Data Supplement 1.

This appendix contains supplementary information on the Medical Expenditure Panel Survey and regression analyses results for non-ambulatory care sensitive conditions (ACSC) encounters.

1. Details of Medical Expenditure Panel Survey (MEPS) data-collection procedures.

The Medical Expenditure Panel Survey Household Component (MEPS-HC) is a nationally representative dataset that is publicly available and uses a household-based survey, supplemented by medical provider and hospital data. The data used in this study include detailed information regarding individual clinical encounters. The sampling frame of the MEPS-HC is derived from respondents to the National Health Interview Survey, which is conducted by the National Center for Health Statistics. MEPS uses computer-assisted personal interviewing (CAPI) to collect data from respondents on their health care use, health services charges, out-of-pocket expenses, and insurance payments. MEPS researchers then obtain permission from respondents to verify and supplement the data with their medical providers and hospitals. Annual household-level response rates from 2005 to 2010 ranged from 57% to 63%.[1] For quality control, MEPS pre-selects 20% of the sample for validation and at least 15% of each interviewer's case assignments are validated annually to ensure that the interview took place and appropriate procedures were followed. MEPS also tests the full CAPI instruments annually to identify any computer errors. MEPS has been collecting data on health insurance coverage, health services expenditures, health services utilization, and health status since 1996. MEPS is sponsored by the Agency for Healthcare Research and Quality.[1]

2. Comparison of MEPS with the National Hospital Ambulatory Medical Care Survey (NHAMCS)

The MEPS dataset has been critiqued as underestimating the true number of ED visits nationwide, with NHAMCS, a provider-based dataset managed by the CDC, estimating the number of nationwide ED visits more accurately.[2] However, NHAMCS does not provide detailed health expenditures data similar to MEPS to answer the questions proposed in this study. In the context of this study, MEPS' under-representation of total ED visits does not directly affect our findings because the study has been designed at the visit level with a focus on payments and charges per clinical encounter. However, the under-representation of ED visits may potentially be correlated with inherent selection biases in the MEPS sample of ED visits, which may thereby influence study results. Given that the MEPS data collection procedures have been consistent throughout the years included in this study, any inherent selection biases in the data collection procedures would be expected to be homogenous across the study sample.

3. Non-ACSC Visit Payments and Charges

The payment and charges patterns for ACSC visits were similar to those for non-ACSC visits. For non-ACSC visits, the adjusted mean total payment ($801; 95% CI = $761 to $841) and adjusted mean total charge ($2,382; 95% CI = $2,269 to $2,496) provided for ED encounters were both 1.3 times higher relative to outpatient encounters. Additionally, the adjusted mean total payment ($4,416; 95% CI = $4,360 to $4,472) and adjusted mean total charge ($12,161; 95% CI = $12,015 to $12,306) for inpatient encounters were both five times higher relative to those of ED encounters. For non-ACSC visits, 77% to 94% of the charge difference and 81% to 93% of the payment difference was accounted for by facility fees (Data Supplement 2).

References

1. Agency for Healthcare Research and Quality. Design and Methods of the Medical Expenditure Panel Survey Household Component. Available at: http://meps.ahrq.gov/data_files/publications/mr1/mr1.pdf. Accessed Nov 9, 2014.
2. Owens PL, Barrett ML, Gibson TB, et al. Emergency department care in the United States: a profile of national data sources. Ann Emerg Med 2010;56(2):150-65.