MN LTSS Projection Model

• Developed with collaboration from the Minnesota Department of Human Services, Aging Services
• Interested in Medicaid-funded LTSS for the elderly, 65 years and older
  • Primarily interested in future utilization and cost of LTSS
  • Use of MMIS 2015 claims data for baseline
• Projections to 2020 and 2030
• Excludes disabled under age 65; excludes acute care services
• Prioritizes the use of Minnesota-specific data
Outline

• Background on MN Medicaid and Demographic Trends
• Overview of the Model
• Policy Options
• Utilization and Cost Projections
• Closing Remarks
Background
Focus: elderly 65+ enrolled in Medicaid

Minnesota Medicaid enrollment by Eligibility category: 2012-2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Adults</th>
<th>Age 65 or older</th>
<th>Disability or blindness</th>
<th>Parents and children</th>
<th>Total Medicaid enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>82,908</td>
<td>58,073</td>
<td>125,335</td>
<td>471,126</td>
<td>737,442</td>
</tr>
<tr>
<td>2013</td>
<td>86,567</td>
<td>58,090</td>
<td>127,230</td>
<td>474,013</td>
<td>745,900</td>
</tr>
<tr>
<td>2014</td>
<td>168,118</td>
<td>58,511</td>
<td>124,830</td>
<td>641,024</td>
<td>992,483</td>
</tr>
<tr>
<td>2015</td>
<td>207,649</td>
<td>58,937</td>
<td>120,588</td>
<td>693,269</td>
<td>1,080,443</td>
</tr>
<tr>
<td>2016</td>
<td>201,457</td>
<td>60,384</td>
<td>118,076</td>
<td>706,729</td>
<td>1,086,646</td>
</tr>
</tbody>
</table>

Source: Medicaid Matters, DHS 2018

5.5% of Total Medicaid Population
Minnesota’s aging population continues to grow as baby boomers age

Historical and Projected Population Shares By Three Major Age Groups, Minnesota, 1950-2050

Source: U.S. Census Bureau, decennial census, and Minnesota State Demographic Center Projections.
While enrollment is only 5.5% of Medicaid, the costs are high

Medicaid per enrollee spending is significantly greater for the elderly and individuals with disabilities compared to children and adults.

Note: Rounded to nearest $100. Spending may not sum to totals due to rounding. Source: Kaiser Family Foundation and Urban Institute estimates based on data from FY 2013 MSIS and CMS-64 reports. Due to lack of data, does not include CO, KS, NC, or RI
Long Term Services and Supports

• LTSS encompasses the broad range of paid and unpaid medical and personal care assistance that people may need — for several weeks, months, or years — when they experience difficulty completing self-care tasks (Kaiser Family Foundation 2015)

• Examples:
  • Personal Care Assistance
  • Nursing facilities
  • Adult foster care
  • Companion services
  • Chore services
  • Transitional services
Minnesota’s use of Nursing Facilities have declined over time

Use of Nursing Facilities by Medicaid Enrollees

Decline of 9,354 Medicaid enrollees
From 27% to 20%
between 2011 and 2016

Source: SHADAC analysis of MMIS, 2011-2016
One has to be very poor to be eligible for regular Medicaid at age 65

Figure 2: Minnesota’s income eligibility levels for Medicaid, MinnesotaCare, federal tax credits

<table>
<thead>
<tr>
<th>Federal Poverty Level</th>
<th>100%</th>
<th>200%</th>
<th>300%</th>
<th>400%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants up to age 2</td>
<td>283% (Medicaid)</td>
<td>&gt;283%-400% (APTC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnant women</td>
<td>275% (Medicaid)</td>
<td>&gt;275%-400% (APTC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children ages 2-18</td>
<td>275% (Medicaid)</td>
<td>&gt;275%-400% (APTC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents</td>
<td>133% (Medicaid)</td>
<td>&gt;133%-200% (MinnesotaCare)</td>
<td>&gt;200%-400% (APTC)</td>
<td></td>
</tr>
</tbody>
</table>

Parents and Adults age 65 or older:

- Individuals who have a disability or are blind: 100% (Medicaid)

100% FPG – 2015 Baseline

<table>
<thead>
<tr>
<th>Family Size</th>
<th>2015 Gross Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$11,770</td>
</tr>
<tr>
<td>2</td>
<td>$15,930</td>
</tr>
<tr>
<td>3</td>
<td>$20,090</td>
</tr>
</tbody>
</table>
There is a complex eligibility determination process for LTSS funding.

