# Minnesota LTSS Projection Model: MN-LPM

## Preliminary Results

Giovann Alarcon | Robert Hest | Lynn A. Blewett

April 26th, 2018

# 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

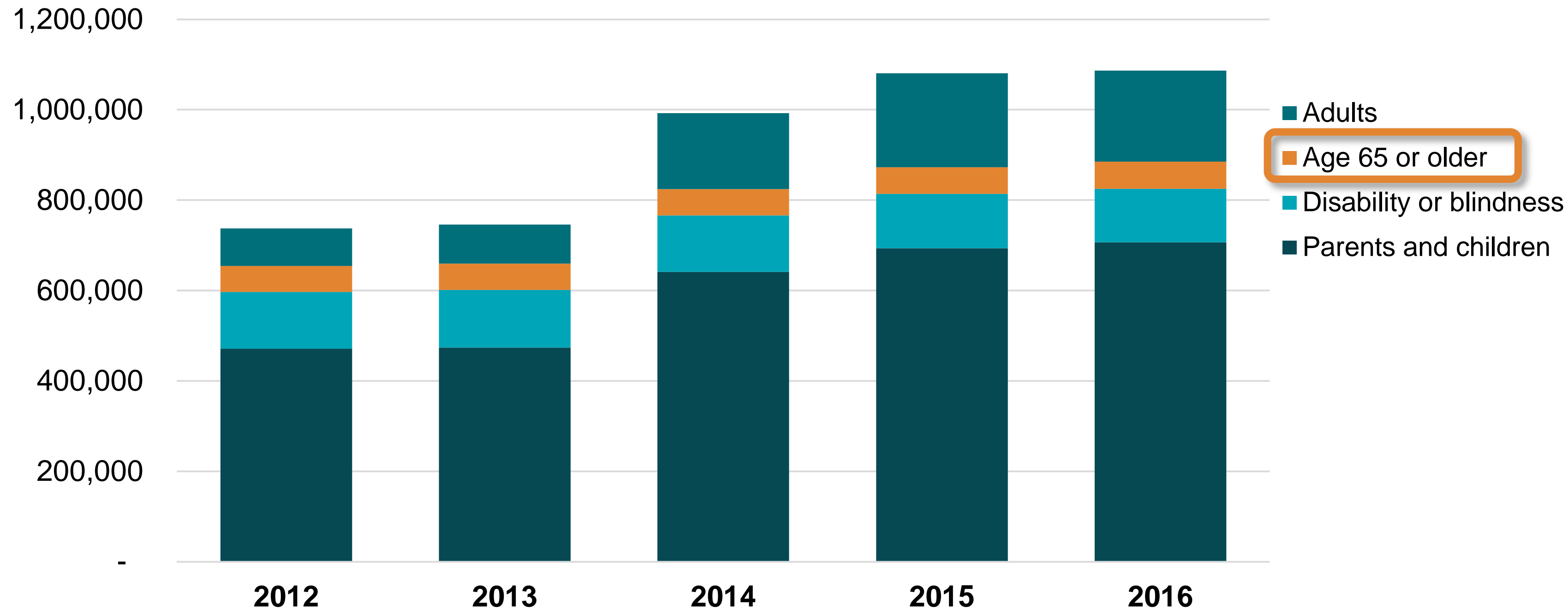
# Outline

- 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

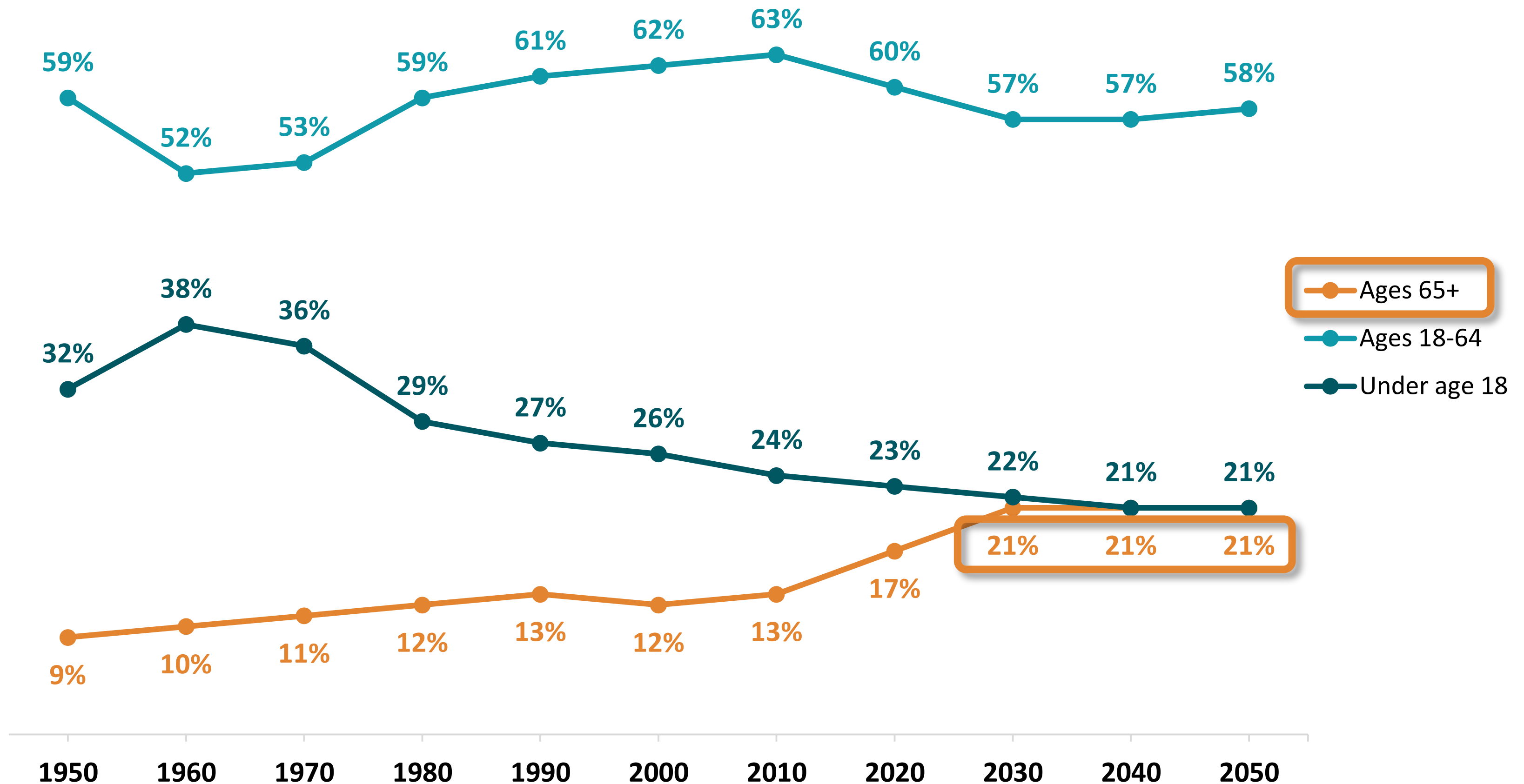



| | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|
| **Adults** | 82,908 | 86,567 | 168,118 | 207,649 | 201,457 |
| **Age 65 or older** | 58,073 | 58,090 | 58,511 | **58,937** | 60,384 |
| **Disability or blindness** | 125,335 | 127,230 | 124,830 | 120,588 | 118,076 |
| **Parents and children**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

