State Costs and Revenue-Related to Long-Term Care for Older Coloradans

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In August 2018, the Strategic Action Planning Group on Aging (SAPGA) contracted with the Colorado Health Institute (CHI) to address key questions related to aging long-term services and supports (LTSS) in Colorado. The guiding research questions were:

1. What types of LTSS care are older Coloradans utilizing?
2. What are the expected state LTSS expenditures, now (2018) through 2030?
3. What is the expected state LTSS revenue, now (2018) through 2030?
4. What is the expected gap between state LTSS revenue and expenditures, now (2018) through 2030?
5. What changes to state-funded LTSS demand, care settings, and workforce may reduce or eliminate this gap?

In 2018, Colorado spent $630 million on aging-related long-term services and supports (LTSS). By 2030, the state is expected to spend $1.5 billion on these services. However, without major changes to the state budget or new ways to provide these services, the state can expect to have just $964 million in available revenue to allocate to aging-related LTSS in 2030.

This report summarizes CHI’s research in detail and points to recommendations moving forward.

State Long-Term Care Services

Colorado currently provides aging-related LTSS in a variety of settings for older adults with a variety of health care needs. This study defines “aging-related” LTSS as services provided to Coloradans age 65 and older.

Settings of care included in this study are the home, assisted living, residential habilitation, and skilled nursing. [See sidebar.]

Four-fifths (80 percent) of older Coloradans getting state-supported LTSS are being served at home — usually by programs offered through the Colorado Department of Human Services (CDHS). If current trends persist, CDHS will still have the largest share of the caseload by 2030. But the Program of All-Inclusive Care for the Elderly, or PACE, will experience the largest growth, covering one in eight Coloradans getting these services in 2030, up from just 1 in 25 in 2018 (see Figure 1). While small compared with the caseload of other programs, PACE enrollment has grown 150 percent in the past decade.

Figure 1. LTSS Caseload Mix for Older Coloradans, FY 2018 and FY 2030
Setting of LTSS Care Included in this Study

This report investigates LTSS costs across multiple settings and programs. Budgets for many state agencies, including the Colorado Department of Transportation, the Department of Local Affairs, and the Department of Regulatory Agencies, will be impacted by Colorado’s changing age demographics. This analysis is limited to the settings of care, and therefore programs administered by the Colorado Department of Health Care Policy and Financing (HCPF) and the Colorado Department of Human Services (CDHS). These programs are:

**Home Care**
CDHS provides home-based care financed by the Older Americans Act (OAA) and State Funding for Senior Services (SFSS). A wide variety of services support older adults living in communities who do not require a high level of medical care. Services include chore assistance, meal preparation, adult day services, transportation, and legal assistance.

**Long-term Home Health**
Medicaid covers long-term home health care for beneficiaries. Long-term home health services provide professional medical care to older adults for whom their home is the most effective setting. These include skilled nursing care, home health aide care, and physical therapy.

**Home and Community-Based Services**
In Colorado, as in many states, the Medicaid program offers care through a home and community-based services (HCBS) waiver. This is provided to beneficiaries who need the level of care typically provided in a nursing home setting. Services include transportation assistance, personal care, adult day services, and respite care.

**The Program of All-Inclusive Care for the Elderly**
Colorado’s Medicaid also administers a Program of All-Inclusive Care for the Elderly (PACE). PACE is available to Medicaid beneficiaries who need the level of care typically provided in a nursing home setting. PACE has a focus on coordinated care, and services include adult day services, health care, transportation assistance, and respite care.

**Assisted Living**
Medicaid also provides care in assisted living, also known as alternative care settings. Assisted living supports aging in a community setting through 24-hour protective oversight, assistance with daily activities, personal care, and homemaker services.

**Residential Habilitation**
Medicaid also provides long-term services and supports in a residential setting, called residential habilitation. These residential settings can be individual or group living environments. Services include cognitive care, self-advocacy training, transportation, and independent living training.

**Skilled Nursing**
Medicaid covers skilled nursing care for any beneficiary who requires it. Skilled nursing offers a variety of specialized medical, mental, and social services. These often care for the highest-need Coloradans.
State Long-Term Care Costs

Funding for older Coloradans’ LTSS comes through the Colorado Department of Health Care Policy and Financing (HCPF), which provides care through Medicaid, and the Department of Human Services (CDHS), which provides services through the Older Americans Act (OAA) and State Funding for Senior Services (SFSS).