**INCOME**
- Eligible up to **100% FPG**
  - ($11,770 annual income for household of one)
- Deductions and transfers
  - Spousal allowance (max. $35k /yr)
  - Personal needs/home maintenance allowances (approx. $1k - $11k /yr)
  - Insurance premiums deduction

**SPENDDOWN**
- Deduct medical expenses up to reaching a disposable income of **80% FPG**
  - ($9,416 annual income for household of one)

**ASSETS**
- Eligible up to **$3,000**
- **$560K** home equity limit
- Deductions and transfers
  - Primary home (if living at home)
  - Value of one vehicle
  - Spousal allowance (approx. $121k)
Overview of the Model
General Overview

• Our model:
  • projects the use and costs of LTSS for MN’s Medicaid elderly population *(excludes disabled population under age 65 and acute care services)*
  • estimates potential future costs of Medicaid based on current use
  • allows for estimating impact on costs of key policy interventions

• We prioritize the use of MN-specific data
  • And when not available, we adjust national data to Minnesotans’ characteristics

• Baseline: 2015

• Projections: 2020 and 2030
Model’s Steps

1. Cohorts
2. Current LTSS Users (Baseline)
3. Potential Future LTSS Users
4. Demographic projection: mortality, morbidity, and eligibility
5. LTSS policies
6. Eligibility scenarios
7. LTSS utilization and costs
Baseline

- Comprised of Minnesotans aged 65 or older who use LTSS

- Divided into 96 cohorts:
  - (Eligibility for Medicaid)
  - Type of service: nursing facility resident, HCBS
  - Age: 65-74, 75-84, 85+
  - Sex
  - Urbanicity: TC metro area resident, Greater Minnesota resident
  - Activities of Daily Living (ADL) limitations: 0-1, 2 or more
  - Race/ethnicity: white, non-white

- Data source: Medicaid Management Information System (MMIS)
Projection: 2020 and 2030

• Our main objective is to estimate LTSS utilization and costs for 2020 and 2030 under different contexts and scenarios for policy implementation

• The model projects demographic transitions and changes in relevant characteristics
  • Mortality
  • Morbidity: ADL, stroke & diabetes, low cognitive function
  • Medicaid eligibility
  • Long Term Care insurance (LTCi)

• 2 policies evaluated:
  • Enhanced Home Care (EHC) benefit embedded in Medicare supplement plans
  • LifeStage, a blended product of life insurance (64-) and LTCi (65+)


Projection (cont’d)

- Data sources:
  - American Community Survey, five-year file (2015)
  - Minnesota Health Access Survey (2015)

- Universe: Minnesota residents aged 50 or older in 2015 (who will be 65 or older in 2030)

- Our projection model creates a longitudinal dataset into the future (2020 and 2030)
Example

CY 2015

Cohort 42 (70,091)
60-64, male, white, urban,
0-1 ADL, not eligible

Deceased (2,558)

CY 2020

Cohort 154 (21,253)
65-74, male, white, urban,
0-1 ADL, eligible

Cohort 156 (1,521)
65-74, male, white, urban,
2+ ADL, eligible

Cohort 58 (44,167)
65-74, male, white, urban,
0-1 ADL, not eligible

Cohort 60 (593)
65-74, male, white, urban,
2+ ADL, not eligible

NF (13)
HCBS (2,635)
No formal LTSS (18,600)
Example (cont’d)

Cohort 154 (21,253)
65-74, male, white, urban, 0-1 ADL, eligible

NF (13)
$37,882
$492,466

HCBS (2,635)
$9,953
$26,226,155

Average cost
Total cost

MN-LPM

Medicaid Management Information System (MMIS)
Policy Options and Projections

- Regular LTC insurance
- Enhanced Home Care Benefit Embedded in Medicare Supplement Plans
- LifeStage Insurance
Regular Long Term Care Insurance

- LTCi is the only current, relevant option to protect assets
- 16% Minnesotans over 65 have this coverage
- This is a market with decreasing sales
  - By 2030 we project that the rate of policy holders will halve

<table>
<thead>
<tr>
<th>Medium</th>
<th>2015</th>
<th>2020</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>65-74</td>
<td>73,000 (16.2%)</td>
<td>74,000 (13.2%)</td>
<td>34,000 (4.9%)</td>
</tr>
<tr>
<td>75-84</td>
<td>43,000 (18.5%)</td>
<td>44,000 (15.8%)</td>
<td>47,000 (10.9%)</td>
</tr>
<tr>
<td>85+</td>
<td>14,000 (12.1%)</td>
<td>18,000 (14.8%)</td>
<td>22,000 (14.4%)</td>
</tr>
<tr>
<td>Total</td>
<td>131,000 (16.3%)</td>
<td>136,000 (14.1%)</td>
<td>103,000 (8.0%)</td>
</tr>
</tbody>
</table>

