Chapter 4. Limitations

This study has four main limitations. First, as with nearly all models of health care utilization and spending, our model can explain very little of the variation in service utilization across beneficiaries. Despite having a rich set of covariates, including measures of education, insurance, and numerous attributes of health status, we were able to explain only 4 percent of the variation in RVU use among beneficiaries. Thus, it is possible that there are changes in unobserved beneficiary characteristics that are causing some of the increase in service use.

Second, while we were able to attribute the unexplained increase in RVUs to both "new and updated" and "existing" service codes, this distinction does not isolate the effect of new technology, since existing services can undergo technological changes that are not captured in the fee schedule. The new and updated codes are only a lower bound on the extent of technological change. For example, there may be technological change within existing codes that is not recognized by the RUC review committee, or that does not increase the work associated with providing a service. In addition, during the period we examined, the practice expense and malpractice components of the RBRVS were not resource-based. (They were based on surveys of physician practice costs and charges, respectively; resource-based practice expenses are currently being phased into the fee schedule.) Thus, these components of our RVU totals do not as accurately reflect the "volume and intensity" of services delivered. There might also be changes in technology that produce increases in the use of physicians' services indirectly. For example, better prescription drugs or improved diagnostic tests could increase the use of physician office visits and other physicians' services. In addition, technological change can lead to changes in the identification of the diseases we examined and even to changes in the health status of the population over time.

Third, while we tried to control for patient characteristics, unobserved differences in severity of illness may have existed between the patients in our 1993 and 1998 samples. There may, therefore, be a portion of our unexplained increase in RVU use that is due to increasing severity within the disease groups we included in our models.

Finally, we cannot say whether or not the observed increases in service use are medically appropriate or whether they would have been different in magnitude if an alternative payment update system had been used. There is certainly an interrelationship between payment updates and the volume of services delivered: physicians do respond to the prices paid for services. Thus, we cannot evaluate whether service use would have been higher or lower had an SGR-like payment update system been in place during the time period we examined.