer independence to living in an institution. Ideally, home- and community-based long-term care services (HCBS) should be organized in a way that helps elders (with the assistance of family caregivers) remain as independent as possible for as long as possible. HCBS, however, is not universally available to those who have the greatest need. The mechanisms and capabilities of states and local governments to manage long-term care systems show great and increasing variability, particularly in large urban and rural communities.1,72,116 It is estimated that for every elder with disabilities who resides in a nursing home, two or more equally impaired elders live in the community43 Even with evidence of (a) greater prevalence of chronic conditions requiring long-term care, (b) higher likelihood of low-income and poverty and (c) lower nursing home and HCBS use by gender and race/ethnicity,

explanations for these patterns of lower access and service use for elders of color, especially women, remain inconclusive and problematic. Data, for example, do not distinguish between home health care services and personal home care. There is no quantitative data on home care use and the determinants of service use for groups other than whites and African Americans.51

Karon and Capitman,51 using 1984 data from the Longitudinal Survey on Aging, explored the relationship between use of paid formal care services and informal care assistance by disabled elders. The purpose of the study was to investigate whether or not gender and race/ethnicity affect informal care arrangements and affect the probability of using paid health and home care assistance. They found that using home health services and paid assistance with household and personal care tasks was contingent upon medical and functional status, presence of informal support, consumer's financial resources, and race and gender. The analysis suggested that women's informal supports do not reduce use of formal services, and formal services are used by African Americans and other persons of color only at a most extreme level of need.

Few states use or collect data on race/ethnicity participation in HCBS waiver or state-funded home care programs that aim to improve access among those who are seeking and have been determined eligible for care. As more is known about ways to promote adequate care and foster ongoing improvement in the delivery of HCBS (including adult day care, transportation assistance, and assisted living), the identification of race/ethnicity and gender effects will be of critical importance in measuring program and practitioner effectiveness and outcomes for all elders.53,117

Other issues. The preceding sections highlight the role of individual behaviors of patients and practitioners associated with health access and service use. Structural inequities in Medicare and Medicaid that act as access barriers for older women are also outlined. Structural factors include the availability, type, and organization of needed services. Barriers to service access and use, including opportunities to prevent disease and promote health occur at interpersonal and institutional levels. Institutional racism, sexism, and ageism are factors that have been noted as contributing to the underutilization of health service by elders of color.58,84,116,118,119

The absence of staff who are themselves from communities targeted for service delivery, including an absence of multilingual capacity and multicultural perspectives at administrative and management levels, affect efforts to promote and sustain the delivery of appropriate services and use of responsive service delivery approaches. Studies indicate that multiethnic staff can significantly increase access and service use of elders of color.120,121, Organizations that disregard the importance of responding to multicultural and multilingual needs of consumers by failing to develop a workforce with appropriate skills perpetuate barriers to

accessible care and discount the importance of developing appropriate service delivery approaches. Nonaction at the institutional or organizational level reinforces individual provider behavior that may lead to postponement of treatment and/or inappropriate service use by elders of color.722

American society continues to grey and become increasingly female and ethnically diverse with greater chronic care needs. A health and long-term care system designed for the treatment of acute illness that is also inflexible in its responsiveness to culture and gender will fail in its effort to restrain health costs and make health care delivery more rational, affordable, and effective.

Challenges and opportunities for reform

This article provides a broad overview of several issues known to affect health care access and to promote health among diverse groups of elders, particularly women and the oldest old. The longevity advantage for women has come to mean greater rates of morbidity and disability and increased risk of less and inadequate access to care. Underinsurance and economic insecurity for older women is broadly associated with systemic mismatches between an increasing diversity of elders and provider/service delivery policies that promote color-blind, gender-blind treatment decisions, indicating the need to identify and take actions to assure that older women of color benefit from health care reform, rather than become further disadvantaged. Such actions need to be systematic and multifaceted. They need to address (a) how health care benefits are financed and packaged, (b) how services are organized and delivered, and (c) the empowerment of older women to obtain quality care.

These are not new issues. In the midst of radical local and federal health care reform in the private and public sectors, redoubled efforts are needed to seek and take opportunities that will improve health status and health care access for older women and reduce the extent to which their needs and concerns are marginalized. Consumers, administrators, providers, and policymakers may be too easily distracted from this priority as reforms present trade-off strategies that pit the needs of employed childbearing women against retired women or that pose a choice between treating older women with chronic illness and disability and children or employed adults.