Source: MN-LPM
Take up rates in parentheses
EHC Benefit in Medicare Supplement Plans

• Medicare Advantage, Medicare Cost, and Medigap plans would include a Enhanced Home Care benefit plan

• Benefit package (currently funded by Medicaid) includes:
  • Personal Emergency Response System (“PERS”)
  • Homemaker Services
  • Chore Services
  • Training and Education of Family Caregivers
  • Home Delivered Meals
  • Adult Day Care Services
  • Service Coordination
  • Add-on: Personal Care Assistance

• Maximum daily benefit of $100 and lifetime benefit of $50,000
EHC Benefit in Medicare Supplement Plans (cont’d)

• Estimated premium addition: ~$20 per month
• Take up is high; 84% of the elderly Minnesotans bought a supplement plan in 2015
• Estimated number of Medicare supplement plan policy holders in Minnesota

<table>
<thead>
<tr>
<th>Age</th>
<th>2015</th>
<th>2020</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>65-74</td>
<td>374,000</td>
<td>445,000</td>
<td>543,000</td>
</tr>
<tr>
<td>75-84</td>
<td>213,000</td>
<td>225,000</td>
<td>359,000</td>
</tr>
<tr>
<td>85+</td>
<td>86,000</td>
<td>100,000</td>
<td>121,000</td>
</tr>
<tr>
<td>Total</td>
<td>673,000</td>
<td>770,000</td>
<td>1,023,000</td>
</tr>
</tbody>
</table>

Source: MN-LPM
LifeStage

- LifeStage is a combination of life insurance and LTCi
  - Life insurance benefit up to age 64
  - LTCi starting at age 65
    - same annual premium
    - same level of coverage
      - $100,000 - $135 per day
      - $150,000 - $205 per day
      - $200,000 - $275 per day
      - $300,000 - $275 per day

- Target market:
  - employed adults aged 35-55
  - household income $50,000-$500,000

- Our model shows results of what the outcomes would be if LifeStage had been implemented in 2000
LifeStage (cont’d)

- Other assumptions
  - By 2015, awareness rates range from 50% (low) - 95% (high)
  - Take up rate ~20%
  - Lapse rate reaches 1% by 2004

- Growing number of LifeStage policy holders

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>9,900</td>
<td>39,000</td>
</tr>
<tr>
<td>Medium</td>
<td>12,400</td>
<td>52,600</td>
</tr>
<tr>
<td>High</td>
<td>21,400</td>
<td>75,700</td>
</tr>
</tbody>
</table>

Source: MN-LPM
These projections assume a medium scenario for LTCi
LifeStage and aging

<table>
<thead>
<tr>
<th>Age in 2000</th>
<th>Age in 2015</th>
<th>Age in 2020</th>
<th>Age in 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>50</td>
<td>55</td>
<td>65</td>
</tr>
<tr>
<td>45</td>
<td>60</td>
<td>65</td>
<td>75</td>
</tr>
<tr>
<td>55</td>
<td>70</td>
<td>75</td>
<td>85</td>
</tr>
<tr>
<td>65</td>
<td>80</td>
<td>85</td>
<td>95</td>
</tr>
</tbody>
</table>
Utilization and Cost Projections

PRELIMINARY RESULTS
Baseline: Utilization and Costs

- In 2015, 54,773 Minnesotans made claims for LTSS they received at home (or community) or in nursing facilities.
- Our baseline Medicaid spending on LTSS is $990.5 million.

<table>
<thead>
<tr>
<th></th>
<th>Users</th>
<th>Total Cost (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NF residents</td>
<td>16,942</td>
<td>$620</td>
</tr>
<tr>
<td>HCBS</td>
<td>37,831</td>
<td>$371</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>54,773</td>
<td><strong>$991</strong></td>
</tr>
</tbody>
</table>

Source: SHADAC’s analysis of MMIS, 2015

- We compare our projections against this baseline (using 2015 dollars).
Utilization and Projections, Status Quo Preliminary Results

• If no policy is implemented, we project that by 2030 the number of Medicaid enrollees who are nursing facilities residents will grow slightly (12%), whereas the number of using HCBS will double (104% growth)

