

COMMONWEALTH OF MASSACHUSETTS
HEALTH POLICY COMMISSION



TECHNICAL APPENDIX 8
POST-ACUTE CARE

ADDENDUM TO 2023 COST TRENDS REPORT

Table of Contents

1 Summary	3
2 Comparing PAC use in Massachusetts and the U.S.	3
2.1 Data	3
2.2 Analysis.....	3
3 Tracking PAC use in Massachusetts over time.....	3
3.1 Data	3
3.2 Analysis.....	4
4 Tracking PAC discharges following hip and knee replacement surgeries	4
4.1 Data	4
4.2 Analysis.....	4

1 Summary

This appendix describes the Health Policy Commission’s (HPC) approach to examining post-acute care (PAC) in the **Post-Acute Care** chartpack.

2 Comparing PAC use in Massachusetts and the U.S.

2.1 Data

For the exhibit **“Use of post-acute care in Massachusetts and the U.S., all DRGs, 2020”**, the HPC used the Healthcare Cost and Utilization Project’s (HCUP) 2020 Massachusetts State Inpatient and National Inpatient Sample to create a dataset that included patients discharged to routine care or a form of PAC. Using HCUP’s discharge destinations, the HPC created the following categories:

1. Routine: (“routine”)
2. Home health care: (“home health care”)
3. Institutional: (“skilled nursing facilities (SNF)”, “intermediate care facility (ICF)” and “another type of facility” such as an inpatient rehabilitation facility)

2.2 Analysis

The HPC evaluated the distribution of discharges by total discharges and grouped results by payer: Medicaid, Medicare, and Commercial. The following discharge destinations were excluded in the analysis: short-term hospitals, unknown destination, patient deceased, and left against medical advice.

3 Tracking PAC use in Massachusetts over time

3.1 Data

For the exhibit **“Post-acute care in Massachusetts following hospital discharge, all DRGs, 2010-2022”**, the HPC used the Center for Health Information and Analysis’ (CHIA) Hospital Inpatient Discharge Database (HIDD) CY 2010-2022 to compare rates of PAC discharges. Data from October 2022 through December 2022 is preliminary data.

The HPC limited the sample to Massachusetts residents who were at least 18 years of age with the following discharge destinations in HIDD: home/routine, long-term care hospital, rehabilitation facility or hospital, rehabilitation hospital, skilled nursing facility, intermediate care facility, home health agency, and home/IV therapy. Discharges were excluded from specialty hospitals, except New England Baptist. Due to coding inconsistencies in certain years, UMass Memorial Medical Center, Clinton Hospital, Cape Cod Hospital, Falmouth Hospital, and Marlborough Hospital were removed from the time trend analyses. COVID-19 field hospitals were excluded due to small discharge size. The HPC also limited the analysis to DRGs that had

at least ten discharges in every year from 2010 to 2020. Based on input from providers, the HPC concluded that distinctions between discharges to “skilled nursing facility” “inpatient rehabilitation facility” versus “long-term care hospital” were not coded accurately enough to ensure meaningful results by this level of provider type. Therefore, the 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”/ “rehabilitation hospital”/ “skilled nursing facility”/ “intermediate care facility”)

3.2 Analysis

For the adjusted PAC rate per year, HPC adjusted for change in HIDD over time. To do so, HPC used ordinary least squares (OLS) to estimate a time trend, controlling for age, sex, and changes in the mix of diagnosis-related groups (DRGs) over time. Time effects were modeled on a per-year basis.

4 Tracking PAC discharges following hip and knee replacement surgeries

4.1 Data

For the exhibit “**Post-acute care following hip and knee replacements by payer, 2018-2022**”, the HPC used CHIA’s HIDD data from CY 2018-2022. Data from October 2022 through December 2022 is preliminary data.

4.2 Analysis

For this analysis, the HPC included the following DRGs: 466, 467, 468, 469, 470, 521, 522. The HPC evaluated the distribution of PAC discharges for these DRGs by the following discharge destinations: Routine, Home health care, Institutional (similar to the exhibit “**Post-acute care in Massachusetts following hospital discharge, all DRGs, 2010-2022**”) The data sample was limited to Massachusetts residents who were at least 18 years of age. Discharges were excluded from hospitals that closed and from specialty hospitals, except New England Baptist. COVID-19 field hospitals were excluded due to small discharge size.