# Attachment B Proposed Evaluation for Reform 2020 Section 1115 Demonstration Waiver

This is a proposed evaluation plan for the Alternative Care program under Minnesota's demonstration waiver entitled Reform 2020: Pathways to Independence. The waiver was originally approved in October 2013 and was extended in February 2020.

Minnesota's Medicaid program, known as Medical Assistance (MA), offers an array of home and community—based services for low-income seniors and people with disabilities.

Minnesota has been reducing use of institutions through development of home and community-based long-term supports and services for over thirty years. Minnesota has rebalanced its system so that a large majority of the older adults (74% in 2018) and people with disabilities (95% in 2018) who are enrolled in MA and need long term care services are living in the community rather than in institutional settings.

Minnesota has five home and community-based services waivers: Developmental Disability (DD)<sup>1</sup>, Community Alternatives for Disabled Individuals (CADI)<sup>2</sup>, Community Alternative Care (CAC)<sup>3</sup>, Brain Injury (BI)<sup>4</sup> and Elderly Waiver (EW)<sup>5</sup>. Similar services to support individuals living in the community are offered under each waiver, but since each was developed over time and under different constraints, opportunities, and different populations, HCBS waivers differ from one another in areas such as eligibility criteria and annual spending.

In addition, Minnesota provides the following long-term services and supports through the state plan: home health agency services, private duty nursing services, rehabilitative services (several individualized community mental health services that support recovery) and personal care assistant (PCA) services.

There are other Medicaid and state programs that support community living such as day treatment and habilitation, semi-independent living services, the Family Support Grant Program, mental health services, AIDS assistance programs, group residential housing, independent living services, vocational rehabilitation services, extended employment, special education and early intervention.

Minnesota's Reform 2020 demonstration enables the state to continue its history of on-going improvement to enhance its home and community-based service system by enabling the state to provide preventive services to seniors who are likely to become eligible for Medicaid and who need an institutional level of care. The demonstration goals align with those of Medicaid and assist the state in promoting title XIX program objectives in the following ways:

<sup>&</sup>lt;sup>1</sup> DD: 2019 unduplicated enrollment was 21,120

<sup>&</sup>lt;sup>2</sup> CADI: 2019 unduplicated enrollment was 31,715

<sup>&</sup>lt;sup>3</sup> CAC: 2019 unduplicated enrollment was 649

<sup>&</sup>lt;sup>4</sup> BI: 2019 unduplicated enrollment was 1,242

<sup>&</sup>lt;sup>5</sup> EW: 2019 unduplicated enrollment was 36,680 (managed care and fee-for-service)

- Achieving better health outcomes;
- Ensuring that the demonstration increases the participants' level of support for independence and recovery;
- Increasing community integration;
- Reducing the reliance on institutional care;
- Simplifying the administration of the program; and
- Ensuring access to the program's offered services.

## 1. Background on the Reform 2020 Section 1115 Waiver for Alternative Care

The Alternative Care or AC program was implemented under Reform 2020 beginning November 1, 2013. Formerly a state-funded program, the Reform 2020 waiver allows Minnesota to receive federal financial participation to provide Alternative Care services to people over age 65 whose functional needs indicate eligibility for nursing facility care but have combined adjusted income and assets exceeding state plan Medicaid standards for aged, blind and disabled categorical eligibility.

Acute and primary care services are not covered under the program. However, connecting seniors with community services earlier may divert them from nursing facilities and encourage more efficient use of services when full Medicaid eligibility is established. Minnesota has a home and community-based waiver for people over age 65 that need nursing facility care called the Elderly Waiver. Although Alternative Care covers fewer services, service definitions and provider standards for the Alternative Care program are the same as the service definitions and provider standards specified in Minnesota's federally approved Elderly Waiver. Services are provided by qualified enrolled Medicaid providers.