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2020</th>
<th>2030</th>
<th>2015-2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>NF residents</td>
<td>16,942</td>
<td>12,000</td>
<td>19,000</td>
<td>12%</td>
</tr>
<tr>
<td>HCBS</td>
<td>37,831</td>
<td>59,000</td>
<td>77,000</td>
<td>104%</td>
</tr>
<tr>
<td>Total</td>
<td>54,773</td>
<td>71,000</td>
<td>96,000</td>
<td>76%</td>
</tr>
</tbody>
</table>

Source: MN-LPM
These projections assume a medium scenario for Medicaid eligibility and LTCi
# Utilization and Projections, Status Quo

## Preliminary Results

*Using “deflated” dollars, we project that by 2030 Medicaid expenditures on LTSS will grow by 29% ($284.2 million)*

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2020</th>
<th>2030</th>
<th>2015-2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>NF residents (in millions)</td>
<td>$620</td>
<td>$453</td>
<td>$720</td>
<td>16%</td>
</tr>
<tr>
<td>HCBS (in millions)</td>
<td>$371</td>
<td>$467</td>
<td>$555</td>
<td>50%</td>
</tr>
<tr>
<td>Total (in millions)</td>
<td>$991</td>
<td>$920</td>
<td>$1,275</td>
<td>29%</td>
</tr>
</tbody>
</table>

*Source: MN-LPM*

*These projections assume a medium scenario for Medicaid eligibility and LTCi*

*Estimates are “deflated” (expressed in 2015 dollars)*

*This increase in expenditures is driven by the growth in HCBS utilization (104% growth)*

*HCBS expenditures only increase 50% because of changes in the characteristics of HCBS users and HCBS utilization patterns*
Utilization and Projections, Status Quo
Preliminary Results

• Using a projected inflation rate of 3% we estimate that total costs for Medicaid will double by 2030

Source: MN-LPM
Notes: These projections assume a medium scenario for Medicaid eligibility and LTCi
Real estimates are “deflated” (expressed in 2015 dollars)
Nominal estimates assume an annual inflation rate of 3%
Policies Effects, EHC in Medicare Supp
Preliminary Results

• Our model finds that an Enhanced Home Care benefit package in all Medicare Supplement plans would reduce costs by 2030
  • Although the estimates under this policy for 2020 also differ from those of the status quo scenario, they are not statistically different

• Our model observes a shift in the type of service produced by this policy:
  • A decrease in the use of nursing facility care
  • An increase of HBCS
EHC Benefit in Medicare Supp. Plans
Preliminary Results

Medicaid LTSS Cost Projections (Millions of 2015 Dollars)

Source: MN-LPM
These projections assume a medium scenario for Medicaid eligibility and LTCi
Estimates are "deflated" (expressed in 2015 dollars)
Policies Effects, LifeStage
Preliminary Results

• During the period of analysis, our estimates do not show Medicaid LTSS costs under the LifeStage implementation scenario that are statistically different than the *status quo* scenario
  • LifeStage has a relatively young market target
  • A portion of policy holders are unlikely to become eligible for Medicaid

• An evaluation of LifeStage would require:
  • including annual projections beyond 2030
  • considering other outcomes
    • Out-of-pocket expenditures
    • Minnesotans’ assets and income
Closing Remarks
Closing Remarks

• Our model used MN-specific data on the characteristics of elderly Minnesotans
• It used data on current distribution of Medicaid spending
• We used these two main data sources to develop a projection model that forecasts the future patterns of LTSS utilization and expenditures, in particular those paid by Medicaid
• Our pilot assessment of two policy options are preliminary, but show the potential value of our projection model
• The MN-LPM provides the state with a platform that can be added to and developed over time to produce additional analysis and policy evaluation
Possible Extensions

• Projections beyond 2030

• Policy options
  • Other LTC insurance options
  • Increases in disposable income (e.g., tax credits or reverse mortgage)
  • Social determinants of health (e.g., implementing programs that reduce food-insecurity)

• Outcomes
  • Out-of-pocket expenditures
  • Medicare spending

• Context scenarios
  • Medical advancements (e.g., finding a cure for Alzheimer)
  • Saving patterns (i.e., allow for a different savings pattern for baby boomers)
  • Provider supply
Lynn A. Blewett
blewe001@umn.edu

Giovann Alarcon
alar0013@umn.edu

Robert Hest
hestx005@umn.edu

Check out our website at www.shadac.org and follow us on twitter: @shadac and @LynnBlewett

shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER