Chapter 5. Conclusions

In our sample of Medicare beneficiaries, per capita expenditures for physicians' services increased 19 percent in nominal dollars from $898 in 1993 to $1073 in 1998. Expenditures for physician fee schedule services increased 27 percent from $581 to $740, and other services included in the statutory definition of physicians' services increased 5 percent from $317 to $333. During that period, the physician fee schedule dollar conversion factor increased by 16.6 percent from $31.50 to $36.70.[36]

Changes in laws and regulations and increasing enrollment in managed care can account for at most one-half of the observed change in expenditures. According to CMS, changes in laws and regulations should have led to an increase of 5 percent in total expenditures for physicians' services. We estimate that HMO enrollment can account for no more than a 5.6 percent increase in expenditures.

The per capita volume of physicians' services (in RVUs) delivered to non-ESRD, non-institutionalized fee-for-service Medicare beneficiaries increased 30 percent over the mid-1990s. Our analyses do not indicate that this increase is due to measurable changes in the demographic composition, the places of residence, the prevalence of health conditions, or other characteristics of the Medicare population. Indeed, our analysis indicates that, all else being equal, the 1998 FFS population should have used slightly fewer RVUs than the 1993 population. In addition, while we found that the use of services in outpatient settings increased substantially, the increase in expenditures could not be attributed directly to shifts in site of care from inpatient to outpatient settings.

Overall, the main driver of change in the volume and intensity of services was a general increase in the use of care by all categories of beneficiaries. Only a few medical conditions emerged as having unusual RVU growth. For these conditions, clinical experts were able to point to changes in medical knowledge and technology that could have contributed to the increase. Large increases in the use of physicians' services were also seen in patients just prior to death. Thus, changing medical technology appears to increase use of physicians' services in ways that are strong and pervasive. Furthermore, the increases in Medicare expenditures for physicians' services seem comparable to those of other payers. This finding indicates that the trends in Medicare beneficiaries' use of physicians' services are likely driven by the same set of factors as those driving the increase in overall health care spending.

Implications

Our analyses have several implications for the debate about the SGR payment update system:

1. Technical adjustments to the SGR targets are not a ready solution to the criticisms raised about the SGR. Such adjustments could be made to account for the changing composition of the FFS population, but they would be small adjustments relative to the overall increases in service use.
2. A payment update system that systematically attempted to measure "appropriate" increases in use due to changing technology would not be feasible. Such a system would

[36] Note, however, that conversion factor increase does not translate into a commensurate increase in expenditures, owing to beneficiary cost sharing, the phase-in of the fee schedule, and other factors discussed in detail in the report.

have to consider changes across an extraordinarily broad set of dimensions and conditions to capture all of the possible ways in which technology can influence service provision.

3. Our analyses indicate that some of the largest increases in the use of physicians' services cannot be ascribed to discrete causes. These increases are surprisingly uniform across medical conditions, suggesting that a single update factor for physicians' services may be appropriate. However, what that factor should be remains an open policy question.

Future Research

There are clearly a number of areas in which further research would be valuable. First, more detailed investigations of service use and coding would help to disentangle the effects of coding practices, new technology, productivity, consumer demand, care substitution, and other factors. A detailed breakdown of RVU use into office visits, outpatient procedures by various specialties, inpatient procedures, etc. would allow for a greater understanding of shifting care and coding patterns. In particular, the extent of increases in the RVU weights associated with similar visits over time ("upcoding") could be gauged by looking over time at the distribution of office visit types (across the levels of intensity captured in the evaluation and management codes.) A more refined classification of codes would also reveal the extent to which the "new and updated" codes we observed capture truly new technology versus services newly covered by Medicare or coding changes unrelated to technological change (e.g. the splitting of codes into finer categories such as insertion of pacemaker, single chamber or dual chamber.) An examination of only the work RVU portion of the physician fee schedule could also be helpful in this respect because it would isolate changes in physician labor. Finally, a study of the RBRVS update process could shed light on the degree to which it truly reflects changes in technology.

Second, further refinements to our modeling could improve predictions. The major challenges in modeling health care costs and use from a statistical standpoint are that many individuals do not access health care at all and that the distribution of costs for those who do is extremely right-skewed. All of our analyses have focused on mean use and expenditures since we were interested in overall trends. However, given the skewed distribution of care use, there would be value in understanding if and how the distribution of care use also changed. This could be done by examining median use or use by different deciles of the distribution. Least Absolute Deviation (LAD) models could assist in these analyses.

Third, further work could be done on selected patient groups. With the more detailed information on service use described above, we could test whether there is evidence supporting our clinical experts' explanations of the changes observed in care use by osteoporosis, stroke, and lung cancer patients. We could also investigate additional patient groups. In particular, further investigation of decedents seems warranted given their large increase in the use of physicians' services. It would be interesting to know if this increase has come despite or because of the increased use of hospice care by Medicare beneficiaries over this time period. Such an investigation would require that the decedent group be further disaggregated and the care patterns of decedent subgroups analyzed.

Fourth, there may be important interactions between demographic change and technological change over the longer term that would affect projections of physicians' expenditures. We found that, given the patterns of care observed in 1993, the 1998 cohort of Medicare beneficiaries

would be expected to use fewer services. This was due in large part to the fact that beneficiaries in the oldest age group (age 85 and older), which grew between 1993 and 1998, receive fewer services than beneficiaries in the age categories below them (ages 75-84). However, it is interesting to note that the increases in RVU use by those over age 80 between 1993 and 1998 were much higher than the increases for other age groups. Thus, the effects of the aging of the population on service use are not static. Given the widely reported decline in disability among older persons, it may be that older persons are better candidates for aggressive care than they were in the past. It may also be that as physicians gain skill with new diagnostic, surgical, and other technologies they are increasingly willing to apply them to riskier patient groups. These issues have important implications for future health care trends and warrant further investigation.

Finally, health services research could also reveal areas in which changes in physician practice would bring greater health benefits to beneficiaries or lower costs to the Medicare program. Such research is needed to answer the fundamental question about the increases in expenditures for physicians' services we describe: are those increases in Medicare expenditures producing commensurate health gains for Medicare beneficiaries?