Alternative Care is available to eligible individuals who meet all of the following *financial* requirements:

- Those with combined income and assets insufficient to pay for 135 days of nursing facility care, based on the statewide average nursing facility rate
- Those not within an uncompensated transfer penalty period
- Those with home equity within the home equity limit applicable under the state plan

Functional eligibility for nursing home care and identification of needed services for Alternative Care is performed using the Long-term Care Consultation process, which is the same assessment tool and process that is used for the Elderly Waiver. Applicants for Alternative Care also discuss the option of qualifying for Medical Assistance under a medically needy basis (see Figure 1).

Eligibility Program -not financially eligible for Medicaid **Nursing Facility** -cannot fund NF stay for >135 days Alternative Care (private-pay) -able to pay monthly fee -chooses HCBS services Meets NF level of care eligible for Medicaid (ie. MA Elderly Waiver Nursing Facility Long-term care People aged -chooses HCBS services (FFS or Managed care) (MA-paid) consultation 65 or older process Does not May still qualify for State meet NF

Plan Home Care programs

Figure 1. Minnesota Health Care Program Options for the Elderly

evel of care

AC, alternative care program; FFS, fee-for-service; HCBS, home and community-based services; MA, Medical Assistance (Minnesota's Medicaid program); NF, nursing facility; SNF, skilled nursing facility

If an Alternative Care participant is admitted to a nursing facility, his/her stay is either paid by Medicare (if eligible), other long-term care insurance, or out-of-pocket. Continued facility stays can result in spenddown to MA. A person may also spend-down and become eligible for Medicaid while enrolled I Alternative Care. In that case, he/she can also transition to the Elderly Waiver. For details on how a person transitions from Alternative Care to Elderly Waiver program, refer to the "AC Operational Protocol".

The Alternative Care program provides an array of home and community-based services based on assessed need and as authorized in the community support plan or care plan developed for each participant. The monthly cost of the Alternative Care services must not exceed 75 percent of the monthly budget amount available for an individual with similar assessed needs participating in the Elderly Waiver program.

The services available under Alternative Care are the same as the services covered under the federally approved Elderly Waiver, *except*:

- Alternative Care does not cover transitional support services, assisted living (customized living) services, adult foster care services, or services that meet primary and acute health care needs
- Alternative Care additionally covers nutrition services and discretionary services

The comprehensive list of Alternative Care services is below.

- Adult day service/adult day service bath;
- Family caregiver training and education and family caregiver coaching and counseling/assessment;
- Case management and conversion case management
- Chore services;
- Companion services;
- Consumer-directed community supports;
- Home health agency services;
- Home-delivered meals;
- Homemaker services;
- Environmental accessibility adaptations;

- Nutrition services;
- Personal care:
- Respite care;
- Skilled nursing and private duty nursing;
- Specialized equipment and supplies including Personal Emergency Response System (PERS);
- Non-medical transportation;
- Tele-home care;
- Discretionary services

An overview of the Alternative Care program, services, and outcomes are provided in Figure 2.

## 1.1 Program Goals

The goals of the Alternative Care program are to:

- Provide access to coverage of home and community-based services for individuals with combined adjusted income and assets higher than Medicaid requirements and who require an institutional level of care.
- Provide <u>access to consumer-directed coverage of home and community-based services</u> for individuals with combined adjusted income and assets higher than Medicaid requirements and who require an institutional level of care.
- Provide <u>high-quality and cost-effective home and community-based services</u> that result in improved outcomes for participants measured by less nursing home use over time.