**5.5% of Total Medicaid Population**

*Source: Medicaid Matters, DHS 2018*

# Minnesota's aging population continues to grow as baby boomers age



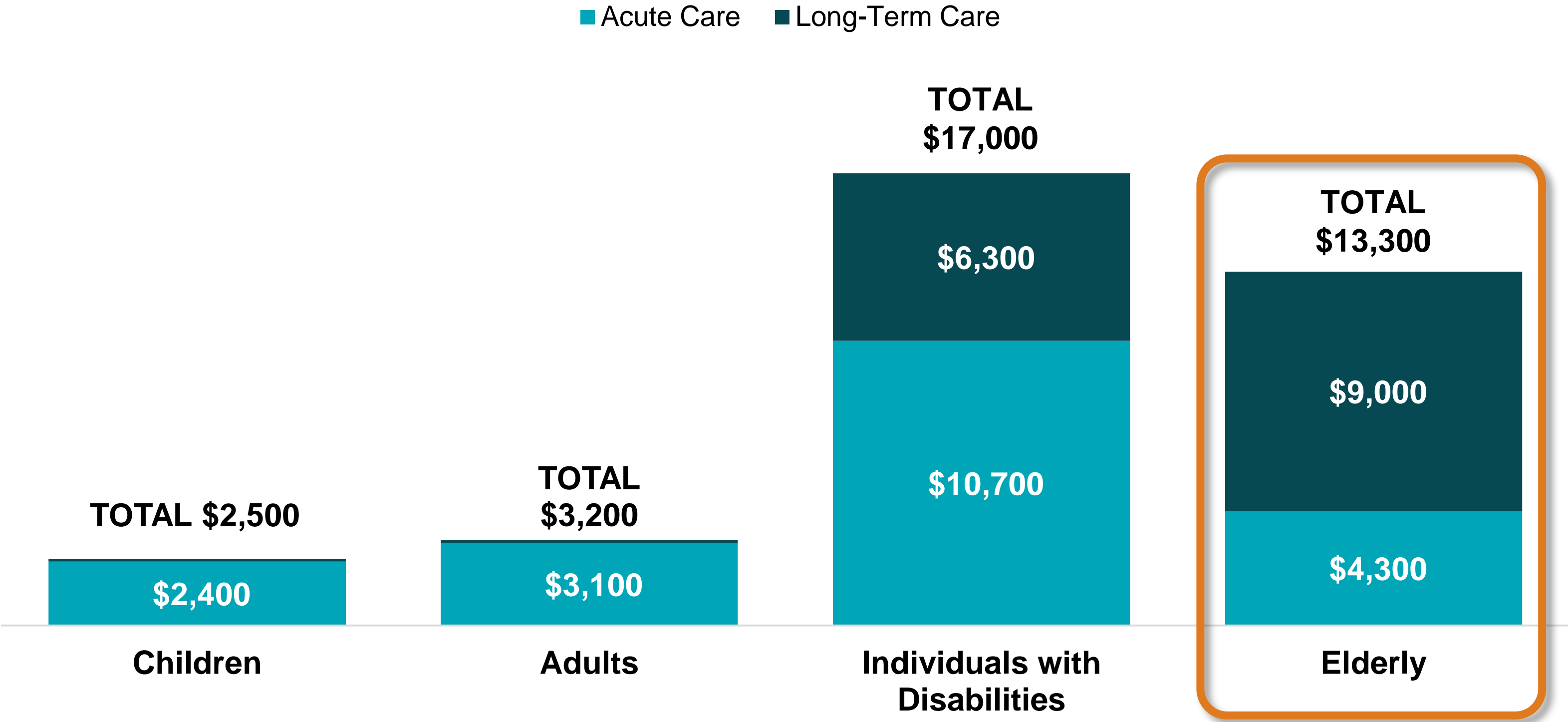

*Source: U.S. Census Bureau, decennial census, and Minnesota State Demographic Center Projections.*



shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

# 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*

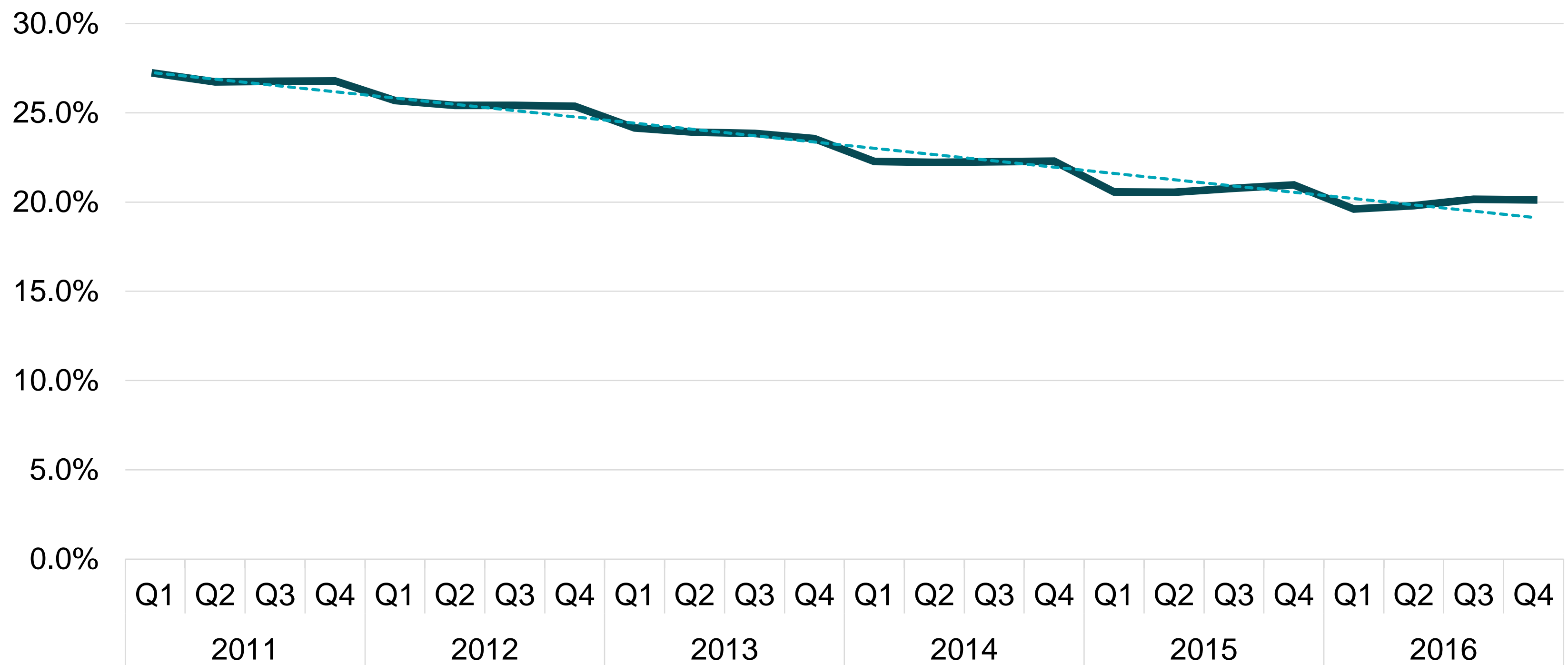


shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

# 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



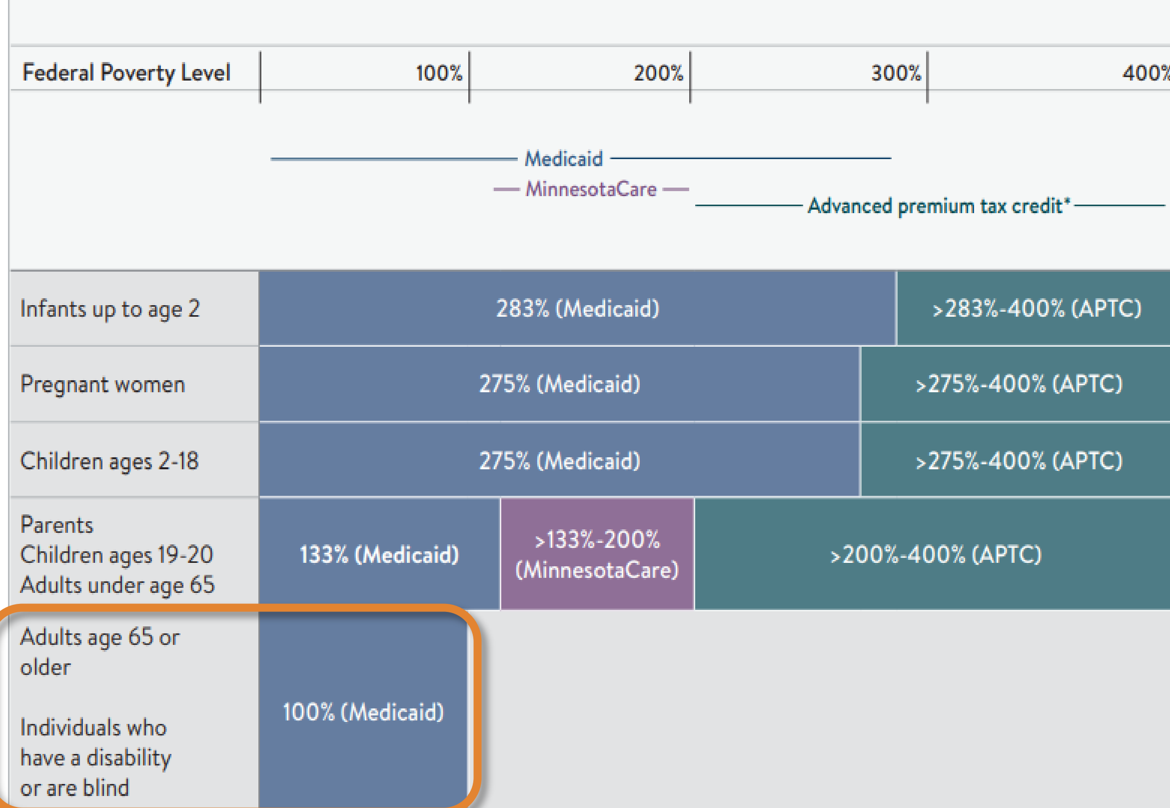

**Decline of 9,354 Medicaid enrollees**
**From 27% to 20%**
**between 2011 and 2016**

*Source: SHADAC analysis of MMIS, 2011-2016*



shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

# One has to be very poor to be eligible for regular Medicaid at age 65




| 100% FPG – 2015 Baseline | |
|---|---|
| **Family Size** | **2015 Gross Income** |
| 1 | $11,770 |
| 2 | $15,930 |
| 3 | $20,090 |

# 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



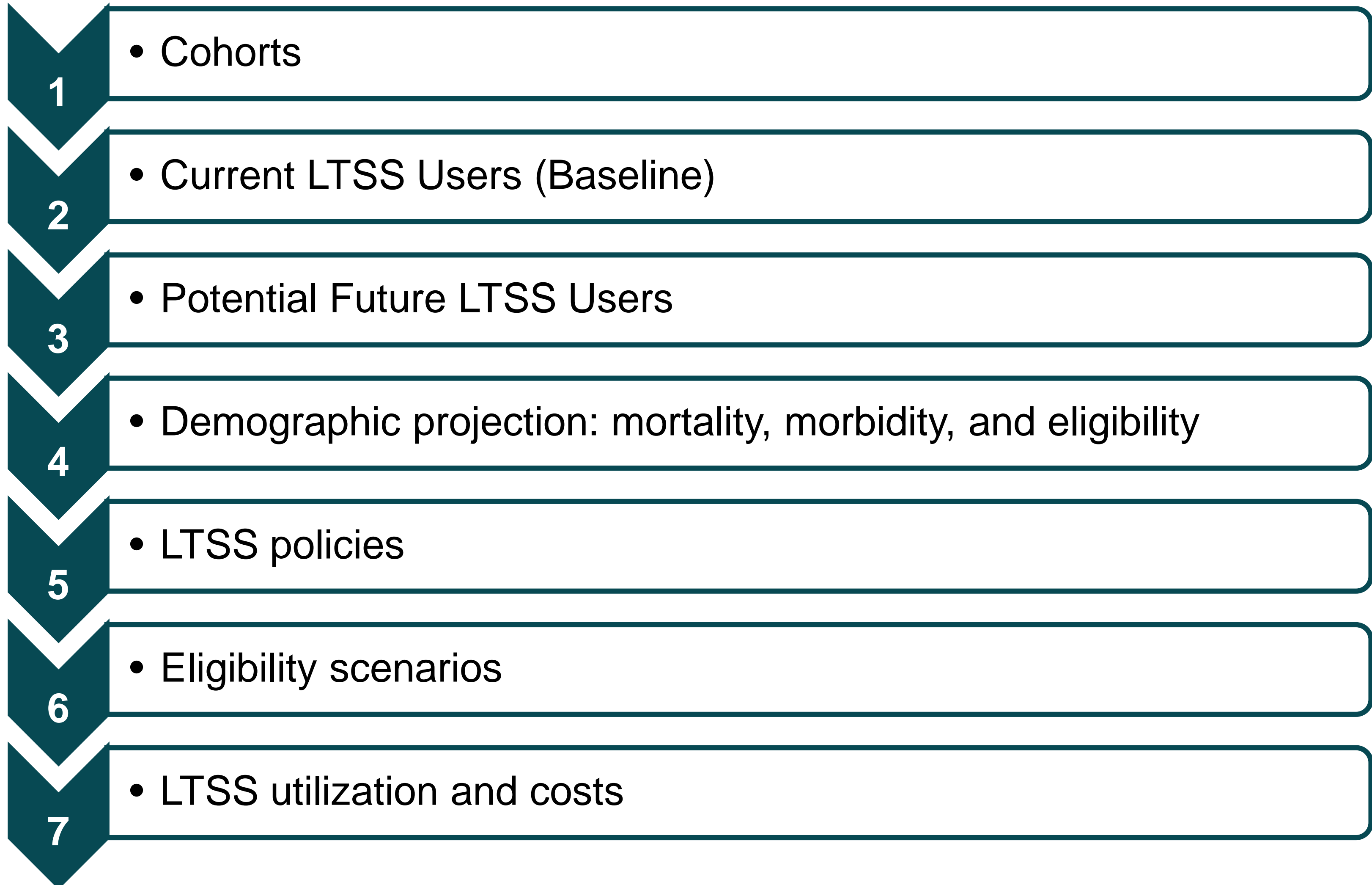
shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

