What is NASHP’s Hospital Cost Calculator?

- A downloadable calculator health purchasers, including state officials, can use to better understand and address hospital costs
  - For example, the calculator can help inform hospital rate negotiations or demonstrate hospital finances pre- and post- merger/ acquisition

- The calculator identifies costs using data that hospitals report annually to the federal government
  - Each hospital that serves Medicare patients must annually submit, and verify the accuracy of, a Medicare Cost Report (MCR) to the Centers for Medicare & Medicaid Services (CMS)
  - MCRs provide hospital level data and are the only national, public source of hospital costs

- The Hospital Cost Calculator was developed by the National Academy for State Health Policy (NASHP) alongside Rice University, with support from Arnold Ventures
Cost to Charge Ratio

- **Charges**: the ‘sticker price’ set by the hospital for services

- **Costs for Hospital services**:  
  a. Salaries & Benefits;  
  b. Contracted Services;  
  c. Equipment and Supplies;  
  d. Rent, Interest, Depreciation, etc.

- The lower a hospital’s Cost-to-Charge Ratio, the less its charges reflect its costs

Source: NASHP Hospital Cost Calculator, 2019 Data
Breakeven Analysis

- NASHP’s Hospital Cost Calculator determines a hospital’s breakeven point: Revenue = Expenses
  - Revenue includes payments from all sources. Expenses include hospital operations, administration, ancillary services, & non-operating expenses.

- NASHP Commercial Breakeven – how much a hospital needs to be reimbursed by commercial payers in order to cover its expenses

- RAND 3.0 Commercial Price – how much a hospital was reimbursed by commercial payers in aggregate from 2016 to 2018
  - Calculated using data from the RAND Corporation’s Nationwide Evaluation of Health Care Prices Paid by Private Health Plans

- Breakeven and Price expressed as multiples of the individual hospital’s Medicare rates for comparability purposes.

Example: Hospital A could afford a commercial price of 155 percent of Medicare. However, in 2018, its commercial price was 334 percent of Medicare.

Source: NASHP Hospital Cost Calculator, 2019 Data; price from RAND Corporation, 2016-2018 Data
Factors That May Impact Breakeven

• **Medicare Payment rate** – A hospital’s Breakeven is based on its own Medicare reimbursement rates. If a hospital is paid by Medicare in excess of its Medicare-related expenses, Breakeven would be lower.

• **Hospital Other Income** – If a hospital receives significant other income (e.g., return on investments, federal relief payments), the payment required from a commercial payer to Breakeven would be lower.

• **Reimbursement from Other Payers** – The hospital payer mix adjusted profits and losses from other payers (Medicaid, Medicare, CHIP and other local/state programs, Medicare Advantage) are reflected in the commercial payer Breakeven calculation.

• **Reporting Error** – Medicare Cost Reports are completed by the hospital or their contractor and may contain reporting errors, impacting Breakeven calculations.
Rhode Island Hospitals’ Breakeven vs Price

Source: NASHP Hospital Cost Calculator, 2019 Data; price from RAND Corporation, 2016-2018
Rhode Island Systems’ Breakeven vs Price

Rhode Island Systems’ Median Breakeven vs Price, 2019
(number of hospitals in parentheses)

Source: NASHP Hospital Cost Calculator, 2019 Data; price from RAND Corporation, 2016-2018 Data
Rhode Island vs National Median Breakeven

Note: Hospitals nationwide continue to submit and update 2020 data.

Source: NASHP Hospital Cost Calculator, 2011-2020 Data
A more complete picture of a hospital’s profit (loss) on a payer can be seen by factoring payer mix into payer-specific profit/loss.
Roger Williams Medical Center  
(Prospect Medical Holdings)

Source: NASHP Hospital Cost Calculator, 2019 Data; price from RAND Corporation, 2016-2018 Data
Our Lady of Fatima Hospital (Prospect Medical Holdings)

Payer Mix Metrics
Payer Mix (left chart): Percentage of total hospital services provided to the payer mix (i.e. Medicaid) patients, as measured by Hospital Charges.
Operating Profit Margin (middle chart): Operating Profit (Loss) divided by Net Patient Revenue.
Adjusted Profit (Loss) (right chart): Operating Profit Margin multiplied by Payer Mix, which represents the payer’s impact on the hospital’s financial performance.

