CENTER FOR HEALTH INFORMATION AND ANALYSIS

Massachusetts Acute Hospital & Health System Financial Performance

HFY 2022

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Technical Appendix

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Massachusetts Acute Hospital and Health System Financial Performance: HFY 2022

TECHNICAL APPENDIX

Table of Contents

I. Description of Financial Metrics

Financial ratio analysis is one critical component of assessing an entity's financial condition. The Center for Health Information and Analysis (CHIA) reports on profitability, liquidity, and solvency metrics. Below are the descriptions and calculations for each.

Profitability

This category evaluates the ability of an entity to generate a surplus. A negative surplus, or loss, is usually a sign of financial difficulty.

Operating Margin

Operating income is income from normal operations of an entity, including patient care and other activities, such as research, gift shops, parking, and cafeteria, minus the expenses associated with such activities. Operating Margin is a critical ratio that measures how profitable the entity is when looking at the performance of its primary activities.

Operating Margin = (Total Operating Revenue – Total Expenses Including Nonrecurring Gains or Losses) / Total Unrestricted Revenue, Gains and Other Support

Non-Operating Margin

Non-operating income includes items that are not related to operations, such as investment income, contributions, gains from the sale of assets and other unrelated business activities.

Non-Operating Margin = Total Non-Operating Revenue / Total Unrestricted Revenue, Gains and Other Support

Total Margin

This ratio evaluates the overall profitability of the entity using both operating surplus (or loss) and non-operating surplus (or loss).

Total Margin = Total Excess of Revenue, Gains and Other Support Over Expenses / Total Unrestricted Revenue, Gains and Other Support

Liquidity

This category evaluates the ability of the entity to generate cash for normal business operations. A worsening liquidity position is usually a strong indication that an entity is experiencing financial distress.

Current Ratio

This ratio measures the entity's ability to meet its current liabilities with its current assets (assets expected to be realized in cash during the fiscal year). A ratio of 1.0 or higher indicates that all current liabilities could be adequately covered by the entity's existing current assets.

Current Ratio = Total Current Assets / Total Current Liabilities

Average Payment Period

This ratio measures the average number of days it takes an entity to pay its bills.

Average Payment Period = (Total Current Liabilities – Estimated Third Party Settlements) / [(Total Expenses – Depreciation and Amortization Expense) / # Days in period]*

*Note: Number of days in period: Quarter 1= 91.25, Quarter 2 = 182.5, Quarter 3 = 273.75, or Annual = 365 days.

Solvency

This category evaluates the health of an entity's capital structure, measuring an entity's ability to meet its financing commitments and the entity's ability to take on more debt. Both measures are critical to the entity's long-term solvency.

Debt Service Coverage

This ratio measures the ability of an entity to cover current debt obligations with funds derived from both operating and non-operating activity. Higher ratios indicate an entity is better able to meet its financing commitments. A ratio of 1.0 indicates that average income would just cover current interest and principal payments on long-term debt.

Debt Service Coverage Ratio = (Total Excess of Revenue, Gains, and Other Support Over Expenses + Depreciation and Amortization Expense + Interest Expense) / (Interest Expense + Current Long Term Debt)

Cash Flow to Total Debt

This ratio reflects the amount of cash flow being applied to total outstanding debt (all current liabilities in addition to long-term debt) and reflects how much cash can be applied to debt repayment. The lower the ratio, the more likely an entity will be unable to meet debt payments of interest and principal, and the higher the likelihood of violating any debt covenants.

Cash Flow to Total Debt = (Total Excess of Revenue, Gains, and Other Support Over Expenses + Depreciation and Amortization Expense) / (Total Current Liabilities + Long Term Debt Net of Current Portion)

Equity Financing

This ratio reflects the ability of an entity to take on more debt and is measured by the proportion of total assets financed by equity. Low values indicate an entity used substantial debt financing to fund asset acquisition and therefore may have difficulty taking on more debt to finance further asset acquisition.