Figure 2: Alternative Care Program Logic Model

Inputs		Outputs		Outcomes	
Resources	Legislative Oversight	Service and Access	Activities	Short-term	Long-term
LTCC/MnChoices assessors  LTC screening assessment to determine whether a person qualifies for nursing facility level of care  Training of staff (e.g. case managers, assessors)  Continuing training (e.g. bulletins, webinars, video conferencing)  Legislative authority  State funding  DHS administrative resources  Local HCBS provider networks  External evaluators and volunteers to survey AC beneficiaries	Policy Changes  Changes in financial eligibility determination  Changes in program fees  Changes in covered services  Changes in provider standards  Budget Changes  Rate changes	Accessed in the person's home and community  Covered Services  Adult Day service  Case management  Chore services  Companion services  Consumer-directed community supports  Home health aides  Home-delivered meals  Homemaker services  Changes to make homes and equipment accessible  Nutrition services  Personal care  Respite care  Skilled nursing  Specialized equipment/supplies  Personal emergency response system  Training and support for family caregivers  Nonmedical transportation  Discretionary services	State-level  Monitoring spending at a county-level*  Monitor AC enrollment and program spending  Issue policies, guidance, and resources  On-site lead agency review of cases every 3 years to assure program compliance  Further develop a HCBS provider network  Add/remove/redesign services per stakeholder feedback  Facilitate participant feedback surveys  County-level  Assess program eligibility  Determine financial eligibility  (includes citizenship validation) †  Develop a support plan to meet assessed needs  Authorize services  Monitor implementation of the support plan  Feedback to DHS on barriers to AC use  Provider-level  Support the person through provision of services	Program Beneficiaries  Able to live in their homes and communities with necessary supports  Direct their services and supports  State-level  Collect and internally analyze AC enrollment across time	Program Beneficiaries Prevent and delay transitions to a nursing facility Prevent seniors from spending down their assets Increase the quality-of-life of seniors by spending more time in the community with their family and friends  State-level Save Medicaid dollars Change in expectations about the state's ability to serve older adults in the community rather than in institutions Rebalancing of public dollars away from institutions and toward HCBS for older adults Continued AC funding

<sup>\*</sup>Minnesota DHS stopped monitoring county spending on AC program at the 2015 legislative session. †After the federal match for AC program, DHS began validating citizenship.

## Evaluation

## 2. Evaluation Questions and Hypotheses

The Reform 2020 demonstration waiver extension is approved for the period February 1, 2020 through January 31, 2025. Since the federal waiver authorization has not resulted in any substantial changes to the Alternative Care program structure, we expect that key evaluation metrics will not change over the extension period (2020–2025) as a result of the continuation of the AC waiver. We will be testing the null hypotheses of no change attributable to the AC waiver extension. We will test these null hypotheses by tracking trends in service use and outcomes and drawing comparisons with a matched sample of EW participants who presumably will be subject to the same external events, such as COVID-19, as AC participants. We plan to assess the following hypotheses.

As a consequence of the AC Waiver extension from 2020-2025:

- 1. The demographic characteristics and service needs of AC participants will not change.
- 2. AC participants will not experience a change in the types of HCBS services or a decrease in the intensity of services, i.e., number of hours or units of service.
- 3. AC participants will experience equal or better access to consumer-directed service options;
- 4. AC participants will not experience an increase in nursing facility use;
- 5. AC participants will not experience an increase in acute events, as indicated by an increase in acute hospitalizations or emergency department visits; and
- 6. The rate of Medicaid conversion for AC participants though transitions between AC and EW and other waiver programs or nursing home use will not increase.

We must consider the possibility of changes occurring in these metrics due to external events outside of the AC waiver itself. These events could influence access to or use of HCBS or other services or change health status over the extension period. For example, the COVID-19 pandemic is an external event that has likely influenced service use patterns and outcomes in 2020-2021 and it may continue to do so in the future. The evaluation design, therefore, should attempt to separate out changes over time due to the AC Waiver from those attributable to COVID-19 or other external events.<sup>6</sup>

To strengthen the evaluation design, we propose to examine trends over a five year period prior to the waiver (2015-2019) as a backdrop to the trends during the extension period. In addition, we will compare the AC participants with a balanced sample of Elderly Waiver participants. By examining past trends, we can estimate the impact of COVID-19 or other identifiable external events, such as HCBS policy changes. We anticipate some disruption of HCBS, acute care, and other service use. In the period 2021-2025, some changes associated with the COVID-19 pandemic may continue. By selecting an EW comparison group that is similar to AC participants in demographics, need, and access to services, we can check for parallel trends and perform difference in difference calculations in an attempt to isolate waiver-related changes from COVID-19 or other external events. If AC and EW participants follow the same patterns of HCBS or other service use disruption during or after the COVID-19 pandemic, we have a stronger basis for inferring that it was COVID-19 rather than the AC waiver that contributed to

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<sup>&</sup>lt;sup>6</sup> Available at https://www.medicaid.gov/medicaid/section-1115-demo/downloads/evaluation-reports/1115-covid19-implications.pdf

these changes. Given data limitations and the complexity of events during and after COVID-19, we must be cautious in our interpretations of patterns in the data.

## 3. **Methodology**

To test these hypotheses, we will employ multiple strategies: (1) examine trends in repeated 12-month cross sectional measures of demographics, service use and other patterns for AC participants beginning with the baseline period (2015-2019) and continuing through the extension period (i.e., 2020-2025); (2) conduct a parallel cross-sectional analysis for a comparison groups of EW participants selected through balanced sampling; (3) track patterns in key metrics for longitudinal cohorts of AC participants and EW participants beginning in 2019, 2020, and 2021 and then followed through 2025. In conducting the trend and cohort analyses, we will look for changes in service use and other metrics, particularly any unintended consequences for program participants that could be attributable to the AC waiver compared to external events such as COVID-19.

### 3.1 Comparison of AC Participants and EW Sample

The populations included in the evaluation consist of Alternative Care (AC) program participants and Elderly Waiver (EW) participants. Elderly Waiver participants are similar to Alternative Care program participants. Both groups: 1) are aged 65 and above, 2) must have an assessed need for an institutional level of care, and 3) are using home and community-based services to meet their needs and remain living in the community instead of in a nursing facility.

Some EW participants will use residential services (i.e., customized living, adult foster care). We will identify EW participants in non-residential settings by excluding participants with any claims for residential services. Internal program monitoring and evaluation show that the number of unique participants in AC remained relatively constant from 3,679 in 2015 to 3,652 in 2018; whereas the number of EW participants in non-residential settings increased somewhat from 19,934 in 2015 to 22,042 in 2018.<sup>7</sup>

We will select a comparison group of EW participants according to balance sampling techniques in order to ensure that the EW comparison group is as similar as possible to the AC participants in demographics, health, and functioning.

## 3.2 Metrics Aligned with Hypotheses

#### 3.21 The demographic characteristics and service needs of AC participants will not change.

- Gender, race/ethnicity, age composition, living arrangement, and residential location
- Case mix status (low-need vs. high-need)<sup>8</sup>
- Professional recommendations for service need and supports
- ADL dependencies

<sup>&</sup>lt;sup>7</sup> Evaluation of Minnesota's Reform 2020 Section 1115 Demonstration Waiver Alternative Care Program. Minnesota Department of Human Services, June 2021.

<sup>&</sup>lt;sup>8</sup> See section 2.42 for details on case mix is determined and level of need is defined.

• Health status – major diagnoses

## 3.22 AC participants will not experience a change in the types of HCBS services or a decrease in the intensity of services, i.e., number of hours or units of service.

- Prevalence of HCBS waiver services
- Prevalence of state-plan LTSS services, e.g., PCA
- Hours/units of HCBS waiver services
- Hours/units of state-plan services, e.g., PCA

## 3.23 AC participants will experience equal or better access to consumer-directed service options.

- Prevalence of authorized consumer-directed community supports
- Number of units/hours of consumer-directed community supports

#### 3.24 AC participants will not experience an increase in nursing facility use.

- Proportion of participant days spent in nursing facilities
- Frequency of nursing facility admission, by length of stay
- Case mix adjusted nursing facility admission
- Number of nursing facility days
- Return or new use of AC or Elderly Waiver programs after discharge from nursing facility

## 3.25 AC participants will not experience an increase in acute events, as indicated by an increase in acute hospitalizations or emergency department visits.

- Rate of acute inpatient admissions
- Rate of ED visits
- Mortality rate

## 3.26 The rate of Medicaid conversion for AC participants through transitions between AC and EW and other waiver programs or nursing home use will not increase.

- AC participants converting to Medicaid
- Transition from AC to EW or other HCBS waiver program
- AC participant transition to Essential Community Supports<sup>9</sup>
- Days alive in the community and not on Medicaid

<sup>&</sup>lt;sup>9</sup> The Essential Community Supports Program (ECS) program was established by the Minnesota Legislature and became effective January 1, 2015. Initially designed to provide support for individuals who might lose their HCBS program eligibility as a result of changes to the nursing facility level of care criteria that also became effective January 1, 2015, it was also adopted as an ongoing program for individuals aged 65 and older with emerging needs for HCBS but who do not yet meet level of care criteria and who are not MA eligible but meet the AC financial eligibility criteria. This program has a relatively small basket of services and monthly budget.

#### 3.3 Data Sources and Variable Construction

#### 3.31 Data Sources

#### **MMIS**

Medicaid Management Information Systems (MMIS) is the largest health care payment system in Minnesota. Health care providers, county staff, and DHS administration uses the MMIS to pay the medical bills and managed care payments for over 525,000 Minnesotans enrolled in Minnesota Health Care Programs. The MMIS contains both fee-for-service claims and data on use of services by individuals enrolled in managed care plans. The following types of data will be used for the current evaluation:

- Program begin and end date
- Claims for HCBS and other services
- Death date
- Demographics
- In residential or non-residential setting

### **LTC Screening Document**

This form is used to document pre-admission screening and long-term care consultation (LTC) activities. It is used to record public programs eligibility determination as well as to collect information about people screened, assessed, or receiving services under home and community-based services programs. These assessments contain the following variables that will be used for the current evaluation:

- Program type (i.e., indicates waivered program, change to another waivered program)
- Entry and exit from waivered programs (including death) and exit reasons
- Continued use of waivered program at reassessment
- Case mix
- Health functions (e.g. activities of daily living (ADLs))
- Level of care
- Housing type (e.g. nursing facility, assisted living, foster care)
- Authorization of CDCS services

#### **Minimum Data Set (MDS)**

This is a federally mandated assessment. Nursing facilities conduct the MDS assessment on each resident and transmit that data to the Minnesota Department of Health (MDH). Case mix related functions are conducted by the MDH on behalf of the Medicaid program under contract to the DHS (the Medicaid Agency). The MDH determines the resident's case mix classification based on the MDS data and also conducts regular audits of the MDS data submitted by NFs to ensure the data is accurate. These assessments contain the following variables that will be used for the current evaluation:

- Admission and discharge date
- Admission source (e.g., acute and primary care or community) and discharge destination (e.g. acute and primary care transfer, community, or mortality)
- Post-acute Medicare stay, either alone or in combination with a subsequent long stay.

• Health and functional status at admission and the latest assessment before discharge back to the community, if applicable.

#### **Medicare Data**

Medicare claims will provide utilization for non-Medicaid-covered services (particularly for AC participants or for periods when a participant is not covered by Medicaid), but otherwise will largely duplicate what we can learn from MMIS. Medicare files will be requested for persons age 65+ who were enrolled in Medicaid or AC (from existing MMIS) and anyone using skilled nursing facilities (from MDS). The MBSF and MedPAR files will provide sufficient information for the outcome variables.

- Dates of acute hospital stays and emergency department visits
- Utilization outside of periods of Medicaid eligibility or for services not covered by Medicaid
- Associated diagnoses and procedure codes
- Date of death

#### 3.32 Special Variable Construction

#### Case mix

Case mix is a classification tool that is used in both AC and EW programs to establish monthly budget limits for HCBS services. A copy of the Case Mix Classification Worksheet describing the factors used to determine a case mix classification for all AC and EW participants is at <a href="https://edocs.dhs.state.mn.us/lfserver/Public/DHS-3428B-ENG">https://edocs.dhs.state.mn.us/lfserver/Public/DHS-3428B-ENG</a>. The classification is based on assessed need in:

- Eight activities of daily living (ADLs): bathing, dressing, grooming, walking, toileting, positioning, transferring, and eating
- The need for clinical monitoring in combination with a physician-ordered treatment, and
- The need for staff intervention due to behavioral or cognitive needs.

After assessment, the individual is assigned a case mix classification of A-L based on their combination of ADLs, clinical monitoring and behavioral/cognitive needs. <sup>10</sup>

#### Level of Need

For purposes of this evaluation, the case mix classifications have been grouped as follows:

- Low Need (A, L): This group includes individuals with 0-3 ADL dependencies
- Moderate Need (B, D, E): This group includes individuals with 4-6 ADL dependencies and/or behavioral/cognitive needs.
- High Need (G, H, I, J): This group includes individuals with dependencies in 7 or 8 ADLs (G), and those with specific other needs in combination with 7-8 ADL dependencies.
- High Need Clinical (C, F, K, V): This group includes individuals with varying number of dependencies but who have an assessed need for clinical monitoring at least once every 8 hours.

<sup>&</sup>lt;sup>10</sup> EW also has a case mix V for people who are vent dependent

**Table 1. Major Variables and Data Sources** 

Major Variables	Source	
Demographic characteristics and service needs		
Gender, race/ethnicity, age composition, living	MMIS, LTC assessment	
arrangement and residential location	TVITTES, ET C descendent	
Case mix status (low-need vs. high-need)	LTC assessment	
Professional recommendations for service need and	LTC assessment	
supports	Die assessment	
ADL dependencies	LTC assessment	
Health status – major diagnoses	LTC assessment	
Treater Status Imajor diagnoses	ETC dissessment	
Types of HCBS services and intensity of services		
Prevalence of HCBS waiver services	MMIS	
Prevalence of state-plan LTSS services, e.g., PCA	MMIS	
Hours/units of HCBS waiver services	MMIS	
Hours/units of state-plan services, e.g., PCA	MMIS	
Trours are plan services, e.g., 1 err	TVIIVIIS	
Access to consumer-directed service options		
Prevalence of authorized consumer-directed	MMIS	
community supports	WINIS	
Number of units/hours of consumer-directed	MMIS	
community supports	WINIS	
community supports		
Nursing facility use		
Proportion of participant days spent in nursing	MDS, MMIS	
facilities		
Frequency of nursing facility admission, by length	MDS, MMIS	
of stay		
Case mix adjusted nursing facility admission	MDS, MMIS	
Number of nursing facility days	MDS, MMIS	
Return or new use of AC or Elderly Waiver	MDS, MMIS	
programs after discharge from nursing facility		
Acute hospitalizations, emergency department		
visits, and mortality rate		
Rate of acute inpatient admissions	MMIS, Medicare data	
Rate of ED visits	MMIS, Medicare data	
Mortality rate	MMIS, Medicare data	
Medicaid conversion for AC participants and		
transitions between AC and EW and other waiver		
programs		
AC participants converting to Medicaid	MMIS	
Transition from AC to EW or other HCBS waiver	MMIS	
program		

Major Variables	Source
AC participant transition to Essential Community	MMIS
Supports <sup>11</sup>	
Days alive in the community and not on Medicaid	MMIS, Medicare data

### 3.4 Analytic Methods

We propose the following methods to address the hypotheses for the evaluation. The sections below provide information about each approach, including the comparison group(s), metrics, and statistical methods.

### 3.41 Data Set Development

The cross-sectional data sets will be developed by assembling data each calendar year from 2015-2025 for AC and EW participants, constructing all relevant variables, and sample balancing matching to select the EW participant sample.