These programs are paid for using federal, state, and local funds. The total cost to provide these services was $1.3 billion in fiscal year (FY) 2018.

The federal government covered $622 million and local cash funds another $3 million. But the state paid for the remaining $630 million of these costs. Nearly half (44 percent) of this funding went to providing skilled nursing care. A third (35 percent) covered services provided through the HCBS waiver (see Figure 2).

Expenditures do not necessarily track with the

![Figure 2. State Funding for LTSS by Program (in Millions), FY 2018](image)

Table 1. State-funded LTSS Programs At a Glance

<table>
<thead>
<tr>
<th>Program</th>
<th>Administered By</th>
<th>Funded By</th>
<th>Mean Cost per Enrollee per Month, FY 2018</th>
<th>Full-time Equivalent Enrollees, FY 2018*</th>
</tr>
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<tbody>
<tr>
<td>Home-based services</td>
<td>CDHS</td>
<td>Federal funds; state general funds; state cash funds; local cash funds</td>
<td>$930</td>
<td>44,085</td>
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<td>Long-term home health</td>
<td>HCPF</td>
<td>Federal funds; state general funds</td>
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<tr>
<td>HCBS waiver</td>
<td>HCPF</td>
<td>Federal funds; state general funds</td>
<td>$3,186</td>
<td>1,106</td>
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<td>PACE</td>
<td>HCPF</td>
<td>Federal funds; state general funds</td>
<td>$3,729</td>
<td>3,164</td>
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<td>Assisted living</td>
<td>HCPF</td>
<td>Federal funds; state general funds</td>
<td>$1,597</td>
<td>2,061</td>
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<tr>
<td>Skilled nursing</td>
<td>HCPF</td>
<td>Federal funds; state general funds</td>
<td>$5,627</td>
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<tr>
<td>Residential habilitation</td>
<td>HCPF</td>
<td>Federal funds; state general funds</td>
<td>$5,725</td>
<td>505</td>
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*Because not every Medicaid beneficiary uses these services for the full year, “full-time equivalent” refers to 12 beneficiary months. For example, one Medicaid beneficiary using three months of a service and another Medicaid beneficiary using nine months of a service will count as one “full-time equivalent” in the caseload totals.
Figure 3: State General and Cash Funds Expenditures by Program, FY 2018

- K-12 Education: 26%
- Higher Education: 19%
- Other HCPF: 19%
- Corrections/Judicial: 8%
- LTSS HCPF: 3%
- LTSS (CDHS): 0.1%
- Other Human Services: 7%
- Other: 17%

Figure 4: Increase in State Costs to Provide LTSS for Older Adults, FY 2018-FY 2030

- State Costs for 65+ LTSS (in Millions)
  - FY2018: $630
  - FY2019:
  - FY2020:
  - FY2021:
  - FY2022:
  - FY2023:
  - FY2024:
  - FY2025:
  - FY2026:
  - FY2027:
  - FY2028:
  - FY2029:
  - FY2030: $1,452

Figure 5: Increase in State Revenue for LTSS for Older Adults, FY 2018-FY 2030

- State Revenue for 65+ LTSS (in Millions)
  - FY2018: $630
  - FY2019:
  - FY2020:
  - FY2021:
  - FY2022:
  - FY2023:
  - FY2024:
  - FY2025:
  - FY2026:
  - FY2027:
  - FY2028:
  - FY2029:
  - FY2030: $964
caseloads for these programs, as monthly costs per enrollee range from $930 for services provided by CDHS to nearly $6,000 for residential habilitation care (see Table 1). This is mostly driven by the differences in acuity between these populations. PACE, residential habilitation, HCBS waivers, and skilled nursing cares for some of the highest-need older Coloradans, while home-based services offered by CDHS support older Coloradans living independently and with comparatively minor health care needs.

The $630 million in state expenditures makes up less than 4 percent of state general and cash funds (see Figure 3). This is 15 percent of HCPF’s budget and 1 percent of the CDHS budget.

Over the next 12 years, these expenditures are expected to more than double, reaching $1.5 billion in 2030 (see Figure 4). Factors contributing to this include a growing population of older Coloradans, changing demographics within the older adult population (such as a greater percentage of people 80 and older), and increasing costs of medical care.

State Long-Term Care Revenue

Under the base case scenario developed for this analysis, Colorado will have $964 million available for state-funded LTSS in FY 2030 (see Figure 5).

However, estimating the anticipated state revenue available for LTSS is difficult, as few state funds are earmarked specifically to cover LTSS services. Cash funds specifically intended for these programs, such as the Older Coloradans Cash Fund, accounted for less than 2 percent of the $630 million state cost in FY 2018.

Because general funds can be allocated differently based on state priorities, it’s possible the state will distribute funding differently in FY 2030 than it did in FY 2018. For example, Colorado may reduce its spending on higher education to cover LTSS cost growth.

In FY 2018, the state spent 6 percent of its general fund on LTSS for older Coloradans. CHI’s base case revenue scenario assumes that this same proportionate spending continues through 2030, with the exception of increased funding for K-12 education to alleviate the current under-funding referred to as the “negative factor” and increases in general fund commitments due to the growing homestead tax exemption as Colorado’s population ages.

Another scenario with different assumptions could offer different results. For example, if Proposition 109, which would increase transportation funding, were to pass in November 2018, it would introduce a new cost to the general fund. Under this scenario, just $779 million would be available for aging-related LTSS in FY 2030.

Figure 6. State Costs Versus State Revenue for LTSS for Older Adults, FY 2018–FY 2030

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State Costs and Revenue Related Long-Term Care for Older Coloradans

Colorado Health Institute
Gap Between State Long-Term Care Costs and Revenue

Under the base case analysis, there will be a gap between LTSS costs and revenue. The shortfall will be $22 million in FY 2020 and grow to $488 million in FY 2030 (see Figure 6).

The state will not actually spend more on aging-related LTSS than it has in available revenue. The funding gap represents the additional financing that would be needed to continue providing LTSS for older adults at the current level of service.

Most of this gap will be incurred by the Medicaid program, but CDHS programs are also facing a funding shortage. In 2020, $768,000 of the $22 million gap will be incurred by CDHS. By FY 2030, CDHS will face a $7 million shortfall.

Reducing the Gap Between State Long-Term Care Costs and Revenue

Generally, solutions for this funding shortage focus on lowering anticipated costs rather than increasing funding at the expense of other state budget priorities. Changes to state-funded LTSS care settings, LTSS workforce, and new technologies may contribute to this goal.

Settings. One way to address the growing pressure of LTSS costs on the state budget is to reconsider the settings in which older Coloradans currently get care. Shifting to less expensive settings, such as home-based care, could significantly reduce the state’s spending. In Colorado, if 20 percent of people projected to be served by skilled nursing were instead served with the HCBS program, there would be no funding gap in FY 2020, but a $5 million surplus.

Within Medicaid, for example, the cost of providing someone home-based LTSS is anywhere from 45 to 66 percent of the cost to care for someone with skilled nursing, depending on the home-based program. In addition to potential cost savings to the state, nearly 9 in 10 older adults say they would prefer to age in their community. In response to these trends and statistics, some states have already piloted programs that support transitioning to home and community-based living.

Texas and Arizona both leverage the Housing and Urban Development Section 811 Supportive Housing for Persons with Disabilities Program to make home-based settings more affordable and accessible for many older adults who require assistance with daily activities. These Section 811 waivers incentivize developers to create housing units for people transitioning from institutional care into the community.

In Tennessee, the state’s Medicaid LTSS program uses payment reform to increase the use of home-based LTSS. The state pays health care plans a standard capitated rate for Medicaid beneficiaries at a skilled nursing level of care. This payment is the same whether these beneficiaries remain in...
skilled nursing or move to a home-based setting. This incentivizes these plans to ensure beneficiaries are receiving the most cost-effective level of care, and initial evaluations show there have been no adverse impacts on access to care. Evaluations of care quality have shown mixed results. Funds are also provided to Medicaid beneficiaries transitioning to community-based living to help pay for new costs such as rent and basic furnishings.

In Washington state, the Medicaid program also uses its HCBS waiver to increase the use of home and assisted living settings of care for nursing home-eligible beneficiaries. This program pays providers tiered rates to help them provide assisted living to beneficiaries with a wide range of health needs.

In Colorado, the Colorado Choice Transitions (CCT) program aims to help Medicaid beneficiaries who wish to transition out of institutional care settings into home- and community-based settings do so by supporting them with home-delivered meals, community transition services, and more. In addition, non-profit community groups such as the Respite Coalition support caregivers so they in turn can support family or other loved ones who are living at home.

