

range of services designed to treat beneficiaries following discharge from an acute care hospital setting. A recent study reports that in 2002, approximately one-third of Medicare beneficiaries who received treatment at acute care hospitals also used post-acute care services (American Hospital Association, 2009).

The key role played by post-acute care services can be clearly seen in Figures 2-5a through 2-5h, a series of charts in which the horizontal axis represents HRRs ordered from left to right by total per-member-per-month, input-price-adjusted spending (a measure of utilization) between 2007 and 2009 for Medicare Parts A and B. Thus in each graph, the lowest total use area (Rochester, New York) is the left-most bar, and the highest total use area (Miami, Florida) is the right-most. The vertical axis represents the deviation of input-price-adjusted spending (utilization) in a particular HRR from the national mean utilization for the type of service shown after adjustment for patient demographics and health status (see the note to the figures). In other words, the residuals represent unexplained variation. Figure 2-5a shows the total Medicare utilization across HRRs that remains unexplained after adjustment for input prices, demographics, and health status, while Figures 2-5b through 2-5h display the unexplained variation in utilization in specific service categories only. These residual charts suggest that variation in post-acute care utilization accounts for a large portion of the unexplained variation in total utilization. Areas to the far left in Figure 2-5a have utilization roughly \$50 to \$150 below the adjusted national mean, whereas those on the far right have utilization roughly \$100 to \$200 above the adjusted national mean. In fact, as Table 2-10 indicates, if there were no variation in post-acute care spending, the variation in total spending would fall by 73 percent. Miami is an outlier, which the committee addresses in greater detail below.

Almost all of the remaining variation is accounted for by variation in acute (inpatient) care utilization (see Figure 2-5c). If there were no variation in acute care spending but the variation in post-acute care spending were unchanged, the variation in total spending would fall by 27 percent. Finally, if there were no variation in either acute or post-acute care spending, variation in total spending would fall by 89 percent (see Table 2-10). Thus, the remaining services shown (e.g., diagnostic, which includes outpatient physician services; emergency department/ambulance service; and prescription drugs) play a small role in variation in Medicare spending.

As discussed previously, the subcontractors' findings are consistent with those of MedPAC's 2011 report to Congress, which reveal that utilization of post-acute care and acute (inpatient) care accounts for the greatest variability in Medicare spending (MedPAC, 2011). Prior studies have noted that variation in the use of post-acute care is influenced not only by demographic and clinical factors but also by a number of nonclinical