Financing and packaging benefits. The struggle to implement national and local health care system reforms that aggressively balance public and private dollars to control all health care expenditures, particularly for the poor and old, continues to rage as we enter the 21st century. New financing and insurance strategies, such as managed care plans, can underinsure those with chronic conditions by, for example, too narrowly defining prescription drug, laboratory, or home care benefits.

Managed care organizations may have track records that show efficient care for relatively healthy groups of salaried employees and their young families, but these successes may belie a paucity of experience and

know-how needed to manage the care of chronically ill older women, including persons of color. Health care financing and reimbursement approaches that do not recognize the differing life experiences of women and elders of color, such as how their wage-based employment years and hence their retirement years might contribute to poorer health and under- rather than overutilization of care, may not adequately incorporate health education, chronic care interventions, and flexible care management approaches or assure that such benefits are affordable.123 As a result, reformed health care may only reinvent the ways in which indemnity health insurance programs hamper access to appropriate and timely care.

Service delivery organization and approaches. A continued absence of linkage and continuity between acute and long-term care can also precipitate a care system that goes from bad to worse for older women of color. Costcontainment measures that encourage fewer hospital days, transfers to less costly institutions, or discharge to community settings with few providers and inadequate home and community-based services will adversely affect the health and functioning of all elders and persons with disabilities. Managed care strategies that integrate primary care, acute care, and long-term care and incorporate explicit linkages to a range of social and supportive services have been developed and touted, but not adequately evaluated.124 Just as attention is needed to manage costs and create accessible, user-friendly insurance plans, service delivery models need to incorporate strategies that address the needs of the oldest old and the most frail. For example, creative ways to respond to nursing and medical care needs may be developed by the next century that focus less on the location of care delivery and more on getting care to elders where they are-at home, in day care centers, and in clinics at congregate housing or assisted living facilities, as well as inpatient settings. Rigid delivery approaches in which an older female patient with disabilities is required to arrange for transportation to her physician's office only to wait an hour for a 10-minute office visit in which the physician merely reviews an office nurse's notes, asks about any new complaints, and tells the patient what treatment or tests he or she is ordering for the patient, may need to be foregone as a modal delivery approach in outpatient medicine. As the number of patients who need medical management of chronic conditions increases, today's alternative and creative approaches, including multidisciplinary team care management, may become tomorrow's new standard for care. Evaluation efforts, however, will be needed to test the efficacy and effectiveness of such approaches, and the extent to which race/ethnicity, gender, age, and related factors point to approaches that are more responsive to the needs of older women of color.

Consumer empowerment to promote quality. Responding to diversity is an essential component of (a) how and whether consumers experience care they receive as adequate and satisfactory and (b) how providers identify and implement efforts to improve their effectiveness and efficiency. From this

perspective, health care systems should incorporate continuous improvements in the quality of care by assessing patient satisfaction with care and outcomes and movement toward patient-centered care.125

While many research demonstrations target the poor (e.g., Medicaid eligible persons), they rarely develop sufficient strategies to explicitly define and reach elders as a heterogeneous group of consumers. Few Medicaid home and community-based services programs have assessed how the diversity of program participants (compared with the overall Medicaid population) affects service use, participation in care plan choices (among various HCBS and nursing home care), and outcomes (care as well as cost). The addition of contract language to promote strategies that reach specific subgroups of consumers may have a major impact on improving health care access, changing service-use patterns, improving health outcomes, and controlling long-term expenditures for health care.

Conclusion

For older women of color, information that assists them in making fair comparisons between health insurance and managed care plan costs and benefits is essential to engendering informed choices and to empowering older women of color to "vote with their feet." State insurance commissioners and health care advocates need to develop educational programs for consumers in the context of age, race/ethnicity, and gender diversity. Poor and weak efforts fail to provide impartial consumer protections in a volatile and reforming health care marketplace and can exacerbate historic inequities in health care access and health outcomes.

Responsiveness to issues of diversity in the United States should neither be "add-on" nor even "value-added" considerations to improve market share. Issues of diversity need to be incorporated in each building block of a health system infrastructure, including consumers, workers, policy makers, program administrators, and governing bodies. Those implementing health care reform need to incorporate diversity issues, not as an afterthought, but as a demonstrated commitment to improving health care access and availability for the underserved, particularly for older women of color.

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Footnote: * In this discussion, "women of color" is used to refer to African American/black, Latino/ Hispanic, Asian American/Pacific Islander, and American Indian/Native American women.

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Author Affiliation: Dr. YEE is co-director and Dr. CAPITMAN is director, National Resource Center: Diversity and Long Term Care at the Institute for Health Policy, Heller School, Brandeis University, Waltham, MA. 02254.

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