However, increasing costs of care mean expenses will eventually surpass the state revenue dedicated to these programs, even if there are large changes to the settings of care. In the above example, where 20 percent of skilled nursing patients instead received care through the HCBS waiver, the initial surplus in FY 2020 would still turn into a funding shortfall of $443 million by FY 2030.

**Workforce.** Another potential strategy includes changes to the workforce. States pursuing this strategy include Tennessee and New Jersey.

Tennessee has launched an educational initiative that teaches new competencies to the LTSS workforce. The aim is to increase the capacity of this workforce to engage in value-based payment models by aligning quality metrics used in these models with new competencies. Value-based payment models have been shown to reduce costs in many states, including Colorado.

In New Jersey, a nurse delegation pilot is expanding the number of tasks that can be done by certified home health aides. Tasks are those traditionally provided by nurses, such as medication administration. This will allow services to be provided at lower costs by utilizing a more cost-effective workforce.

**Technology.** The potential of new technologies to alleviate pressure on Colorado’s aging-related LTSS budget is substantial, but also largely unknown. The evidence for many innovative potential solutions such as monitoring technology, transportation apps, smart homes, and social artificial intelligence does not yet exist.

Organizations such as Health 2.0 and Aging 2.0 promote conversations around the role of technology in these areas. They provide innovators, inventors, and investors forums to share solutions.

Locally, a September 2018 panel held as part of Denver Startup Week focused specifically on Coloradans choosing to age at home. It examined ways new technologies such as smart homes and technologies that detect when an older adult has fallen can support these older adults and their caregivers.

**Conclusion**

There is one thing that every human has in common—we are all aging. The growth in Colorado’s older adult population is good for us all. We are living longer, and often healthier, lives.

But in order to sustain many of these gains and support older adults in the future as robustly as it does today, Colorado will have to make some large changes in its approach to funding aging-related LTSS.

Additional research could provide context on how a variety of solutions would work in Colorado. Some suggestions are included in an appendix, “Forging Ahead.”
Forging Ahead: Suggestions for Research Going Forward

Quantifying the impact of evidence-based practices would help Colorado estimate the impact of solutions and innovations on the aging-related LTSS funding gap projected for the state. For example, if New Jersey’s nurse delegation pilot lowers the per capita cost of skilled nursing care, what might the impact be on the per capita cost of skilled nursing if such a program were adopted in Colorado? This model could be adapted to estimate the impact of these lowers costs on the state funding gap.

Moving beyond economic arguments for home as a setting of care to investigate if there are differences between quality of care, care continuity, and health outcomes between people who get care through programs such as HCBS and those who get services in a skilled nursing setting. Studies on when home is truly the best setting of care for many older adults, especially those in need of higher levels of support, are essential to the discussion of the role of the home in LTSS.

Including private market costs in these estimates may paint a more comprehensive picture of aging-related LTSS in Colorado. Approximately 30 cents of every LTSS dollar is spent within the private market.

Assessing workforce shortages and competencies would help Colorado understand how our state’s LTSS workforce is equipped to handle changes in demand. Future studies could leverage research conducted by the state demographer on the employment impacts of aging. Research should consider the feasibility of filling needed positions over the coming years and how new competencies can help support changes to the workforce.

Assessing capacity will also be key to helping older Coloradans live in the right setting for them. Many Coloradans are struggling with affordable housing, and addressing these challenges for older adults is key to helping them age in the community. If fewer Coloradans are utilizing skilled nursing, specific questions about their sustainability should also be considered. Reductions in demand may put pressure on these locations to close – but their presence is still needed to provide the appropriate level of care to the most vulnerable and highest-need Coloradans. Already, patients and providers report difficulty finding Medicaid-reimbursable sites.

New data needs could also open up new avenues for research. In some cases, data limitations have meant study limitations. More information could allow for risk-adjustment in these analyses, and therefore risk-controlled setting of care analyses.

Research on technologies can further elucidate their role in improving independence, choice, and cost. Cost-benefit analyses on new technologies, may help the state understand returns on investments in these innovations.
Endnotes

1 In this analysis, “caseload” refers to the number of full-time equivalent (FTE) Coloradans using HCPF or CDHS services. For example, if someone is in skilled nursing for nine months in a year, this person is counted as 0.75 FTEs in the caseload totals.


The Colorado Health Institute is a trusted source of independent and objective health information, data and analysis for the state’s health care leaders. The Colorado Health Institute is funded by the Caring for Colorado Foundation, Rose Community Foundation, The Colorado Trust and the Colorado Health Foundation.