Health Care Cost Growth Benchmark

- Sets a target for controlling the growth of total health care expenditures across all payers (public and private), and is set to the state’s long-term economic growth rate:
  - Health care cost growth benchmark for 2013 - 2017 equals **3.6%**
  - Health care cost growth benchmark for 2017 - 2018 equals **3.1%**

- If target is not met, the Health Policy Commission can require health care entities to implement Performance Improvement Plans and submit to strict monitoring.

**TOTAL HEALTH CARE EXPENDITURES**

**Definition**: Annual per capita sum of all health care expenditures in the Commonwealth from public and private sources

**Includes**:
- All categories of medical expenses and all non-claims related payments to providers
- All patient cost-sharing amounts, such as deductibles and copayments
- Net cost of private health insurance
What is Potential Gross State Product?

Potential Gross State Product (PGSP)

- Long-run average growth rate of the Commonwealth’s economy, excluding fluctuations due to the business cycle

Process

- Every year the Secretary of Administration and Finance and the House and Senate Ways and Means Committees meet to develop and estimate of potential gross state product (PGSP) growth
- The PGSP estimate is established as part of the state’s existing consensus tax revenue forecast process and is included in a joint resolution by January 15th of each year
- The Commonwealth’s estimate of PGSP is developed with input from outside economists
- The PGSP estimate is used by the Health Policy Commission to establish the Commonwealth’s health care cost growth benchmark
Benchmark Modification Process – Overview

- Beginning in 2017, the HPC Board may modify the statutory annual health care cost growth benchmark (for the following calendar year), pursuant to a public hearing process and engagement with the Legislature.

- The HPC Board sets the health care cost growth benchmark for the following calendar year annually between January 15 (when the PGSP is established in the consensus revenue process) and April 15.

  For calendar years 2013-2017, the law required the benchmark to be equal to PGSP (3.6%).

  For calendar years 2018-2022, the law requires the benchmark to be **PGSP minus 0.5%** (e.g., 3.1%) unless the Board votes to modify the benchmark (requires 2/3 vote).

  The modification must be within the range of PGSP minus 0.5% and PGSP (e.g. 3.1% to 3.6%)

- “For calendar years 2018 through 2022, if the commission determines that an adjustment in the health care cost growth benchmark is **reasonably warranted**…the board of the commission may modify the health care cost growth benchmark…” between -0.5 and PGSP.
Benchmark Modification Process – Key Steps

**HPC ROLE**

- HPC Board must hold a **public hearing** prior to making any modification of the benchmark.
- Hearing must consider testimony, information, and data on whether modification of the benchmark is appropriate:
  - **Data**: CHIA annual report, other CHIA data, or other data considered by the Board
  - **Information**: “health care provider, provider organization, and private and public health care payer costs, prices and cost trends, with particular attention to factors that contribute to cost growth within the Commonwealth’s health care system”
  - **Testimony**: representative sample of providers, provider organizations, payers and other parties determined by HPC
  - The Joint Committee on Health Care Financing may participate in the hearing.
- Following a potential vote to modify, the HPC Board **must submit notice** of its intent to modify the benchmark to the Joint Committee.

**LEGISLATIVE PROCESS**

- Joint Committee must hold a public hearing within 30 days of notice of intent to modify.
- Joint Committee must submit findings and recommendations, including any legislative recommendations, to the General Court within 30 days of hearing.
- General Court must act within 45 days of public hearing or the HPC Board’s modification of the benchmark takes effect.
### Factors to consider in determining whether an adjustment is reasonably warranted

1. **Massachusetts’ health system performance to date**
2. **Impact of enrollment and demographic changes on performance**
3. **Opportunities for and barriers to additional savings in Massachusetts**
4. **Financial impact of modifying the benchmark**
5. **Significant changes to the state or federal health care landscape**
6. **Role of the benchmark in the HPC’s statutory responsibilities**
7. **Feedback from market participants and interested parties**
Total health care expenditures (THCE) per capita grew 2.8% in 2016, below the benchmark rate.

Annual per-capita total health care expenditure growth in Massachusetts, 2012-2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-2013</td>
<td>2.4%</td>
</tr>
<tr>
<td>2013-2014</td>
<td>4.2%</td>
</tr>
<tr>
<td>2014-2015</td>
<td>4.8%</td>
</tr>
<tr>
<td>2015-2016</td>
<td>2.8%</td>
</tr>
</tbody>
</table>

Average Annual Growth 2012-2016

<table>
<thead>
<tr>
<th>Category</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Massachusetts Health Care Spending</td>
<td>3.55%</td>
</tr>
<tr>
<td>National Health Care Spending</td>
<td>3.8%</td>
</tr>
<tr>
<td>Consumer Price Inflation (Boston)</td>
<td>1.3%</td>
</tr>
<tr>
<td>Wages and Salaries (Boston)</td>
<td>2.8%</td>
</tr>
</tbody>
</table>

Notes: 2015-2016 growth is preliminary. All other years represent final data.
Sources: Center for Health Information and Analysis, Total Health Care Expenditures
Health care spending in Massachusetts grew slower than the nation again in 2016

Annual growth in per capita health care spending, MA and the U.S., 2000-2016

Sources: Centers for Medicare and Medicaid Services, National Health Expenditure Accounts Personal Health Care Expenditures (U.S. 2014-2016) and State Health Expenditure Accounts (U.S. 2000-2014 and MA 2000-2014); Center for Health Information and Analysis, Total Health Care Expenditures
Among categories of care, pharmacy drugs and hospital outpatient spending grew the fastest in 2016.

Change in all-payer spending 2014-2015 and 2015-2016 by category of care

- Hospital Inpatient: 4.8% growth in 2014-2015, 2.2% in 2015-2016
- Hospital Outpatient: 5.5% growth in 2014-2015, 3.5% in 2015-2016
- Physicians and other professionals: 4.1% growth in 2014-2015, 3.1% in 2015-2016
- Pharmacy: 7.2% growth in 2014-2015, 6.1% in 2015-2016
- Other Medical: 5.6% growth in 2014-2015, 2.7% in 2015-2016
- Non-Claims: 5.1% growth in 2014-2015, 3.5% in 2015-2016
- Total Expenses: 5.1% growth in 2014-2015, 3.5% in 2015-2016

Notes: Pharmacy spending is net of rebates.
Source: Payer reported TME data to CHIA and other public sources; appears in Center for Health Information and Analysis Annual Report, 2017.
In recent years, growth in spending on private health insurance in Massachusetts has been consistently lower than national rates

*Annual growth in commercial health insurance spending from previous year, per enrollee, MA and the U.S.*

Notes: U.S. data includes Massachusetts. Center for Health Information and Analysis data are for the fully-insured market only. U.S. data for 2016 is partially projected.

Sources: Centers for Medicare and Medicaid Services, State and National Healthcare Expenditure Accounts and Private Health Insurance Expenditures and Enrollment (U.S. and MA 2005-2014); Center for Health Information and Analysis Annual Reports (2015-2016)
For both families and individuals, the difference between MA and U.S. premiums narrowed between 2012 and 2016

Annual employer sponsored health insurance premiums, single and family coverage

Family premiums in Massachusetts averaged $19,000 in 2016, $21,085 including typical cost-sharing; as high as $29,000 for 10% of residents
Employees working for low-wage firms contribute considerably more for family coverage

Average annual employer sponsored health insurance family coverage premium by firm wage quartile

- **Q1**: $18,533 (36% Employee contribution, $6,687) vs. $18,182 (27% Employee contribution, $4,935)
- **Q2**: $18,943 (25% Employee contribution, $4,823) vs. $19,335 (26% Employee contribution, $4,993)

**Note**: Q1 represents firms with average wages in the lower 25th percentile among all surveyed Massachusetts firms

**Source**: HPC analysis of Medical Expenditures Panel Survey data, 2016
As of 2015, readmission rates in Massachusetts increased, diverging from national trends.

Thirty-day readmission rates, Massachusetts and the U.S., 2011-2015

Based on pre-filed testimony, payers are starting to adopt a range of strategies to reduce readmissions, including non-payment for avoidable readmissions.

Sources: Centers for Medicare and Medicaid Services 2011-2015 (U.S. and MA Medicare); Center for Health Information and Analysis (MA All-payer), 2011-2015
From 2011 to 2016, the share of community appropriate hospital stays in community hospitals has steadily declined.

Inpatient hospital discharges by hospital type, 2011-2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Community</th>
<th>Non-Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>59.8%</td>
<td>40.2%</td>
</tr>
<tr>
<td>2012</td>
<td>59.3%</td>
<td>40.7%</td>
</tr>
<tr>
<td>2013</td>
<td>59.1%</td>
<td>40.9%</td>
</tr>
<tr>
<td>2014</td>
<td>57.9%</td>
<td>42.1%</td>
</tr>
<tr>
<td>2015</td>
<td>57.8%</td>
<td>42.2%</td>
</tr>
<tr>
<td>2016</td>
<td>57.7%</td>
<td>42.3%</td>
</tr>
</tbody>
</table>

Sources: HPC analysis of Massachusetts All-Payer Claims Database, 2014; Registration of Provider Organizations, 2016; SK&A Office and Hospital Based Physicians Databases, December, 2015
Uptake of alternative payment methods (APMs) increased in 2016, driven by growth in commercial PPO products.

Proportion of member months under APM by insurance category, 2014-2016

<table>
<thead>
<tr>
<th>Category</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Commercial</td>
<td>37%</td>
<td>36%</td>
<td>42%</td>
</tr>
<tr>
<td>Commercial HMO</td>
<td>63%</td>
<td>58%</td>
<td>59%</td>
</tr>
<tr>
<td>Commercial PPO</td>
<td>2%</td>
<td>1%</td>
<td>15%</td>
</tr>
<tr>
<td>Original Medicare</td>
<td>40%</td>
<td>39%</td>
<td>37%</td>
</tr>
<tr>
<td>Medicare Advantage</td>
<td>63%</td>
<td>57%</td>
<td>59%</td>
</tr>
<tr>
<td>MassHealth PCC</td>
<td>34%</td>
<td>37%</td>
<td>36%</td>
</tr>
<tr>
<td>MassHealth MCO</td>
<td>22%</td>
<td>23%</td>
<td>24%</td>
</tr>
</tbody>
</table>

Notes: 2016 results for Original Medicare represent preliminary estimates.
Sources: HPC analysis of Center for Health Information and Analysis Annual Report APM data book, 2017; Centers for Medicare and Medicaid Services, Number of ACO Assigned Beneficiaries by County Public Use File"(2014 – 2016); "Medicare Pioneer Accountable Care Organization Model Performance Years 3- 5" (2014 - 2016); "Next Generation ACO Model Financial and Quality Results Performance Year 1" (2016).
Aging of the population in Massachusetts contributes to health care spending growth

- The Massachusetts population is aging

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2015</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average age</td>
<td>38.8 years</td>
<td>39.4 years</td>
<td>40.2 years</td>
</tr>
<tr>
<td>% of state residents 65+</td>
<td>13.9%</td>
<td>15.4%</td>
<td>17.0%</td>
</tr>
</tbody>
</table>

- Older residents have higher spending

<table>
<thead>
<tr>
<th>Age</th>
<th>0-18</th>
<th>19-44</th>
<th>45-64</th>
<th>65-84</th>
<th>85+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average PMPY spending</td>
<td>$3,394</td>
<td>$4,260</td>
<td>$9,091</td>
<td>$16,123</td>
<td>$30,972</td>
</tr>
</tbody>
</table>

- Relative population aging contributes consistently to notable TME growth

<table>
<thead>
<tr>
<th></th>
<th>2012-2015</th>
<th>2016-2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>TME growth per year due to relative aging</td>
<td>+0.5%</td>
<td>+0.6%</td>
</tr>
</tbody>
</table>

Notes: Resident spending by age bracket are national CMS estimates.
National health care spending growth has averaged 4-5% from 2014 to 2017, driven by both prices and utilization.

- **Price growth over this period has been historically low (1-2%), with the exception of:**
  - Commercial sector hospital prices (~3% per year)
  - Prescription drug prices (~4% per year)
Price increases are projected to be the primary driver of national health care spending growth moving forward.

Average contribution to annual percent growth in health care spending per capita for the years shown:

- **Price growth has been relatively low from 2014-7 but is expected to increase**

National health care spending is projected to increase 5 percent annually from 2017 to 2026

- Higher expected growth driven by population aging, prices, and specialty prescription drugs

Centers for Medicare and Medicaid Services, actual and projected national health care expenditures per capita, Feb 2018 projections
HEARING ON THE POTENTIAL MODIFICATION OF THE
HEALTH CARE COST GROWTH BENCHMARK

OPPORTUNITIES FOR COST SAVINGS

March 28, 2018
Opportunities for Improving Care and Reducing Spending

In order to inform the consideration of whether to modify the health care cost growth benchmark, the HPC identified a set of specific opportunities for improvement and modeled potential health care spending reduction estimates for each one.

The limited set of seven scenarios is based on specific policy recommendations and targets described in the 2017 Cost Trends Report. This should **not** be considered an exhaustive list of potential areas for reducing health care spending.

These illustrative, **“what-if”** scenarios are intended to provide the HPC’s Board, the Legislature, market participants, and the public with a greater understanding of the scope and scale of different savings opportunities.

This year, the model includes five-year estimates from 2018 to 2022 and separate estimates for commercial spending, Medicare, and MassHealth, where applicable.
List of 2018 Spending Reduction Scenarios

1. Reduce Hospital Readmissions
2. Reduce Institutional Post-Acute Care
3. Reduce Avoidable Emergency Department Use
4. Shift Community-Appropriate Inpatient Care to Community Hospitals
5. Implement Site-Neutral Payment for Hospital Outpatient Services
6. Reduce Prescription Drug Price Growth
7. Increase Adoption of Alternative Payment Methods
**BACKGROUND**

- Massachusetts all-payer hospital readmissions rates *increased* in 2014 and 2015 while the national average has been falling
  - Massachusetts’ Medicare readmission rate was 10th highest in the US in 2015 at 18.2% versus 16.8% in the rest of the nation

**ESTIMATE TARGET AND SCOPE**

- Reduce *all-payer readmissions gradually such that the 2022 readmissions rate is 20% below the 2015 rate*
- Scope: All discharges

**KEY ASSUMPTIONS**

- **Baseline**: readmission rates hold steady for all payers from 2015 onward
- Assume that rates for Medicare, Commercial, and MassHealth each drop by 20% from their 2015 levels
Reducing hospital readmissions by 20% would save $1.04 billion over five years

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>$66,041,768</td>
</tr>
<tr>
<td>2019</td>
<td>$134,704,966</td>
</tr>
<tr>
<td>2020</td>
<td>$206,070,783</td>
</tr>
<tr>
<td>2021</td>
<td>$280,222,749</td>
</tr>
<tr>
<td>2022</td>
<td>$357,246,803</td>
</tr>
<tr>
<td>Total</td>
<td>$1,044,287,069</td>
</tr>
</tbody>
</table>

All-Payer

Baseline spending

Target spending

$1.04 billion


$2,000,000,000

$1,500,000,000

$1,000,000,000

$500,000,000
Post-Acute Care

**BACKGROUND**

- Massachusetts residents are more likely to be discharged from hospitals to institutional post-acute care (PAC) settings than residents of other states (20.4% versus 17.1%).
  - Of 36 states with available data, Massachusetts had the highest rate of institutional PAC discharges; 13 states had a discharge rate to institutional PAC below 15%.
- All institutional PAC settings (SNFs, IRFs, LTCHs) are markedly more costly, on average, than routine discharges or home health care.

**ESTIMATE TARGET AND SCOPE**

- Gradually reduce the rate of discharge to institutional PAC to 15% by 2022 without increasing home health use
- Scope: All discharges

**KEY ASSUMPTIONS**

- **Baseline**: rate of discharges to PAC settings remains at 2016 levels
- Use Medicare payment amounts for all payers; Medicare makes up 80% of PAC discharges
Reducing institutional post-acute care by 25% would save $1.37 billion over five years

<table>
<thead>
<tr>
<th>All-Payer</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Savings</td>
<td>$88,690,518</td>
<td>$178,626,287</td>
<td>$270,946,831</td>
<td>$365,700,683</td>
<td>$462,937,279</td>
<td>$1,366,901,599</td>
</tr>
</tbody>
</table>
Avoidable Emergency Department Use

BACKGROUND

- Emergency departments often serve patients with non-emergency conditions (~20% of visits) or conditions that could be safely treated in a primary care setting (~20% of visits).
- Massachusetts has a higher rate of Emergency Department visits and avoidable ED visits than the nation as a whole.

ESTIMATE TARGET AND SCOPE

- By 2022, gradually shift:
  - 20% of visits for emergent primary care treatable conditions to primary care settings
  - 33% of visits for non-emergency conditions to a lower-intensity setting (urgent care center, retail clinic, or primary care office), and
- Gradually eliminate 33% of visits for non-emergency conditions
- Scope: MassHealth and Commercial ED visits

KEY ASSUMPTIONS

- Baseline: the number of ED visits per year remains constant
- Shifts are in the same proportions for Commercial and MassHealth patients
Reducing non-emergent ED visits by 66%, including a 33% shift to other settings, would save $260 million over five years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>$16,683,137</td>
</tr>
<tr>
<td>2019</td>
<td>$33,866,769</td>
</tr>
<tr>
<td>2020</td>
<td>$51,562,155</td>
</tr>
<tr>
<td>2021</td>
<td>$69,780,783</td>
</tr>
<tr>
<td>2022</td>
<td>$88,534,369</td>
</tr>
<tr>
<td>Total</td>
<td>$260,427,213</td>
</tr>
</tbody>
</table>
Shifting 20% of emergent primary care treatable ED visits to other settings would save $91 million over five years

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>$5,479,069</td>
<td>$12,634,813</td>
<td>$18,402,271</td>
<td>$24,339,909</td>
<td>$30,451,537</td>
<td>$91,307,599</td>
</tr>
</tbody>
</table>

Primary care: baseline spending
Primary care: target spending
ED: baseline spending
ED: target spending

Commercial + MassHealth
“Community appropriate” inpatient care can be safely delivered to patients at most hospitals in the Commonwealth
  – As much as possible, this care should be provided at high-value community hospitals
The percentage of such care provided by community hospitals has steadily fallen from 59.8% in 2011 to 57.7% in 2016

Gradually shift 25% of Commercial and Medicare community appropriate care from teaching hospitals to community hospitals by 2022
Scope: Commercial and Medicare discharges

Baseline: The number of community appropriate discharges remains constant from 2016 onward
Shifting 25% of community appropriate inpatient discharges from teaching hospitals to community hospitals would save $211 million over five years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>$13,477,918</td>
</tr>
<tr>
<td>2019</td>
<td>$27,409,461</td>
</tr>
<tr>
<td>2020</td>
<td>$41,806,221</td>
</tr>
<tr>
<td>2021</td>
<td>$56,680,058</td>
</tr>
<tr>
<td>2022</td>
<td>$72,043,103</td>
</tr>
<tr>
<td>Total</td>
<td>$211,416,761</td>
</tr>
</tbody>
</table>
In 2016, hospital outpatient spending represented the fastest-growing category of commercial spending at 5.5% per member
- It was also the largest source of variation in spending by provider organization

Many services performed in hospital outpatient departments (HOPDs) can be performed in alternative settings, including less expensive physicians’ offices and freestanding imaging centers

**Estimate Target and Scope**
- Reimburse select outpatient procedures at a site-neutral rate, starting in 2018
- Scope: 19 selected high-volume, ‘shoppable’ outpatient procedures*

**Key Assumptions**
- Baseline: Assume constant utilization rates of selected procedures from 2015 to 2022
- Apply site-neutral payments, based on the price of performing these procedures in non-HOPD settings, for patients attributed to the 14 largest provider organizations in Massachusetts.

The commercial estimate uses 19 procedures including Imaging (Brain MRI – 70553, Joint MRI – 73721, Chest x-ray – 71020), Upper GI endoscopy (43239), Colonoscopy (45378), Surgical pathology (88305), Echocardiogram (93306), E&M visit (99212)
Implementing site-neutral outpatient reimbursement for certain high-volume, “shoppable” conditions would save over $1 billion over five years.

<table>
<thead>
<tr>
<th>Year</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Savings</td>
<td>$195,132,039</td>
<td>$202,841,187</td>
<td>$210,830,830</td>
<td>$219,110,675</td>
<td>$227,690,801</td>
<td>$1,055,605,532</td>
</tr>
</tbody>
</table>

Baseline spending vs. Target spending.
Prescription Drug Spending

**BACKGROUND**

- Prescription drug spending represented the fastest growing category of care in 2015 and 2016 (7.2% and 6.1% net of rebates, respectively)

**ESTIMATE TARGET AND SCOPE**

- In order to achieve overall growth consistent with the benchmark, *cap annual growth in the price of existing prescription drugs at 1.6%*
- This allows up for up to 1.5% spending growth due to utilization and introduction of new therapies/products
- Scope: Commercial market; prescription drugs that rank high in total spending - comprising the top 50% of all drug spend

**KEY ASSUMPTIONS**


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1Health Sector Economic Indicators, Altarum Center for Value in Health Care [https://altarum.org/sites/default/files/uploaded-related-files/SHSS-Price-Brief_February_2018_0.pdf](https://altarum.org/sites/default/files/uploaded-related-files/SHSS-Price-Brief_February_2018_0.pdf)
Limiting prescription drug price growth to 1.6% would save $230 million over five years

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Savings</strong></td>
<td>$43,366,003</td>
<td>$44,517,093</td>
<td>$46,037,453</td>
<td>$47,357,490</td>
<td>$49,233,591</td>
<td>$230,511,630</td>
</tr>
</tbody>
</table>

Baseline spending

Target spending

$230 million
Baseline: APM rates hold steady from 2016 onward; spending grows 3.1% per year

APMs reduce spending growth by 1-2%, but the effect is twice as large once a critical mass (63%) of patients is under APMs for a given provider organization.

Massachusetts APM adoption in the commercial market increased from 37% to 42% between 2014 and 2016, which is still below the rate needed for APMs to provide sufficient incentives to reduce health care costs.

Increase APM adoption in the commercial market to 68% among HMO plans and 40% among PPO plans by 2022 (see graph)

Scope: Commercial market

Baseline: APM rates hold steady from 2016 onward; spending grows 3.1% per year

APMs reduce spending growth by 1-2%, but the effect is twice as large once a critical mass (63%) of patients is under APMs for a given provider organization.

Expanding use of alternative payment methods would save $494 million over five years

<table>
<thead>
<tr>
<th>Year</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Savings</td>
<td>$3,877,163</td>
<td>$30,889,395</td>
<td>$74,780,093</td>
<td>$150,444,441</td>
<td>$234,635,036</td>
<td>$494,626,098</td>
</tr>
</tbody>
</table>
Total savings over five years exceeds $4.7 billion

<table>
<thead>
<tr>
<th>Measure</th>
<th>2018 savings</th>
<th>2019 savings</th>
<th>2020 savings</th>
<th>2021 savings</th>
<th>2022 savings</th>
<th>5 year savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readmissions</td>
<td>$66.0m</td>
<td>$134.7m</td>
<td>$206.1m</td>
<td>$280.2m</td>
<td>$357.2m</td>
<td>$1.04b</td>
</tr>
<tr>
<td>PAC</td>
<td>$88.7m</td>
<td>$178.6m</td>
<td>$270.9m</td>
<td>$365.7m</td>
<td>$462.9m</td>
<td>$1.37b</td>
</tr>
<tr>
<td>Avoidable ED</td>
<td>$22.2m</td>
<td>$46.5m</td>
<td>$70.0m</td>
<td>$94.1m</td>
<td>$119.0m</td>
<td>$351.7m</td>
</tr>
<tr>
<td>Outpatient</td>
<td>$195.1m</td>
<td>$202.8m</td>
<td>$210.8m</td>
<td>$219.1m</td>
<td>$227.7m</td>
<td>$1.06b</td>
</tr>
<tr>
<td>CADs</td>
<td>$13.5m</td>
<td>$27.4m</td>
<td>$41.8m</td>
<td>$56.7m</td>
<td>$72.0m</td>
<td>$211.4m</td>
</tr>
<tr>
<td>Drugs</td>
<td>$43.4m</td>
<td>$44.5m</td>
<td>$46.0m</td>
<td>$47.4m</td>
<td>$49.2m</td>
<td>$230.5m</td>
</tr>
<tr>
<td>APMs</td>
<td>$3.9m</td>
<td>$30.9m</td>
<td>$74.8m</td>
<td>$150.4m</td>
<td>$234.6m</td>
<td>$494.6m</td>
</tr>
<tr>
<td>Net savings</td>
<td>$432.7m</td>
<td>$665.5m</td>
<td>$920.4m</td>
<td>$1.21b</td>
<td>$1.52b</td>
<td>$4.76b</td>
</tr>
<tr>
<td>Commercial savings</td>
<td>$291.6m</td>
<td>$379.5m</td>
<td>$484.8m</td>
<td>$623.6m</td>
<td>$773.3m</td>
<td>$2.55b</td>
</tr>
</tbody>
</table>

Note: Savings by measure and year may not add to the total savings due to rounding.
Compared to recent performance, achieving the combined savings would reduce THCE by $1.5 billion (2.1%) in 2022

### All-Payer

<table>
<thead>
<tr>
<th>Year</th>
<th>Baseline THCE (3.55% growth)</th>
<th>Savings as a percentage of THCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>$63.3 billion</td>
<td>0.7%</td>
</tr>
<tr>
<td>2019</td>
<td>$65.5 billion</td>
<td>1.0%</td>
</tr>
<tr>
<td>2020</td>
<td>$67.8 billion</td>
<td>1.4%</td>
</tr>
<tr>
<td>2021</td>
<td>$70.3 billion</td>
<td>1.7%</td>
</tr>
<tr>
<td>2022</td>
<td>$72.7 billion</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

Baseline THCE (3.55% growth) graph:
- Baseline THCE (3.55% growth)
- THCE with savings