Equity Financing = Total Net Assets or Equity / Total Assets

Average Age of Plant

Indicates the financial age of the fixed assets of the organization. The older the average age, the greater the short-term need for capital resources.

Average Age of Plant = Accumulated Depreciation / Depreciation and Amortization Expense

Other Measures

The following are individual line items from the Hospital Standardized Financial Filing. Effective with the HFY20 filings, data on COVID-19 relief funds were collected.

- **Operating Surplus (Loss):** Total dollar amount of surplus or loss derived from operating activities.
- **Total Surplus (Loss):** Total dollar amount of surplus or loss derived from all operating and non-operating activities.
- **Net Assets:** For not-for-profit entities, this represents the difference between the assets and liabilities of an entity, comprised of retained earnings from operations and contributions from donors. Changes from year to year are attributable to two major categories: (1) increases and/or decreases in Unrestricted Net Assets, which are affected by operations, and (2) changes in Restricted Net Assets (restricted contributions). The for-profit equivalent of Total Net Assets is Owner's Equity.
- **Net Patient Service Revenue (NPSR):** Revenue an entity would expect to collect for services provided, including premium revenue, less contractual allowances. NPSR is the primary source of revenue for an entity.
- **Other Operating Revenue: Federal COVID-19 Relief Funds:** Revenue an entity received from the federal government related to the COVID-19 pandemic and reported as operating revenue.
- **Other Operating Revenue: State & Other COVID-19 Relief Funds:** Revenue an entity received from the state government or source other than the federal government related to the COVID-19 pandemic and reported as operating revenue.
- **COVID Funding in Operating Revenue**: Total amount of Federal, State, & Other COVID-19 Relief Funds received by an entity and reported as operating revenue starting in HFY20.

Temporary Staffing Data

Effective July 14, 2023, CHIA began collecting information related to temporary staffing expenses in a standardized form. Annual filings for FY 2019, FY 2020, FY 2021, and FY 2022 were filed retroactively on or before August 18, 2023, and subsequent quarterly and annual filings were due on the same filing schedule as prescribed in 957 CMR 9.07.

Data was collected for temporary labor expenses, hours, and how expenses are classified in the standardized financial statements for three employee types: registered nurses (RNs), physician/hospitalists, and other non-RN clinical staff.

II. General Data Caveats

Data Sources

Health system, acute hospital, and affiliated physician organization data is drawn from the CHIA Annual Standardized Financial Filings submitted by the health system. Standardized Financial Filings may not reflect all the financial resources available to the entity, such as resources available through associations with foundations or parents/affiliates. Financial information must be interpreted within the context of other factors, including, but not limited to, management plans, payment changes, market behavior and other factors affecting performance.

Profitability percentages may not add due to rounding.

Data Caveats

Steward Health Care did not submit the required system-level audited or standardized financial statement data for HFYs 2019, 2021, and 2022. Therefore, Steward Health Care system and physician organization data are not included in this report for those years.

In 2018 and 2020, Steward Health Care system-level data was derived from publicly available audited financial statements that were standardized by CHIA using the same method as the other health systems. Additionally, Steward Health Care did not report any of the COVID relief funding received by their eight hospitals as operating revenue. After obtaining the publicly available audited financial statements, their 2020 data was revised by CHIA to include the Provider Relief Funds received by each of the hospitals in their operating revenue.

Heywood Healthcare's audited financial statements were not available in time for this publication and therefore Heywood Healthcare system, hospitals, and physician organization data are based on standardized financial statement filings for HFY 2021 and 2022.

Hospital Type Definitions

Academic medical centers (AMCs) are a subset of teaching hospitals. AMCs are characterized by (1) extensive research and teaching programs; (2) extensive resources for tertiary and quaternary care; (3) are principal teaching hospitals for their respective medical schools; and (4) are full service hospitals with case mix intensity greater than 5% above the statewide average.

Teaching hospitals are those hospitals that report at least 25 full-time equivalent medical school residents per one hundred inpatient beds in accordance with Medicare Payment Advisory Commission (MedPAC) and do not meet the criteria to be classified as AMCs.

Community hospitals are hospitals that do not meet the 25 full-time equivalent medical school residents per one hundred beds criteria to be classified as teaching hospitals and have a public payer mix of less than 63%.

Community-High Public Payer (HPP) hospitals are community hospitals that are disproportionately reliant upon public revenues by virtue of a public payer mix of 63% or greater. Public payers include Medicare, MassHealth and other government payers including the Health Safety Net.

Specialty hospitals are not included in any cohort comparison analysis due to the unique patient populations they serve and/or the unique sets of services they provide. However, specialty hospitals are included in all statewide median calculations.

Note: Some AMCs and teaching hospitals have HPP status.

Annual Reporting

Annual financial performance reports display twelve months of financial data for each health system, acute hospital, affiliated physician organization, and health plan regardless of an entity's fiscal year end date.

Quarterly Reporting

Health systems submit three quarterly reports of cumulative year-to-date financial data for the first three quarters of the entity's fiscal year on behalf of the health system, acute hospital, and affiliated physician organization. Reports are due forty-five days after the end of each quarter. Refer to Fiscal Year End Information section for more information about individual entity's months of data reported quarterly.

Databook

Databooks are published containing all data reported by hospital health system, hospitals, and physician organizations.

Five Year Trends (Factsheets)

Acute Hospital Financial Performance Trends factsheets are published annually on CHIA's website. Five years of financial trend data are displayed for each hospital along with its hospital health system.

Northeast US 2021 median data included in HFY 2022 Factsheets come from *Optum's 2022 Almanac of Hospital Financial Operating Indicators*. Northeast US medians published in this report are based on 2021 Medicare cost report data.

A blank Debt Service Coverage Ratio indicates a facility with no current long-term debt or interest reported in the period covered.

III. Fiscal Year-End Information

Each period in which data is reported represents each entity's cumulative quarters of information depending on an entity's fiscal year-end. Below is a chart indicating the reporting period and the number of months of data represented for an entity in that reporting period based on the given hospital's fiscal year-end.

Note that annual data for each hospital is due 100 days after the entity's fiscal year end. As a result, a full twelve months of data for each hospital is included in the Annual Financial Performance report.

Quarterly Hospital Reporting Schedule

HOSPITALS	DATA AS OF 3/31	DATA AS OF 6/30	DATA AS OF 9/30	DATA AS OF 12/31
Steward Health Care (8 hospitals) **MetroWest Medical Center**	Three Months of Data	Six Months of Data	Nine Months of Data	Not included as data is not yet due
Saint Vincent Hospital **Shriners (2 hospitals)** **Fiscal Year End: 12/31**	January through March	January through June	January through September	January through December

HOSPITALS	DATA AS OF 3/31	DATA AS OF 6/30	DATA AS OF 9/30	DATA AS OF 12/31
Cambridge Health Alliance	Nine Months of Data	Not included as data is not yet due	Three Months of Data	Six Months of Data
Mercy Medical Center **Fiscal Year End: 6/30**	July through March	July through June	July through September	July through December

HOSPITALS	DATA AS OF 3/31	DATA AS OF 6/30	DATA AS OF 9/30	DATA AS OF 12/31
Other Acute Hospitals (47 hospitals)	Six Months of Data	Nine Months of Data	Not included as data is not yet due	Three Months of Data
Fiscal Year End: 9/30	October through March	October through June	October through September	October through December

Hospitals	Twelve months of data for the same fiscal year end regardless of year-end date.

IV. Cohort Designation

For HFY 2022, hospitals are assigned to cohorts based on the data reported in the HFY 2021 Massachusetts Hospital Cost Report.

$\mathcal{E}$ Indicates hospital meets the HPP criteria.