Source: NASHP Hospital Cost Calculator, 2019 Data; price from RAND Corporation, 2016-2018 Data

NASHP Commercial Breakeven (2019): 120%
RAND 3.0 Commercial Price (2016-2018): 130%
Net Profit Margin (2019): 2.1%
Newport Hospital (Lifespan)

Payer Mix Metrics
Payer Mix (left chart): Percentage of total hospital services provided to the payer mix (i.e., Medicaid) patients, as measured by Hospital Charges.
Operating Profit Margin (middle chart): Operating Profit (Loss) divided by Net Patient Revenue.
Adjusted Profit (Loss) (right chart): Operating Profit Margin multiplied by Payer Mix, which represents the payer’s impact on the hospital’s financial performance.

Source: NASHP Hospital Cost Tool, 2019 Calculator; price from RAND Corporation, 2016-2018 Data

NASHP Commercial Breakeven (2019): 174%
RAND 3.0 Commercial Price (2016-2018): 169%
Net Profit Margin (2019): -1.1%
Rhode Island Hospital (Lifespan)

Payer Mix Metrics
Payer Mix (left chart): Percentage of total hospital services provided to the payer mix (i.e., Medicaid) patients, as measured by Hospital Charges.
Operating Profit Margin (middle chart): Operating Profit (Loss) divided by Net Patient Revenue.
Adjusted Profit (Loss) (right chart): Operating Profit Margin multiplied by Payer Mix, which represents the payer’s impact on the hospital’s financial performance.

Source: NASHP Hospital Cost Calculator, 2019 Data; price from RAND Corporation, 2016-2018 Data

NASHP Commercial Breakeven (2019): 127%
RAND 3.0 Commercial Price (2016-2018): 160%
Net Profit Margin (2019): -3.6%
The Miriam Hospital (Lifespan)

Payer Mix Metrics
- Payer Mix (left chart): Percentage of total hospital services provided to the payer mix (i.e. Medicaid) patients, as measured by Hospital Charges.
- Operating Profit Margin (middle chart): Operating Profit (Loss) divided by Net Patient Revenue.
- Adjusted Profit (Loss) (right chart): Operating Profit Margin multiplied by Payer Mix, which represents the payer's impact on the hospital's financial performance.

Source: NASHP Hospital Cost Calculator, 2019 Data; price from RAND Corporation, 2016-2018 Data

NASHP Commercial Breakeven (2019): 92%
RAND 3.0 Commercial Price (2016-2018): 196%
Net Profit Margin (2019): 0.1%
South County Hospital

Payer Mix Metrics
Payer Mix (left chart): Percentage of total hospital services provided to the payer mix (i.e., Medicaid) patients, as measured by Hospital Charges.
Operating Profit Margin (middle chart): Operating Profit (Loss) divided by Net Patient Revenue.
Adjusted Profit (Loss) (right chart): Operating Profit Margin multiplied by Payer Mix, which represents the payer’s impact on the hospital’s financial performance.

Source: NASHP Hospital Cost Calculator, 2019 Data; price from RAND Corporation, 2016-2018 Data

NASHP Commercial Breakeven (2019): 166%
RAND 3.0 Commercial Price (2016-2018): 222%
Net Profit Margin (2019): -5.2%
Kent County Memorial Hospital (Care New England Health System)

Payer Mix Metrics
Payer Mix (left chart): Percentage of total hospital services provided to the payer mix (i.e. Medicaid) patients, as measured by Hospital Charges.
Operating Profit Margin (middle chart): Operating Profit (Loss) divided by Net Patient Revenue.
Adjusted Profit (Loss) (right chart): Operating Profit Margin multiplied by Payer Mix, which represents the payer’s impact on the hospital’s financial performance.

Source: NASHP Hospital Cost Calculator, 2019 Data; price from RAND Corporation, 2016-2018 Data

NASHP Commercial Breakeven (2019): 161%
RAND 3.0 Commercial Price (2016-2018): 186%
Net Profit Margin (2019): 1.8%
Women & Infants Hospital
(Care New England Health System)

Payer Mix Metrics
Payer Mix (left chart): Percentage of total hospital services provided to the payer mix (i.e. Medicaid) patients, as measured by Hospital Charges.
Operating Profit Margin (middle chart): Operating Profit (Loss) divided by Net Patient Revenue.
Adjusted Profit (Loss) (right chart): Operating Profit Margin multiplied by Payer Mix, which represents the payer's impact on the hospital's financial performance.

Source: NASHP Hospital Cost Calculator, 2019 Data; price from RAND Corporation, 2016-2018 Data

NASHP Commercial Breakeven (2019): 147%
RAND 3.0 Commercial Price (2016-2018): 82%
Net Profit Margin (2019): -1.5%
Landmark Medical Center (Prime Healthcare Services)

**Payer Mix Metrics**

- **Payer Mix (left chart):** Percentage of total hospital services provided to the payer mix (i.e., Medicaid) patients, as measured by Hospital Charges.
- **Operating Profit Margin (middle chart):** Operating Profit (Loss) divided by Net Patient Revenue.
- **Adjusted Profit (Loss) (right chart):** Operating Profit Margin multiplied by Payer Mix, which represents the payer’s impact on the hospital’s financial performance.

**Source:** NASHP Hospital Cost Calculator, 2019 Data; price from RAND Corporation, 2016-2018 Data

**NASHP Commercial Breakeven (2019): 83%**

**RAND 3.0 Commercial Price (2016-2018): 135%**

**Net Profit Margin (2019): 4.2%**
The Westerly Hospital
(Yale New Haven Health System)

Payer Mix Metrics
Payer Mix (left chart): Percentage of total hospital services provided to the payer mix (i.e. Medicaid) patients, as measured by Hospital Charges.
Operating Profit Margin (middle chart): Operating Profit (Loss) divided by Net Patient Revenue.
Adjusted Profit (Loss) (right chart): Operating Profit Margin multiplied by Payer Mix, which represents the payer's impact on the hospital's financial performance.

Source: NASHP Hospital Cost Calculator, 2019 Data; price from RAND Corporation, 2016-2018 Data

NASHP Commercial Breakeven (2019): 131%
RAND 3.0 Commercial Price (2016-2018): 169%
Net Profit Margin (2019): 0.4%
Rhode Island Median Payer-Specific Operating Profit Margin Over Time

Rhode Island Hospitals' Median Payer-Specific Operating Profit Margins, 2011 - 2020

Source: NASHP Hospital Cost Calculator, 2011 - 2020 Data

Rhode Island Median Payer-Specific Relative Impact Over Time

Rhode Island Hospitals' Median Payer-Specific Relative Impact on Hospital Operating Income, 2011 - 2020


Source: NASHP Hospital Cost Calculator, 2011 - 2020 Data
Rhode Island Revenue vs Costs

Rhode Island Median Net Patient Revenue vs Costs, 2011-2020


Source: NASHP Hospital Cost Calculator, 2011-2020 Data
Rhode Island Major Systems Operating Profit


Source: NASHP Hospital Cost Calculator, 2011-2020 Data
Rhode Island vs National Median Net Profit Margin


Source: NASHP Hospital Cost Calculator, 2011-2020 Data
Thank you!

NASHP’s Health System Costs Resources:

- Written research and analysis & state legislative tracking
- Model legislation & regulation to address consolidation and more
- Hospital Cost Calculator & hospital financial transparency reporting template
- Available Now! The Hospital Cost Tool (Online Searchable Database)
- https://www.nashp.org/policy/health-system-costs/