For each calendar year, we will identify AC and Elderly Waiver participants using LTC screening assessment data (also available in MMIS). We will further identify Elderly Waiver participants in non-residential settings by excluding participants with any claims for procedure codes denoting residential services (i.e., customized living, adult foster care, and residential care services). While living in the community, if an AC participant uses CDCS, this information will be recorded in the MMIS claims data, as well as the total dollars paid for CDCS in a fiscal year. We will categorize acuity into two categories: low-need and high-need and calculate differences in case mix for each year between AC and Elderly Waiver participants by acuity type.

The cohort data sets will consist of participants selected from the cross-sectional data sets in 2019-2021. Longitudinal data will be assembled for three participant cohorts from the beginning cohort year (2019, 2020, or 2021) through 2025. Although the cross-sectional and cohort samples will be separated analytically, the data sets will have overlapping participants who were receiving waivered services in more than one year.

#### 3.42 Comparison Sample Selection

We will employ a sample balancing methodology to select samples of EW participants that match as close as possible on key characteristics of the AC participants...<sup>12</sup> Predictor variables include gender, race/ethnicity, age composition, living arrangement, and residential location, case mix status (low-need vs. high-need), professional recommendations for service need and supports, ADL dependencies, and health status and major diagnoses.

<sup>&</sup>lt;sup>11</sup> The Essential Community Supports Program (ECS) program was established by the Minnesota Legislature and became effective January 1, 2015. Initially designed to provide support for individuals who might lose their HCBS program eligibility as a result of changes to the nursing facility level of care criteria that also became effective January 1, 2015, it was also adopted as an ongoing program for individuals aged 65 and older with emerging needs for HCBS but who do not yet meet level of care criteria and who are not MA eligible but meet the AC financial eligibility criteria. This program has a relatively small basket of services and monthly budget.

<sup>&</sup>lt;sup>12</sup> Deville, J. C., & Tillé, Y. (2004). Efficient balanced sampling: the cube method. *Biometrika*, 91(4), 893-912.

The matching sample with the minimum total difference (Mahalonobis distance) will used for the analysis.  $^{13}$  Individual characteristics will be compared between the pseudo control and assisted groups and tested for significant differences (P < 0.05) with t-tests and Fisher's exact test.

#### 3.43 Repeated Cross-Sectional Analysis

In the first step in the analysis, will compare annual cross-sections of AC participants to the matched samples of EW participants. We will calculate the proportions and intensity (hours or units) of HCBS other Medicaid services. We will also count the number of acute care episodes and nursing home admissions. We will calculate the proportion of individuals that remain enrolled in AC, those that switched to Elderly Waiver, and the days alive in the community and not on Medicaid (i.e., not using residential services). We will also account for death and loss of AC eligibility.

For all measures, we will report the denominator, number and percent of participants, and person months in each service category, program category, and care setting. We will test the difference in proportions and means between AC and EW participants in each year, as well as differences between years. We will apply t-tests or Z-tests to test for differences in means and proportions. We will also test for differences in trends in service use over time with generalized estimating equations (GEE). <sup>14</sup>

#### 3.44 Cohort Analysis

Patterns in outcomes (e.g., transitions between program statuses or care settings) for AC and EW participants in the three cohorts (2019, 2020, 2021) will be visualized with time plots. Separate Cox-proportional hazard models were used to test for differences in the time to event. Variables causing a violation of the proportional hazards assumption will be removed. Multilevel or mixed effect growth models will be used to evaluate HCBS and other service utilization. The models will be calendar quarter time periods from 2019 – 2021. Service use will the outcome. Calendar quarter, AC participation, and interaction between quarter and AC participation will be fixed effects.

## 4. Methodological Limitations

## 4.1 Establishing a Baseline

Prior Alternative Care Evaluation reports have chosen the period prior to the introduction of the waiver (2010-2013) as the pre-waiver baseline, while 2014-2017 served as the implementation period after the waiver. The AC program underwent significant changes, as did the Elderly Waiver program over these years. However, we found no evidence that these changes occurred

<sup>&</sup>lt;sup>13</sup> Rosenbaum, P. R. (1989). Optimal Matching for Observational Studies. *Journal of the American Statistical Association*, 84(408), 1024-1032.