# 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


shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

# Model's Steps






shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

# 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)

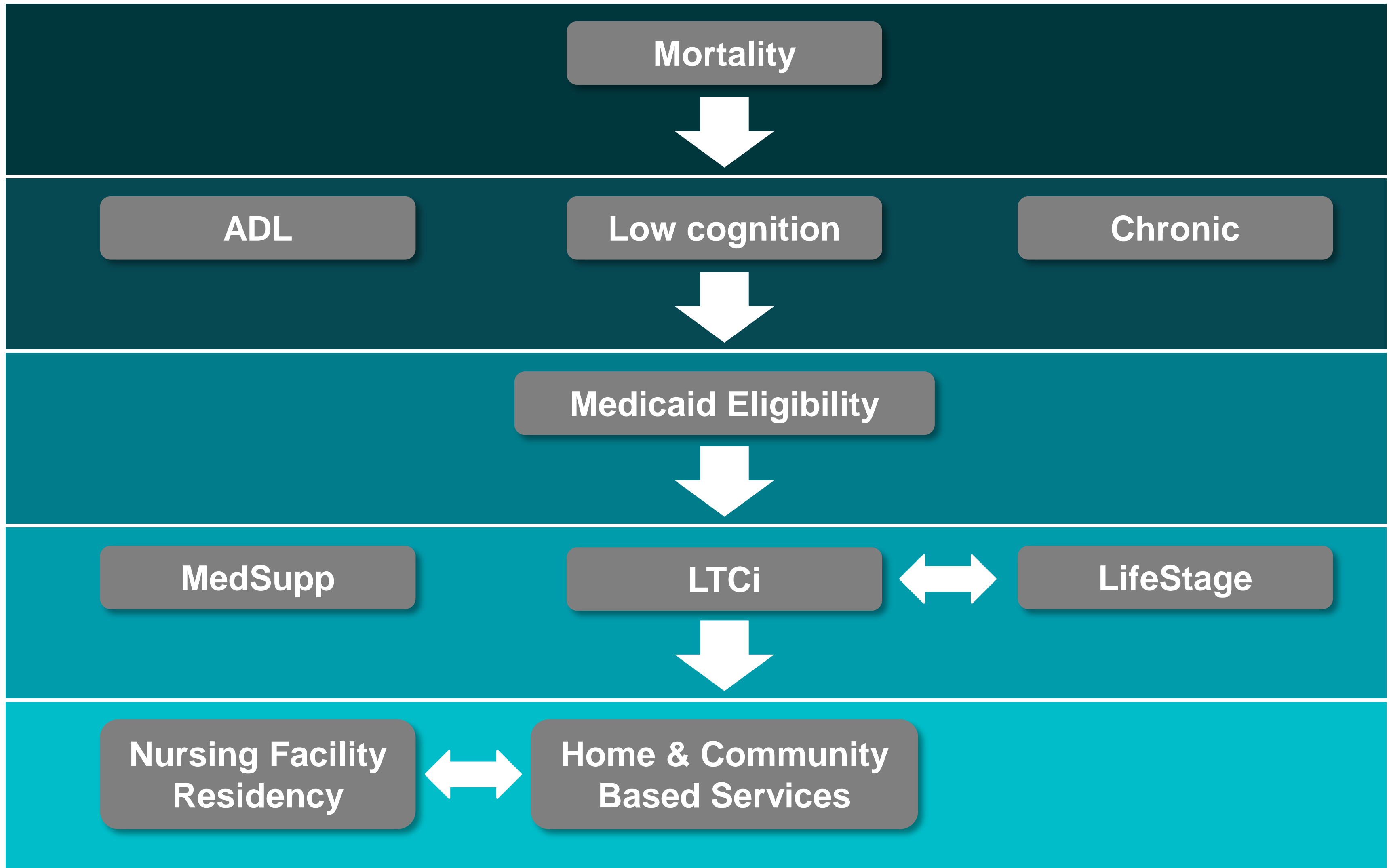
# Projection: 2020 and 2030

- 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- )



shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

# Projection (cont'd)



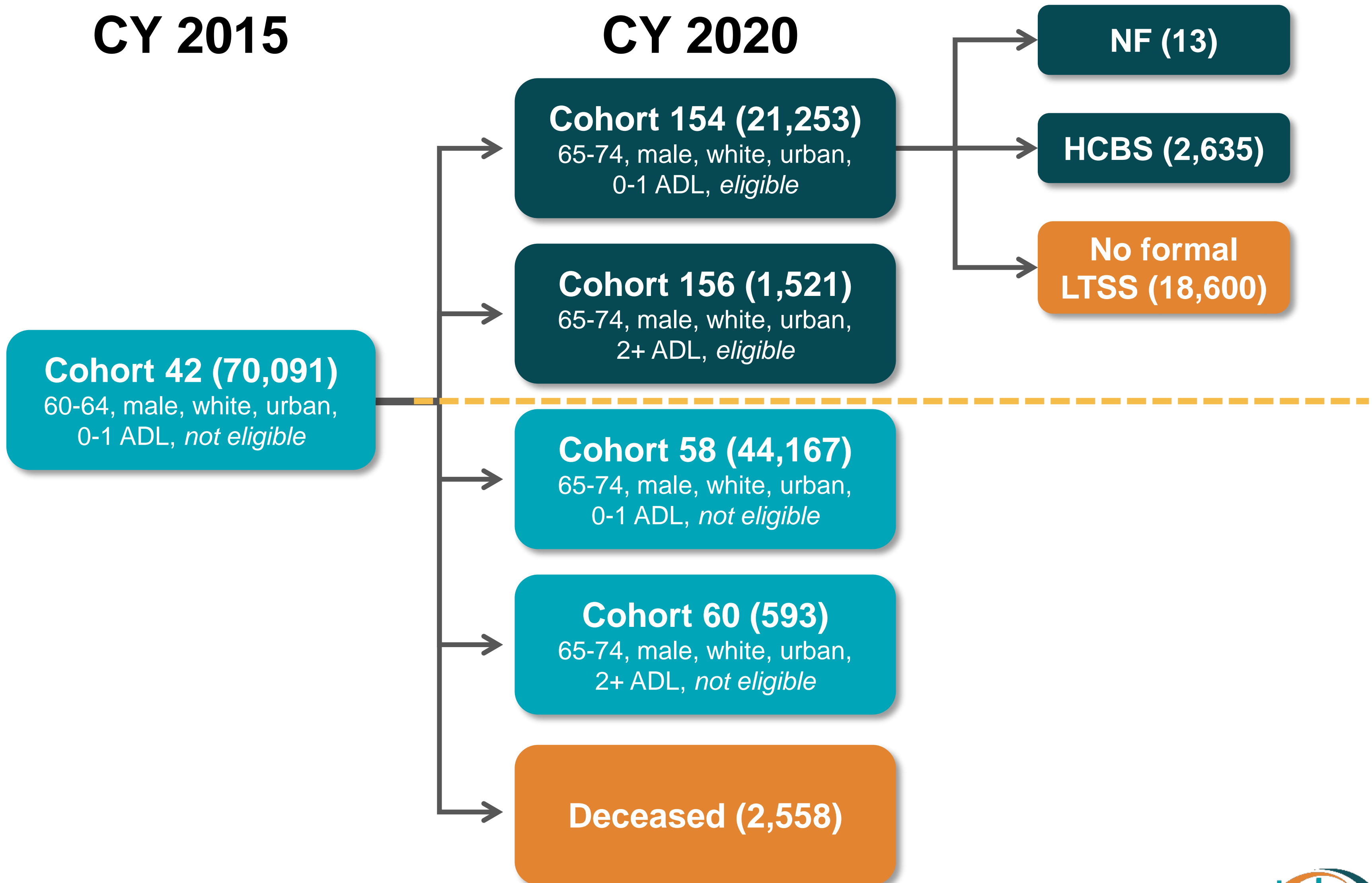


shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

# Projection (cont'd)

- Data sources:
  - American Community Survey, five-year file (2015)
  - Health and Retirement Survey (2000, 2006, and 2014)
  - Minnesota Health Access Survey (2015)
  - Survey of Older Minnesotans (2015)
  - Behavioral Risk Factor Surveillance System (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

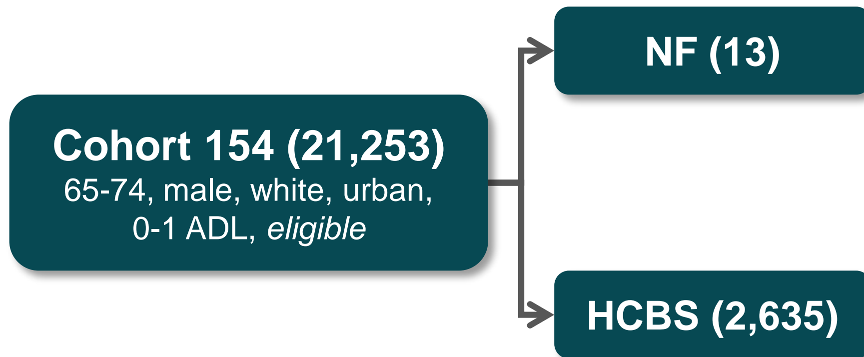





shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

# Example (cont'd)

Average cost | Total cost




$37,882 → $492,466

$9,953 → $26,226,155

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



shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

# 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

| Medium | 2015 | 2020 | 2030 |
|---|---|---|---|
| 65-74 | 73,000 (16.2%) | 74,000 (13.2%) | 34,000 (4.9%) |
| 75-84 | 43,000 (18.5%) | 44,000 (15.8%) | 47,000 (10.9%) |
| 85+ | 14,000 (12.1%) | 18,000 (14.8%) | 22,000 (14.4%) |
| **Total** | **131,000 (16.3%)** | **136,000 (14.1%)** | **103,000 (8.0%)** |

*Source: MN-LPM*
*Take up rates in parentheses*



shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

# 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

| Age | 2015 | 2020 | 2030 |
|---|---|---|---|
| 65-74 | 374,000 | 445,000 | 543,000 |
| 75-84 | 213,000 | 225,000 | 359,000 |
| 85+ | 86,000 | 100,000 | 121,000 |
| **Total** | **673,000** | **770,000** | **1,023,000** |

*Source: MN-LPM*



shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

# 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

| | 2020 | 2030 |
|---|---|---|
| Low | 9,900 | 39,000 |
| Medium | 12,400 | 52,600 |
| High | 21,400 | 75,700 |

*Source: MN-LPM*
*These projections assume a medium scenario for LTCi*



shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

# LifeStage and aging

| Age in 2000 | Age in 2015 | Age in 2020 | Age in 2030 |
|---|---|---|---|
| **35** | **50** | **55** | 65 |
| **45** | 60 | 65 | 75 |
| **55** | 70 | 75 | 85 |
| 65 | 80 | 85 | 95 |

# 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

| | Users | Total Cost (millions) |
|---|---|---|
| NF residents | 16,942 | $620 |
| HCBS | 37,831 | $371 |
| **Total** | **54,773** | **$991** |

*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)

| | 2015 | 2020 | 2030 | 2015-2030 |
|---|---|---|---|---|
| NF residents | 16,942 | 12,000 | 19,000 | 12% |
| HCBS | 37,831 | 59,000 | 77,000 | 104% |
| **Total** | **54,773** | **71,000** | **96,000** | **76%** |

*Source: MN-LPM*
*These projections assume a medium scenario for Medicaid eligibility and LTCi*


shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

# 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)

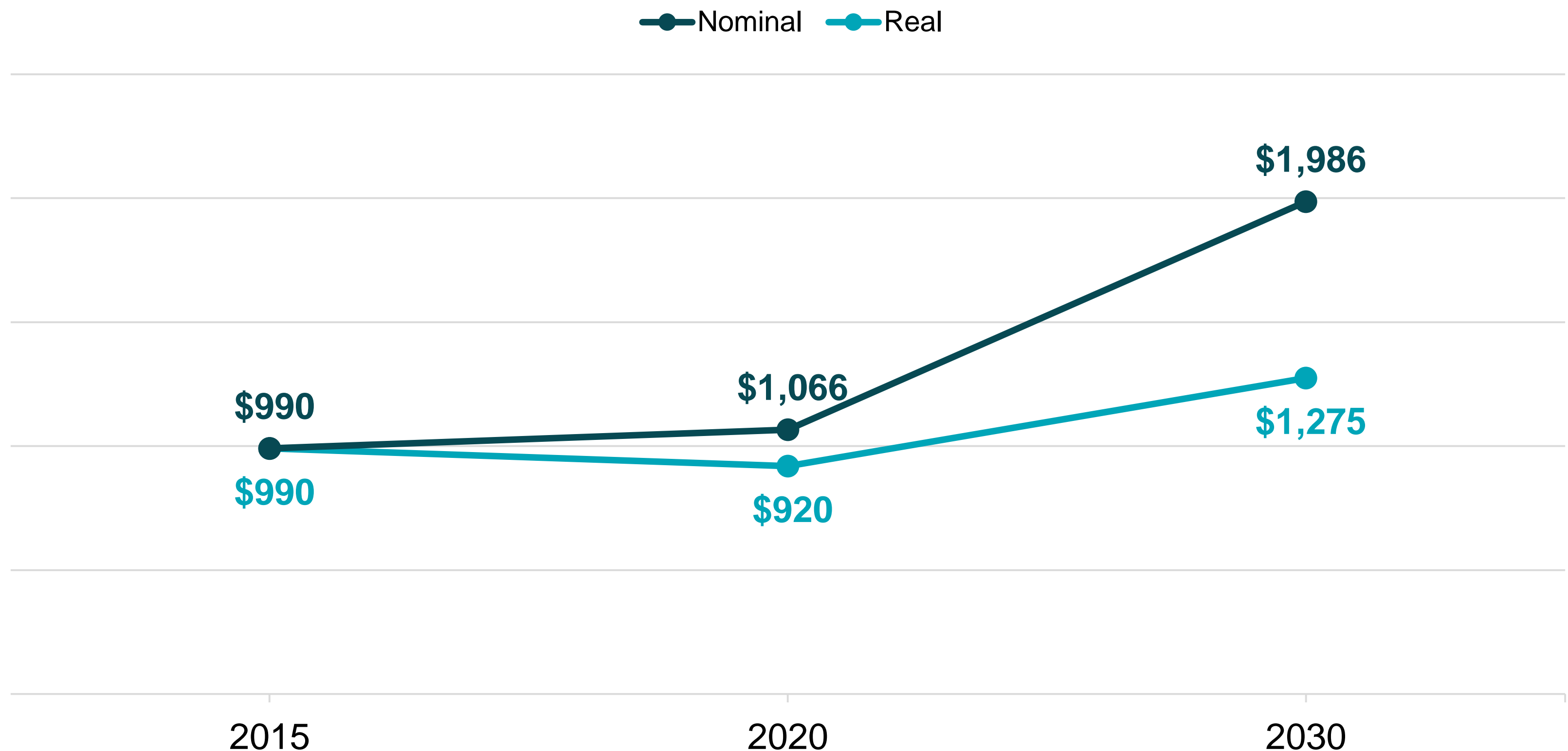
| | 2015 | 2020 | 2030 | 2015-2030 |
|---|---|---|---|---|
| NF residents (in millions) | $620 | $453 | $720 | 16% |
| HCBS (in millions) | $371 | $467 | $555 | 50% |
| **Total (in millions)** | **$991** | **$920** | **$1,275** | **29%** |

*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%*

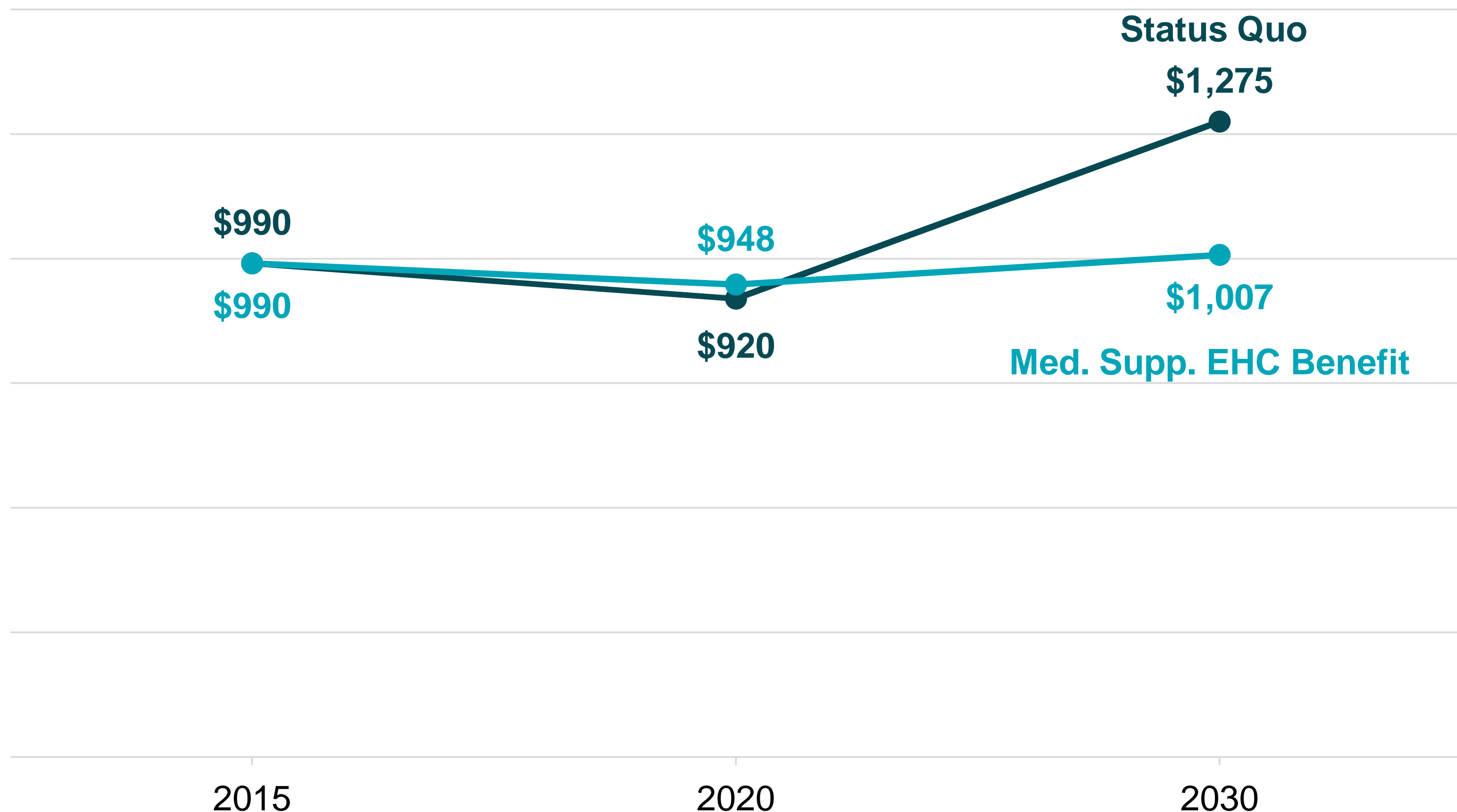
# Policies Effects, EHC in Medicare Supp

## 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




*Source: MN-LPM*
*These projections assume a medium scenario for Medicaid eligibility and LTCi*
*Estimates are "deflated" (expressed in 2015 dollars)*



shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

# 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



shadac
STATE HEALTH ACCESS DATA ASSISTANCE CENTER

# 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**