

COMMONWEALTH OF MASSACHUSETTS
HEALTH POLICY COMMISSION



TECHNICAL APPENDIX B6
POST-ACUTE CARE

ADDENDUM TO 2016 COST TRENDS REPORT

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1 Summary

This appendix describes the Health Policy Commission's (HPC) approach to examining post-acute care in **Chapter 6: "Post-Acute Care"** of the 2016 Cost Trends Report.

2 Comparing post-acute care use in Massachusetts and the U.S.

2.1 Data

For **Exhibits 6.1** and **6.4**, HPC used the Healthcare Cost and Utilization Project's (HCUP) 2013 Massachusetts State Inpatient and National Inpatient Sample to create a dataset that included patients discharged to routine care or some form of post-acute care (PAC). HCUP uses the following discharge destinations: "home health care," "routine," "skilled nursing facilities (SNF)", "intermediate care facility (ICF)", and "short-term hospital." HPC grouped these into the following categories:

1. Routine: ("routine")
2. Home health care: ("home health care")
3. Institutional: ("skilled nursing facilities (SNF)", "intermediate care facility (ICF)", and "short-term hospital")

2.2 Analysis

HPC evaluated the distribution of discharges by total discharges and also grouped results by payer: Medicaid, Medicare, and Commercial. HPC evaluated results for DRG 470 (major joint replacement or reattachment of lower extremity without major comorbidity or complication).

3 Comparing PAC use in Massachusetts over time

3.1 Data

For **Exhibit 6.2**, HPC used the Center for Health Information and Analysis' (CHIA) Hospital Inpatient Discharge Database (HIDD) 2010-2015 to compare rates of PAC discharges. HPC limited our sample to Massachusetts residents who were at least 18 years of age with the following discharge destinations in Case Mix: home/routine, long-term care hospital, rehabilitation facility or hospital, rehabilitation hospital, skilled nursing facility, home health agency, and home/IV therapy. Due to coding inconsistencies in certain years, UMass Memorial Medical Center, Clinton, Marlborough, Cape Cod, and Falmouth hospitals were removed from the time trend analyses. HPC also limited the analysis to DRGs that had at least ten discharges in every year from 2010 to 2015. Based on input from providers, HPC concluded that distinctions between discharges to "skilled nursing facility" versus "inpatient rehabilitation facility" versus

“long-term care hospital” were not coded accurately enough to ensure meaningful results by this level of provider type. Therefore, HPC grouped Case Mix discharges into the following categories:

1. Routine: (“home/routine”)
2. Home health care: (“home health agency” and “home/IV therapy”)
3. Institutional: (“long-term care hospital” / “rehabilitation facility or hospital” and “rehabilitation hospital”/ “skilled nursing facility”)

3.2 Analysis

For the adjusted PAC rate per year (**Exhibit 6.2**), HPC adjusted for change in case mix over time. To do so, HPC used OLS to estimate a time trend controlling for the number of discharges by each DRG. Time effects were modeled on a per-year basis.

4 Comparing costs of PAC in Massachusetts and the U.S.

4.1 Data

To estimate spending per beneficiary by PAC setting (**Exhibit 6.3**), HPC used the Geographic Variation Public Use File from the Centers for Medicare and Medicaid Services.

4.2 Analysis

HPC divided the standardized total spending in Massachusetts in each PAC setting (LTCH, IRF, SNF, and Home Health) by the total number of original Medicare beneficiaries in the state. CMS standardization includes regional price adjustments to account for regional differences in wages and supplemental program spending.