<sup>&</sup>lt;sup>14</sup> Hardin JW, Hilbe JM (2003) Generalized estimating equations. Boca Raton: CRC Press.

because of the waiver. There were other external events, such as policy, programmatic, and demographic changes) that affected the program. The evaluation of the waiver extension will involve a baseline period of 2015-2019 and an evaluation period from 2020-2025. We selected this baseline for the extension period in order to estimate trends prior to the extension period, while avoiding a baseline that is too lengthy and where major policy changes had occurred, such as the change in the nursing facility level of care criteria at the end of 2014.

### 4.2 Selecting a Comparison Population

The Elderly Waiver population serves as a comparator for Alternative Care in most of the analysis. EW participants differ significantly from AC participants in some respects. Controlling statistically for these differences would strengthen the evaluation design. A sample balancing methodology will be used in order that the EW comparison group is as similar as possible to the AC participants in demographics, health, and functioning. Consideration will be given to characteristics and matching techniques for this population throughout the baseline and extension periods.

#### 4.3 External Events – COVID-19

The COVID-19 public health emergency is likely to have had an impact on service needs and use of care for the AC population at the beginning of the extension period and perhaps continuing throughout the period. We will address this and other potential confounders by conducting a trend analysis for a period prior to COVID-19 and extending beyond the pandemic, assuming hopefully that it is nearing an end in mid-2021. Additionally, the EW participant comparison group will be employed as an indicator of the COVID-19 effect.

#### 4.4 Cautious Generalization

We must exercise caution in the interpretation of our findings because of the strong possibility of unmeasured events or policy changes and the difficulty of inferring causality from our observational, quasi-experimental design.

#### 5. Attachments

## 5.1 Independent Evaluator

DHS plans to continue contracting with Center for Long-Term Care and Aging, University of Minnesota School of Public Health, Division of Health Policy and Management to conduct the evaluation of the impact of the continuation of the Alternative Care program under the waiver on access, quality and cost on the low-income senior population in the state. Greg Arling, PhD, Professor and Zachary Hass, PhD, Assistant Professor, Purdue University will assist in the analysis. Dr. Arling and his colleagues at University of Minnesota and Purdue University

designed the current evaluation plan for the initial five year waiver period, and have been reporting on these measures on an annual basis.

The evaluation team at the University of Minnesota and Purdue University will conduct all analysis using the methods described in this plan. DHS will provide access to administrative data, including MMIS claims, Minimum Data Set (MDS v3), and LTC assessment data. In addition, DHS staff will provide expertise on policy and program operations that may influence data trends.

## **5.2 Evaluation Budget**

The total budget available for the independent evaluation over the five year waiver period is estimated to be \$735,000. This will cover evaluation expenses, including purchasing Medicare data as made available to the University by CMS, analysis and interim reports, and travel associated with presentations and in-person meetings. In addition, DHS staff time is necessary to provide the administrative data and consult on the evaluation findings.

## **5.3 Timeline and Major Milestones**

Deliverable	Responsible Party (from to)	Date
Draft Evaluation Design Plan	State to CMS	Within 120 days after the approval
		of the demonstration extension (July
		30, 2020)
Final Evaluation Plan	State to CMS	Within 60 days following receipt of
		CMS comments on Draft Evaluation
		Design Plan
Annual internal report to DHS from	Independent	June of each year during
independent evaluator	Evaluator to DHS	demonstration
Final evaluation report	Independent	Within 12 months following the end
	Evaluator to DHS	of the demonstration extension
		period
Draft Summative Evaluation Report	State to CMS	Within 18 months following the end
		of the demonstration extension
		period
Final Summative Report	State to CMS	Within 60 days of receipt of CMS
		comments