DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services
7500 Security Boulevard, Mail Stop S2-25-26
Baltimore, Maryland 21244-1850

State Demonstrations Group

November 29, 2021

Emma Chacon
Interim Director
Division of Medicaid and Health Financing
Utah Department of Health
PO Box 143101
Salt Lake City, UT 84114-3101

Dear Ms. Chacon:

The Centers for Medicare & Medicaid Services (CMS) completed its review of Utah Medicaid Integrated Care (UMIC) Evaluation Design, which is required by the Special Terms and Conditions (STCs), specifically, STC #134, of Utah's section 1115 demonstration, "Primary Care Network" (Project Numbers: 11-W-00145/8 and 21-W-00054/8), effective through June 30, 2022. CMS determined that the Evaluation Design, which was first submitted on May 6, 2021 and subsequently revised on September 29, 2021, meets the requirements set forth in the STCs and our evaluation design guidance, and therefore, approves the state's UMIC Evaluation Design.

CMS added the approved UMIC Evaluation Design to the demonstration's STCs as Attachment P. A copy of the STCs, which includes the new attachment, is enclosed with this letter. In accordance with 42 CFR § 431.424, the approved Evaluation Design may now be posted to the state's Medicaid website within thirty days. CMS will also post the approved Evaluation Design as a standalone document, separate from the STCs, on Medicaid.gov.

In light of the timing of the amendment of the UMIC component in Utah's Primary Care Network demonstration, the state's evaluation of the UMIC program, consistent with this approved design, will be included in a Summative Evaluation Report to be due to CMS within 18 months of the end of the demonstration period. In accordance with 42 CFR § 431.428 and the STCs, we look forward to receiving updates on evaluation activities in the demonstration monitoring reports.

We appreciate our continued partnership with Utah on the Primary Care Network section 1115 demonstration. If you have any questions, please contact your CMS demonstration team.

Sincerely,

Danielle Daly -S

Digitally signed by Danielle Daly -S
Date: 2021.11.29 11:50:12 -05'00'

Danielle Daly
Director
Division of Demonstration
Monitoring and Evaluation

cc: Mandy Strom, State Monitoring Lead, CMS Medicaid and CHIP Operations Group

Evaluation Design: Utah Medicaid Integrated Care (UMIC) Demonstration

Report prepared by the Public Consulting Group: April 30, 2021
Revised by Public Consulting Group: September 14, 2021

PUBLIC CONSULTING GROUP

TABLE OF CONTENTS

A. GENERAL BACKGROUND INFORMATION 3

1.Demonstration Name and Timing 3

2.Demonstration Goals 3

3.Description 3

4.Population 5

5.Context 6

B. EVALUATION QUESTIONS AND HYPOTHESES 8

1.Logic Model 8

2.Hypotheses and Research questions 8

C. METHODOLOGY 11

1. Evaluation Design Summary 11

2. Target and Comparison Populations 12

In-State Comparison Groups 12

Other-State Comparison 12

3. Evaluation Period 14

4. Data Sources 14

National Survey Data 14

Medicaid Administrative Data 15

Key Informant Interviews 15

5. Analytic Methods 17

Quantitative Analyses 17

Qualitative analysis 20

D. METHODOLOGICAL LIMITATIONS 20

E. ATTACHMENTS 21

1.Independent Evaluator 21

2.Evaluation Budget 24

3.Timeline and Major Milestones 25

4.Evaluation Table 26

5.Measure Specifications 32

General Overview 33

Appendix A: Value Code Sets by Measure 78

A. GENERAL BACKGROUND INFORMATION

1.DEMONSTRATION NAME AND TIMING

On December 23, 2019, CMS approved the "Utah Medicaid Integrated Care Plan" (UMIC) Amendment to Utah's Primary Care Network Demonstration for implementation in the two-and-a-half-year period starting January 1, 2020, under the authority of Social Security Act section 1115(a)(2). The evaluation will cover the time period from UMIC launch on January 1, 2020, through June 30, 2022. The Utah Department of Health (UDOH) Division of Medicaid and Health Financing (DMHF) administers the Utah Medicaid program and is responsible for the implementation of adult Medicaid expansion.

2.DEMONSTRATION GOALS

The aim of the UMIC demonstration is to improve access and health outcomes by enrolling beneficiaries in integrated MCOs for delivery of their physical and behavioral health services in the five most populous counties in the state.

Managed care, with increasing levels of care coordination and integration, is the central approach of Utah's Primary Care Network (PCN) Demonstration. The UMIC amendment advances the goals of the demonstration by providing integrated physical and behavioral health services to participants through a managed care delivery model in five urban counties. This demonstration created four integrated care plans that are responsible for providing physical, mental health, and substance use disorder services for the Adult Expansion members in Weber, Davis, Salt Lake, Utah, and Washington counties. In addition, UDOH received authority to enroll Adult Expansion Medicaid members in existing ACOs in nine additional counties for physical health (see Table 1). Beneficiaries in most counties[1] not covered by UMIC are enrolled in a Prepaid Mental Health Plan (PMHP) covering mental health and SUD services.

The goals of the UMIC waiver amendment are to:

1)Increase enrollment in managed care

2)Improve access to health care

3)Improve health outcomes and appropriate use of the ED for beneficiaries

4) Support the fiscal stability of the Medicaid program

3.DESCRIPTION

The UMIC amendment enrolls beneficiaries in managed care plans and creates an integrated managed care model, to combine the delivery of physical health and behavioral health services for the Adult Expansion Population in five of Utah's most populous counties. The new authorities provided by the UMIC waiver amendment are:

1. To enroll beneficiaries authorized under Utah's 1115 Primary Care Network Demonstration Waiver in managed care plans;

[1] All BH services in Wasatch County, and SUD services in Box Elder, Cache, and Rich Counties, are reimbursed on a FFS basis.

2. To create and operate an integrated managed care model combining the delivery of physical health and behavioral health services in five Utah counties for the Medicaid expansion groups authorized by this waiver;

3. To enroll those beneficiaries not enrolled in Utah Medicaid Integrated Care (UMIC) in Utah's Accountable Care Organizations (ACO) for their physical health service delivery system and in Prepaid Mental Health Plans (PMHP) for their behavioral health services delivery system.

UDOH has introduced managed care on a county-by-county basis. Beneficiaries in some counties have the option to receive physical health services through traditional fee-for-service arrangements or through an ACO and also have access to behavioral health services through a prepaid mental health plan (PMHP). Beneficiaries in other counties are required to enroll in ACOs for physical health, and also have access to behavioral health services through a PHMP. UMIC adds a third level to the managed care plans in place for some beneficiaries, combining behavioral health and physical health into a single integrated plan. The four integrated plans are known as Health Choice Utah, Healthy U, Molina Healthcare of Utah, and SelectHealth Community Care.

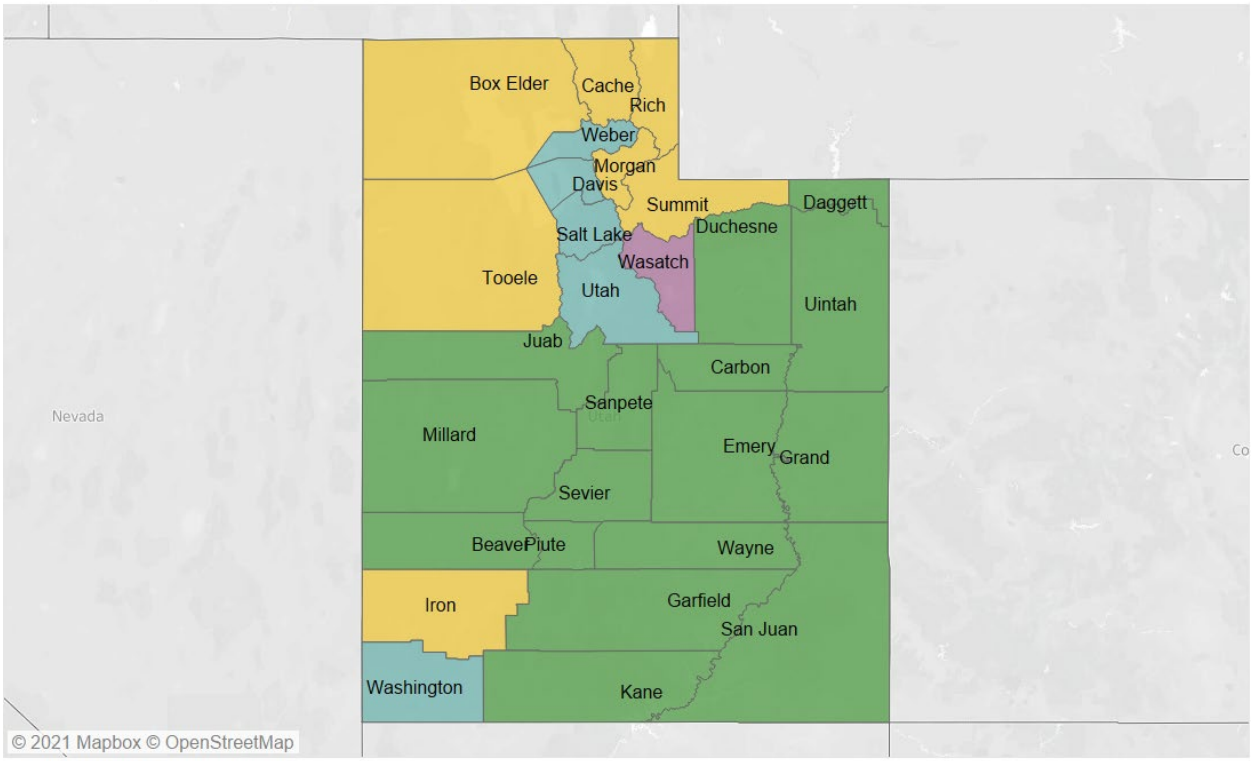
TABLE 1: UTAH 1115 HEALTHCARE DELIVERY PLANS BY COUNTY

Healthcare Delivery Plan		Counties
Physical Health	**Behavioral Health**	
Choose between Fee for Service Network or ACO	Prepaid Mental Health Plan 1915(b)	Beaver, Carbon, Daggett, Duchesne, Emery, Garfield, Grand, Juab, Kane, Millard, Piute, San Juan, Sanpete, Sevier, Uintah, Wayne
Must have Accountable Care Organization 1915(b)	Fee for Service	Wasatch
	Prepaid Mental Health Plan 1915(b)	Box elder[2], Cache, Iron, Morgan, Rich, Summit, Tooele
Utah Medicaid Integrated Care 1115		Davis, Salt Lake, Utah, Washington, Weber

[2] All SUD services in Box Elder, Cache, and Rich Counties, are reimbursed on a FFS basis.

FIGURE 1

UT Adult Expansion Integrated Managed Care



4.POPULATION

The population studied will be the Adult Expansion members enrolled in the Utah Medicaid Integrated Care program, which is anticipated to include approximately 60,000 individuals each year (Table 2). Adult expansion includes both parents and non-parents, aged 19-64, with household incomes up to 133% of the FPL (with a 5% income disregard), who are not otherwise eligible for Medicaid. The following individuals are exempt from UMIC and will be excluded from the evaluation: Utah Medicaid beneficiaries residing in the Utah State Hospital or the Utah State Developmental Center; individuals enrolled in the Health Outcomes Medical Excellence (HOME) program; Medicaid beneficiaries enrolled in Utah's Buyout Program; and Adult Expansion Medicaid beneficiaries who have access to ESI, who will be required to enrolled in a qualified ESI plan.

Because no true comparison population is available for this demonstration, comparisons will be made up of post-waiver trends to pre-waiver trends, and among subgroups within the Utah Medicaid population, adjusted for demographic and other traits where possible.

TABLE 2: UMIC PROJECTED ENROLLMENT

	DY18 (SFY 20) *	DY19 (SFY 21)	DY20 (SFY 22)
Projected Member Months			
Expansion Parents-Integrated Care	196,306	268,285	274,992
Expansion Adults without Dependent Children-Integrated Care	309,454	422,920	433,493
Total	505,760	691,205	708,485
Projected Enrollment			
Average number of beneficiaries	56,196	57,600	59,040
*Projections were based on a start date of 10/1/2019. Actual launch was 1/1/2020.			

5.CONTEXT

The UMIC waiver amendment took the next step in UDOH's long-term strategy of using managed care to increase healthcare access and quality while containing cost. The transition to managed care plans for beneficiaries began in 1982 under Utah's 1915(b) waiver program. Utah's Primary Care Network Section 1115 demonstration waiver was first approved in 2002 and included a pre-ACA coverage expansion (called the Primary Care Network) to certain non-disabled adults. Since 2013, four full-risk ACOs have managed physical health care for all residents of designated counties and for other beneficiaries who opt in to ACO plans. Utah has also operated a 1915(b)-waiver program called the Prepaid Mental Health Plan (PMHP) since July 1, 1991. The PMHP was designed to maximize the contractors' flexibility to effectively and responsibly use Medicaid funds to ensure Medicaid beneficiaries have access to behavioral health services and to improve behavioral health outcomes for Medicaid beneficiaries. Under the PMHP, Medicaid beneficiaries have access to a spectrum of inpatient and outpatient mental health care and outpatient substance use disorder care.

In November of 2018, Utah voters supported a ballot initiative to adopt the full Medicaid expansion as set out in the Affordable Care Act, which would include coverage for childless adults with income up to 138% of the federal poverty level (FPL) and parents/caretakers with incomes from 60% to 138% of the FPL. State legislation introduced in the 2018 General session of the Utah State Legislature as well as in the 2019 General session was passed to amend the ballot measure. Senate Bill 96 "Medicaid Expansion Adjustments," which was signed into law on February 11, 2019, required the Department of Health to seek approval of a waiver request to the federal government for partial expansion for eligible individuals below 100% of the FPL.

On March 29, 2019, CMS approved an amendment to Utah's existing Primary Care Network Section 1115 demonstration waiver to expand Medicaid to a capped number of adults with income up to 100% FPL beginning on April 1, 2019. The state requested authority through the UMIC amendment to cover additional services authorized under Utah's 1915(b) PMHP waiver. These services include

Psychoeducational services[3], Personal services[4], Respite Care[5], and Supportive Living[6]. The Bridge Plan expansion was approved at the state's traditional Medicaid matching rate of 68%, not the enhanced ACA matching rate of 90%. In accordance with SB 96, Utah then submitted its Per Capita Cap waiver application with a request to receive 90/10 ACA enhanced matching rate for partial expansion and its Fallback Plan waiver seeking authority for a coverage expansion up to 133% FPL with a 90/10 ACA enhanced match.

On December 23, 2019, CMS approved expansion of Medicaid coverage for adults up to 133% of the FPL as well as a number of amendments. Approved amendments to the waiver have included targeted SUD and dental services,[7] Clinically Managed Residential Withdrawal Management, community engagement requirements,[8] and support through ESI reimbursement in April 2019 (amendment was approved in March 2019). The new waiver amendments are approved through June 1, 2022.

The UMIC amendment will provide Utahns with more coordinated care and improved access to behavioral health services with the goal of supporting improved health and well-being. As of 3/05/2021, 52,812 beneficiaries are enrolled in the UMIC plan, 8,504 are enrolled in an ACO plan, 16,327 are enrolled in a PMHP, and 15733 are enrolled in FFS. The number of Utah residents with incomes below 133% FPL is likely to increase due to income loss related to the COVID-19 pandemic. Enrollment numbers may also increase for the duration of the PHE, and decrease when the PHE ends, due to the postponement of eligibility review and terminations.

TABLE 3: NUMBER OF ENROLLEES

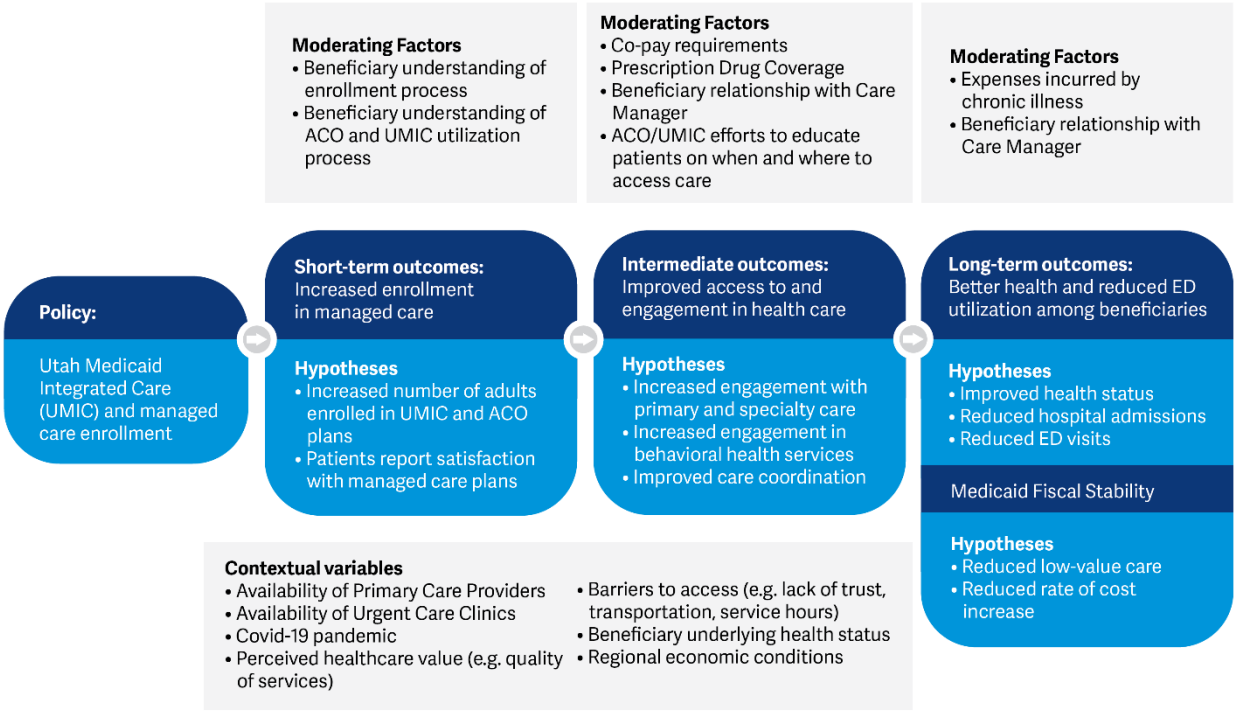
Care Delivery	Utah Medicaid Current Enrollment
FFS (physical and behavioral health)	15,733
ACO (physical health)	8,504
UMIC Fully Integrated Care Plan (physical and behavioral)	52,812

[3] Services recommended by a physician or licensed mental health practitioner that are furnished for the primary purpose of assisting in the rehabilitation of enrollees with serious mental illness (SMI) or serious emotional disturbance (SED)
[4] Assistance with instrumental activities of daily living (IADLs) that are necessary for SMI or SED individuals to live successfully and independently in the community and avoid hospitalization.
[5] Services furnished for the primary purpose of giving parents/guardians temporary relief from the stresses of care for a child with SED.
[6] Costs incurred in residential treatment/support programs when managed care plan enrollees are placed in these programs to reduce risk for inpatient hospitalization.
[7] CMS also approved expanded criteria for the Targeted Adults, state plan dental benefits for Medicaid eligible individuals over the age of 65, porcelain or porcelain-to-metal crowns for Adults receiving SUD treatment, and the UMIC Integrated Care Amendment.
[8] In 2020, community engagement requirements were suspended due to the Public Health Emergency.

B. EVALUATION QUESTIONS AND HYPOTHESES

1.LOGIC MODEL

FIGURE 2



2.HYPOTHESES AND RESEARCH QUESTIONS

The objectives of the UMIC amendment are to improve access to integrated care, to improve health outcomes, especially behavioral health outcomes, and to support the fiscal sustainability of the Utah Medicaid program, through greater participation in the Medicaid managed care delivery system. Accordingly, the overarching evaluation questions are:

TABLE 4: DEMONSTRATION GOALS AND RESEARCH QUESTIONS MATRIX

Demonstration Goal	Research Question
1. Increased enrollment in managed care	Did the Demonstration increase enrollment in managed care among Medicaid beneficiaries?

2. Improved Access to health care	Did beneficiaries enrolled in managed care have increased access to and engagement in health care?
3. Improved Health outcomes and appropriate use of the ED	Did beneficiaries enrolled in managed care have improved health outcomes, including behavioral health, and reduced ED utilization?
4.Support the fiscal sustainability of the Medicaid program	Did managed care contain costs of care?

The logic model above illustrates how the amendment's objective is expected to be achieved by program activities, following a natural progression from proximate to distal outcomes as the demonstration goes on. Each outcome is represented by a testable hypothesis, listed below, about the impact of the demonstration activities, and a corresponding research question. Table 10 specifies the measures that will be used to assess each hypothesis.

The first UMIC objective, greater participation in managed care, is the direct outcome of beneficiary enrollment in the UMIC program in five urban counties, and enrollment of adult expansion beneficiaries in ACOs in an additional nine counties. Adult expansion Medicaid beneficiaries in Davis, Salt Lake, Utah, Washington, and Weber counties will be required to receive their physical and behavioral health services through one of Utah's four integrated care plan MCOs. The first evaluation hypothesis is that implementation of the waiver amendment will increase the number of adult beneficiaries receiving benefits through managed care, both in ACOs and fully integrated plans.

The second hypothesis is that enrollment in the UMIC program will improve access to health care, including behavioral health, through greater coordination in the delivery system. Utahns who are part of the Adult Expansion population will be able to take advantage of consumer-facing features of Utah's four managed care plans including appointment scheduling assistance, telehealth services, 24-hour nurse triage lines, and virtual prenatal visits. In addition, Utah's Bureau of Managed Care (BHMC) has stated Quality Strategy Goals, overseen by the Quality Improvement Council (formerly the State Quality Committee), that incorporate care coordination into managed care contracts. ACOs and PMHPs are required to hold semi-annual meetings, develop rate setting methodologies that support coordinated care, and solidify expected outcomes for members in order to participate in the state's managed care delivery system. ACOs and PMHPs are also required to develop collaborative relationships with state bureaus, agencies, and other external partners to achieve better outcomes for their members. The evaluator will assess demonstration participants' access to primary care, behavioral health services, and improved care coordination as a result of UMIC.

The long-term UMIC objective, improved health outcomes, especially for behavioral health, is the anticipated result of more coordinated care and greater access to BH services. Integrated care delivery is expected to facilitate consistent and timely referrals to the appropriate care setting. Additionally, the state anticipates that access to a suite of mental health services will lead to better treatment compliance and improvements to overall quality of life for beneficiaries. The evaluation hypothesis is that the

demonstration will improve the health of beneficiaries enrolled in managed care, reflected in reduced rates of hospitalization and ED visits. In particular, the state hypothesizes that integrated care for beneficiaries with BH diagnoses will reduce the incidence of ED visits for BH conditions. In addition to acute care utilization, measures to assess this hypothesis will include self-reported health status, mental health outcomes, and engagement in SUD treatment.

Fiscal sustainability, the final UMIC objective, is targeted by this demonstration through greater participation in the Medicaid managed care delivery system. The evaluation hypothesis is that the UMIC amendment will improve the fiscal sustainability of the Medicaid Program both by reducing the rate of hospitalizations and ED visits, as described above, and by decreasing the rate of low-value care among adult expansion beneficiaries, thereby containing growth in the total cost of care for beneficiaries in the adult expansion population.

Hypothesis 1: **The demonstration will increase the number of adult beneficiaries receiving benefits through managed care.**

Primary research question 1.1: Did the demonstration increase the number of adult beneficiaries receiving benefits through managed care?

Subsidiary research question 1.1.1: Did enrollment in either form of managed care (ACOs or UMIC) differ among beneficiaries by demographic factors, such as by age, gender, race/ethnicity, or language?

Primary research question 1.2 Was the demonstration implemented effectively?

Subsidiary research question 1.2.1: Did the Public Health Emergency/Covid-19 pandemic impact implementation?

Primary research question 1.3 Is patient satisfaction associated with enrollment in any managed care, or type of managed care?

Subsidiary research question 1.3.1: Was patient satisfaction associated with receiving care in person or by telehealth, including audio-only?

Hypothesis 2: **The demonstration will improve access to and engagement in health care.**

Primary research question 2.1: Did beneficiaries enrolled in managed care have increased access to and engagement in health care?

Primary research question 2.2: Did beneficiaries enrolled in managed care have increased access to and engagement in behavioral health care?

Primary research question 2.3: Did beneficiaries enrolled in managed care have increased access to care coordination?

Hypothesis 3: **The demonstration will improve the health of beneficiaries enrolled in managed care.**

Primary research question 3.1: Did beneficiaries enrolled in managed care have improved health outcomes, including behavioral health?

Subsidiary research question 3.1.1 Did the outcome of either form of managed care differ among subgroups of beneficiaries by demographic factors?

Primary research question 3.2: Did the rate of ED visits decrease for beneficiaries in managed care?

*Subsidiary research question 3.*2.1 Did the rate of ED visits for BH conditions decrease for beneficiaries in managed care?

*Subsidiary research question 3.*2.2 Did any change in the rate of ED visits differ among subgroups by demographic factors?

Primary research question 3.3: Did the demonstration as a whole improve health care access and quality for the Medicaid beneficiary population?

Hypothesis 4: **The demonstration will improve the fiscal sustainability of the Utah Medicaid program.**

Primary research question 4.1: Did the total cost of care decrease for beneficiaries in managed care?

Primary research question 4.2: Did the rate of hospitalization decrease for beneficiaries in managed care?
Primary research question 4.3: Did the rate of utilization of low-value care decrease for beneficiaries in managed care?

C. METHODOLOGY

1. EVALUATION DESIGN SUMMARY

The Independent Evaluator (IE) will use a mixed-methods evaluation approach that will combine administrative and survey data as well as APCD claims data to address the goals and hypotheses presented in the UMIC waiver amendment application and answer all research questions listed above.[9] The UMIC evaluation design leverages the state's incremental adoption of managed care to compare three groups of beneficiaries. Beneficiaries covered by fee-for-service will serve as a reference population. Those who are covered by ACOs and by integrated care MCOs will be distinct intervention groups. Table 1 shows the counties that comprise each group. The fully integrated UMIC plans are treated as a higher "dose" of managed care, and physical-health ACO plans as a lower dose. While the dosage analogy is imperfect, this framework is a useful representation of the state's concept of physical-health ACOs as a first step in managed care, and UMIC integrated plans as a further step. Comparison of the three groups may identify outcomes where one or both forms of managed care achieve results. Further, a stepwise progression may be seen from FFS to ACO to UMIC, which would suggest a "dose-response" type relationship between managed care and the outcome. Outcomes related to behavioral health are of particular interest, because the integration of BH services in UMIC plans represents the next step in integrated managed care.

These are non-equivalent groups, particularly since the demonstration will target the most populous and urban counties for integrated care. In order to account for differences among the groups as much as possible, regression analysis will adjust for demographics and health status at baseline and will employ propensity score matching to further mitigate the dissimilarities.

For testing the evaluation hypotheses, the IE will analyze the trend over time in outcome variables, using truncated regression to follow individuals through time while accounting for individuals who enter and leave the demonstration at different times. Change over time (slope) will be compared for the three evaluation groups.

Additionally, stratification by demographic subgroups and other populations of interest will be used to investigate whether UMIC engages some regions or populations more effectively, whether these are the same regions or populations with the highest rates of utilization, poor mental health outcomes, etc., and whether these patterns change over time.

Comparisons to Medicaid beneficiaries in other states also provide valuable context. A difference-in-difference (DID) comparison of the aggregate Medicaid population to Medicaid beneficiaries in states without Medicaid integrated care delivery will address the research question "Did the demonstration as a whole improve health care access and quality for the Medicaid beneficiary population?" The DID approach accounts for large historic trends that affect outcomes for all beneficiaries, and in that sense is

[9] This evaluation design report describes the evaluation of the UMIC component specifically. The IE will separately evaluate the Adult Expansion and Employer Sponsored Insurance (ESI) components of the waiver.

more rigorous, but must be interpreted carefully since populations are non-equivalent, and identification of UMIC participants from national survey data will be imprecise.

2. TARGET AND COMPARISON POPULATIONS

In-State Comparison Groups

The population studied will be the members of the Adult Expansion Medicaid population. This includes parents and adults without dependent children aged 19-64 with household incomes up to 133% of the FPL (with a 5% income disregard) who are not otherwise eligible for Medicaid. The analysis of claims/administrative data will include all individuals enrolled in Medicaid for 12 consecutive months. Individuals enrolled in ESI will be excluded.

As described below, the evaluation will compare three groups of beneficiaries (Table 5), with beneficiaries covered by fee-for-service designated as a reference population. Enrollment in ACO plans and UMIC integrated plans will be treated as levels of intervention. Beneficiaries will be attributed to the three groups based on claims data.

Because the ACO and UMIC plans were deliberately introduced in Utah's more populous counties, the three groups are differently sized and clearly nonequivalent at baseline. The IE will employ a difference-in-differences (DID) approach with inverse probability of treatment weighting (IPTW) to account for baseline differences and identify the effect of the demonstration on study outcomes. The IPTW approach will consider the demographic variables that are most different among Utah counties and assign each individual a weight that accounts for the likelihood, based on demographic factors, that they are included in their group. Each individual's weight is defined as the inverse of the probability of receiving the treatment (health plan type) that the subject received. This model allows for a comparison of the overall outcomes for the three health plan types and can be stratified by age and gender to identify different outcomes for these subgroups.

Subgroup comparisons by race/ethnicity across the three health plan types are likely to be underpowered due to low numbers in the less urban counties.[10] In order to investigate possible disparities by race/ethnicity within the state, the IE will break down outcomes by race/ethnicity within each of the three groups.

TABLE 5: COMPARISON GROUPS

Group	Care Delivery	Evaluation
1	Fee-for-Service	Reference group
2	ACO	Intervention group: Lower "dose" managed care
3	Fully Integrated UMIC plan	Intervention group: Higher "dose" managed care

[10] The less populous counties have both smaller numbers of residents, and smaller proportions of minority residents. According to 2019 census data, among the counties comprising the FFS group, on average 7% of residents identified as Hispanic, and 14% as a race other than White, compared to 14% Latino and 21% non-White for the UMIC counties.

Other-State Comparison

For additional context, comparisons of statewide outcomes to national trends and a synthetic control derived from other states will be made using BRFSS data.

As described below in Analytic Methods, for each outcome of interest, the IE will use BRFSS data for other states for each quarter of the three years prior to launch to construct a synthetic control[11] representing Utah's outcomes during the baseline period. The weights derived empirically during this stage will allow the IE to generate a predicted outcome value for "synthetic Utah" for each quarter during the demonstration period. This model will be used to find mean differences between actual Utah outcomes and predicted outcome of the synthetic control during the demonstration period.

The population served by the demonstration cannot be directly identified in BRFSS data. Therefore, the intervention (Utah) and comparison (other states) groups will be constructed by identifying individuals within the age and income bands served by Adult Expansion. The comparison will be of the estimated adult expansion population in Utah, to the synthetic control composed of equivalent individuals in control states. States that newly implemented Medicaid expansion during this time period will be excluded, but all states that expanded before 2017 or did not expand Medicaid will be included.[12] Non-expansion states are included because they are likely to represent the closest match to pre-demonstration Utah.

[11] CMS White Paper, October 2020, "Selection of Out-of-State Control Groups and the Synthetic Control Method.

[12] Based on dates of Medicaid expansion, Virginia, Maine, Idaho, Nebraska, Oklahoma, and Missouri will be excluded from the control pool. Other states may be excluded if they expand before 6/30/2022.

3. EVALUATION PERIOD

The evaluation will include the time period from January 1st, 2020, through June 30th, 2022. The evaluation population is new to Medicaid, so pre-demonstration claims are not available. The evaluation design relies on FFS beneficiaries as a contemporaneous reference group. For out-of-state comparisons based on national survey data, the three years prior to demonstration launch will serve as the baseline.

4. DATA SOURCES

The evaluation will use the following quantitative and qualitative data sources:

- National Survey Data: Behavioral Risk Factor Surveillance System (BRFSS)
- Medicaid Administrative Data
- CAHPS Survey Data
- Key Informant Interviews (KIIs)

The measures used for evaluation are listed in Table 10. Most are derived from claims and administrative data and will be reported to CMS as part of the approved UT Primary Care Network waiver monitoring protocol. Wherever possible, the evaluation design aligns measures with CMS monitoring metrics to ease administrative burden, but also includes additional measures to support robust econometric methods.

National Survey Data

The IE will use the Behavioral Risk Factor Surveillance System (BRFFS) data to answer research questions about changes in access to preventive care and health status of low-income residents (Table 6). The data will be leveraged to compare against national averages, and a nationally derived synthetic control.

BRFSS collects data on over 400,000 adult U.S residents' health-related risk behaviors and events, chronic health conditions, and use of preventive services across all 50 states, the District of Columbia and three U.S territories. The IE anticipates leveraging the BRFSS data for Health-Related Quality of Life estimates. Specifically, the IE will use BRFSS to understand the eligible population's general health status, physical health status, mental health status, and impact of health status on quality of life. These estimates for Utah will then be compared against national averages, and a synthetic control derived from other states.

Measures employing national survey data for an out-of-state comparison will use a three-year pre-demonstration baseline. The measurement period for national surveys does not align with the demonstration years or benefit periods, so the annual survey datasets will not perfectly represent the demonstration timeline. For the years prior to demonstration launch, and for each demonstration year, the closest available datasets will be used.

TABLE 6: APPLICATION OF NATIONAL SURVEY DATA

Survey Name	Topic	Survey Questions
BRFSS	Health status	• Healthy days • Anxiety/depression symptoms • Having a PCP • Primary care engagement • Delayed or avoided care

Medicaid Administrative Data

The IE anticipates receiving claims and other Medicaid administrative data, such as eligibility files, from the state on an annual basis. Administrative data is expected to be of high quality, in terms of completeness and accuracy.

The IE anticipates having access to aggregate CAHPS data collected by the health plans and reported to UDOH. Health plans are able to distinguish between ACO and UMIC plan enrollment in CAHPS data and report this information to the state These data will allow for comparisons between lower "dose" managed care and higher "dose" managed care and will be used to answer primary research questions 1.3 "Is patient satisfaction associated with enrollment in any managed care, or type of managed care?" and 2.3. "Did beneficiaries enrolled in managed care have increased access to care coordination?"

CAHPS data will also be used to analyze differences in access to care coordination and patient satisfaction between subgroups. Because CAHPS data will be available only in aggregate, subgroup analysis will be limited to the available demographic stratifications: age, race (White and Other), ethnicity (Hispanic/ Not Hispanic), and gender.

Key Informant Interviews

Qualitative data on program implementation will be gathered through key informant interviews (KIIs) with providers and state administrators. A total of 20-24 KIIs are planned; three at each of the four health plans, five state employees participating in implementation, and at least three community-based providers. For each health plan participating in the UMIC demonstration,[13] the IE will interview individuals from multiple different perspectives: a clinician that serves Medicaid patients, someone in a managerial role who is familiar with the UMIC program, and another employee involved in implementing the UMIC demonstration who can provide the member perspective. For example, from one of the managed care organizations, the IE will interview the following individuals: a physician, the Chief Medical Officer of the health plan, the Vice President of Government Contracts, the Assistant Vice President of Health Plan Operations, and the Manager of Government Contracts.

In addition to the administrative contacts from the ACOs and MCOs, the IE will interview at least three community-based providers, such as primary care providers and behavioral health clinicians, who directly

[13] The four health plans are Healthy U, Health Choice Utah, Molina Healthcare, and SelectHealth Community Care. All four provide both ACO and UMIC plans.

serve Medicaid patients at sites such as community health centers, in order to capture the perspective of front-line clinicians working through the UMIC demonstration. These providers will be asked about topics including integration of behavioral health care, barriers to access, and their perceptions of patients' engagement in care.

Semi-structured key informant interviews lasting 30-45 minutes per contact will be conducted by phone or videoconference, with privacy protections in accordance with CMS guidelines. Interviews will be recorded and transcribed. Interview guides will be developed by the IE in collaboration with UDOH for providers, health plans, and for state administrators involved in implementation of the waiver demonstration. Based on the interviewee's role, the interview guide and questions asked will be tailored accordingly. For example, state administrators will be invited to discuss the program rollout and feedback received from plans, health plan representatives will be asked about the plan's approach to integrating BH services, and questions regarding telehealth experiences will be directed towards clinicians.

As appropriate, interviews will explore successes and challenges with regard to program implementation, especially in light of the PHE, and other topics drawn from the logic model; examples are shown in Table7.[14] Interview guides will include questions that address disparities and health equity as appropriate for the interviewee's role. This may include population health analysis strategies, language services, and targeted outreach programs.

TABLE7: TOPICS FOR KEY INFORMANT INTERVIEWS

Research Question	Example topics
Was the demonstration implemented effectively?	● Perceived successes and challenges in implementation ○ Care integration with behavioral health ● Perceived steps towards integrating behavioral health with physical health services, e.g., screening and referrals ● Perceived impact of the PHE/pandemic on member engagement ● Perceptions about the role of telehealth in achieving demonstration goals ○ Member experience ▪ Q: How did members experience the transition to telehealth?
Did enrollment or outcomes differ by demographic factors?	● Perceptions of barriers to access and participation in care ● Steps health plans/providers are taking to identify, understand, and address disparities in access and engagement

[14] KIIs will cover topics relevant to the evaluation of the Adult Expansion and ESI components of the demonstration as well; these are covered in separate evaluation designs.

5. ANALYTIC METHODS

Quantitative Analyses

In order to provide robust conclusions, the IE will employ multiple analytic strategies to answer the research questions. The IE will utilize statistical software packages including SAS, SQL, and Stata to analyze the data, generating descriptive statistics and assessing significant differences in comparisons of interest. Multivariate regression will be used to model outcomes over time, following individuals longitudinally. This approach allows for the trend over time to be adjusted for changes in the demonstration population as members enter and leave the Adult Expansion Population.

TABLE 8: SUMMARY OF ANALYTIC METHODS TO BE USED FOR EVALUATION

Method	Comparison	Data sources
Subgroup comparison	Demonstration participants stratified by demographic and health factors	Encounter data, administrative data
Event study/ time series	Trend during demonstration for beneficiaries enrolled in ACO or UMIC plans, vs FFS	Encounter data Administrative data
Difference in difference	Pre/Post change in Utah vs Pre/Post change in neighboring states	National survey data

Descriptive statistics

The IE will use descriptive statistical methods to generate summary tables of population size and characteristics, and outcomes for the three groups of demonstration participants. Data will be analyzed using standard tests as rates, proportions, frequencies, and measures of central tendency (e.g., mean, median, mode). These tables will be used to develop a quantitative picture of the population, to describe raw trends, and to identify characteristics that will be included as covariates in regression modeling.

Prior to performing regression analysis, the composition of the beneficiary population in the three groups (FFS, ACO, and UMIC) will be compared to identify differences in demographic or clinical characteristics. ANOVA/MANOVA tests will be used as a first pass comparison of mean outcomes for the three groups. For metrics derived from BRFSS survey data, results for Utah will be compared to national averages for each year.

Trend over time and linear regression modeling

Outcomes of interest will be plotted over time for the duration of the demonstration. The trend for each evaluation group will be modeled using multivariate linear regression and compared. The null hypothesis will be that the three groups have identical trends. In order to account for demographic characteristics such as age and gender that may differ among the three groups, the IE will use inverse probability of treatment weighting. Individuals in the two intervention groups will be assigned weights based on the

composition of the reference group, producing three groups that are equivalent for measurable characteristics and allowing any difference in outcomes to be attributed to the intervention.[15]

The analysis will use multiple techniques to account for the impact of the Covid-19 pandemic on health care utilization. Patterns of utilization were impacted everywhere, but the effects may have been different in timing or degree among counties, particularly between urban and rural areas. First, trends for each evaluation group will be modeled with and without the most affected months in 2020 and 2021. This sensitivity analysis will help to identify whether the three groups have been impacted differentially. If the pattern changes observed in the first quarter of the Public Health Emergency are similar for all three evaluation groups, then confounding of the results by pandemic impacts is less likely. Second, because the effects of the pandemic may have been felt later in some areas, and may continue past the official end of the PHE, modeling of trends needs to incorporate the altered patterns over time. Two useful dynamic variables that can be included in the modeling are county-level Covid-19 caseloads[16], and county-level community mobility.[17] Publicly available mobility data is a useful proxy for the pandemic's impact on consumer behavior including attending medical appointments. The IE will explore using both caseloads and community mobility as covariates to minimize confounding by differential effects of the PHE.

Synthetic control methods

In order to examine the impact of the demonstration as a whole, the IE will use synthetic control methods (SCM) to estimate the association between implementation of Utah's Medicaid expansion and study outcomes. SCM have been employed to evaluate state-level policy impacts because they are particularly useful when estimating the impact of a policy change that affects a small number of treatment groups (i.e., a state).[18,19,20,21] These methods are a quasi-experimental approach similar to traditional difference-in-difference (DID) estimation but require fewer assumptions to obtain estimates of association. DID assumes that any differential changes in outcomes between treated and control groups are attributable to the policy change. Yet treated and control groups are often nonequivalent in terms of pre-treatment outcome levels, trends in outcomes, and other important covariates. To mitigate this limitation, researchers typically attempt to control for observed variables that may be associated with both treatment

[15] Austin PC, Stuart EA. Moving towards best practice when using inverse probability of treatment weighting (IPTW) using the propensity score to estimate causal treatment effects in observational studies. Stat Med. 2015; 34(28):3661–79. Epub 2015/08/05. https://doi.org/10.1002/sim.6607 PMID: 26238958; PubMed Central PMCID: PMC4626409.
[16] Available from the Johns Hopkins University Coronavirus Resource Center. https://coronavirus.jhu.edu/data
[17] Available from Google Community Mobility Reports https://www.google.com/covid19/mobility/index.html?hl=en
[18] Abadie, A., 2012. *Synthetic control methods for comparative case studies: estimating the effect of California's tobacco control program. J Am Stat Assoc* 105(490):493-505. https://www.tandfonline.com/doi/abs/10.1198/jasa.2009.ap08746
[19] Rudolph, K.E., *et al.*, 2015. *Association between Connecticut's Permit-ti-Purchase handgun law and homicides. Am J Public Health* 105(8):e49-e54. https://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.2015.302703
[20] Santella-Tenorio, J. *et al.*, 2020. *Association of recreational cannabis laws in Colorado and Washington state with changes in traffic fatalities. JAMA* 180 (8):1061-1068. https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2767647
[21] Bhatt, A. *et al.* 2020. *Association of changes in Missouri firearm laws with adolescent and young adult suicides by firearms. JAMA Netw Open* 3(11). https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2772526

likelihood and the outcome of interest. However, treatment and control groups may still differ in terms of outcome pre-trends and levels due to unobserved factors. This introduces potential selection issues, which may bias any estimates of association.

In contrast, SCM constructs a synthetic control from a pool of groups not exposed to the treatment of interest – in this case other states. The synthetic control is constructed using a weighted average of the control groups, with weights chosen through a fully empirical process; weights for individual control units may range from 0 to 1 and are selected so the synthetic control is as similar as possible to the treated group in terms of outcome pre-trends. Unlike traditional regression, inclusion of covariates is not required to achieve equivalence between treated and control groups.

The full adult expansion Medicaid population (approximated based on age and income) will be the intervention group for this analysis. The IE will use data from the BRFSS for health outcomes. A three-year, pre-demonstration baseline will be used to determine the weights for the control states. The post-demonstration trend for Utah will be compared to the calculated values for synthetic Utah using linear regression.

Subgroup Analyses

The evaluation will use the aforementioned data sources to understand how different subgroups of Adult expansion participants are impacted by the demonstration. Analyses will partition participants by age, race/ethnicity and gender. Where possible, race will include White, Black, Asian, Latinx, and Native American populations for stratification. Due to the low prevalence of some subgroups, it may be necessary to combine non-white racial groups into an "Other" category. Ethnicity will be characterized as Hispanic/Not Hispanic. Geographic patterns will also be investigated, using zip codes of residence to map beneficiaries to the three intervention types.

Qualitative analysis

Qualitative analysis will be used for key informant interview transcripts. The research questions to be addressed, with corresponding example topics, are listed in Table 10 (Attachment 4). Interviews will address these questions by probing for perspectives from providers and from administrators involved in implementing the demonstration. Thematic analysis using a coding tree derived from the demonstration logic model will be used to excerpt transcripts. Additional themes that arise during coding will be added to the analysis. Results of provider interviews will be used to add context to the quantitative findings regarding experience of care, beneficiary engagement, and barriers to engagement. Results of provider and administrator interviews will address implementation and will inform the Evaluation Report chapter on Lessons Learned and Recommendations.

D. METHODOLOGICAL LIMITATIONS

1. **Lack of a true comparison group.** The UT Adult Expansion Population includes individuals aged 19-64 with household incomes up to 138% of the FPL who are not otherwise eligible for Medicaid. As such, no true comparison group for this population exists. Other Medicaid beneficiaries are not comparable due to income and groups covered by traditional Medicaid which may have incomes up to 138% of the FPL. To mitigate this limitation, the IE plans to use both in-state comparison among the three benefit groups, and out-of-state BRFSS data.

2. **Lack of historic data for newly eligible individuals.** As all Utah adult expansion enrollees are newly eligible, no pre-demonstration data is available for these individuals through Medicaid. The use of FFS beneficiaries as a contemporaneous reference group provides a comparison without a pre-demonstration baseline.

3. **Sample size.** Full UMIC participation is projected to be around 60,000 individuals. However, the data set for specific outcomes may not have sufficient size statistical analysis on all subgroups of interest. In particular, the lower number of residents in the FFS counties may not support analysis by race/ethnicity. The IE will explore disparities in outcomes by race/ethnicity within the groups where numbers are sufficient, most likely the ACO and UMIC groups. To further investigate health equity, KII interview guides will include questions about health plan efforts to identify and remediate disparities in access, such as population health analyses and targeted outreach.

4. **Health Plan Reporting.** The independent evaluator will receive aggregate CAHPS data reported in aggregate by the health plans, stratified by gender, age, and race/ethnicity. Patient-level data is not available for privacy reasons. Data aggregation will limit the available subgroup analyses that can be performed. The current age and race/ethnicity reporting buckets for CAHPS data are limited and are not standardized across health plans. In order to aggregate data across the population, the IE will combine categories as needed, creating wider age bands, and characterizing race as White/Other.

5. **Out-of-state comparisons.** The use of national survey data allows for out of state comparison groups but limits the ability to specifically identify individuals enrolled in the demonstration. An approximation will be achieved by using income and Medicaid enrollment to define a sample representing demonstration participants as closely as possible.

6. **Historic effects.** The impacts of the Covid-19 pandemic/PHE expand beyond the expected increase in enrollment numbers. Participants' ability and willingness to make and keep appointments could impact demonstration goals to improve healthcare access. Analytic techniques described above will be used to minimize confounding.

E. ATTACHMENTS

1.INDEPENDENT EVALUATOR

As required by the Centers for Medicare & Medicaid Services (CMS) and the Section 1115 waiver's Special Terms and Conditions (STCs), the Utah Department of Health (UDOH) conducted an open solicitation process to secure a third-party evaluator to conduct an evaluation of the State of Utah's Section 1115 Waiver Demonstration.

The State issued one contract for all evaluation activities and the production of required CMS reports.[22] As the successful bidder, Public Consulting Group (PCG) demonstrated the following qualifications:

- Experience conducting program evaluations for programs administered by the federal department of Health and Human Services.
- Ability to provide at least two examples of program evaluations conducted meeting the above criterion.
- Experience with Medicaid claims data.
- Experience complying with human subjects' protection and data confidentiality laws (state and federal)
- Experience with quantitative and qualitative evaluation design, implementation, analysis, and reporting, and impact evaluations in public health and social services settings.

Consistent with the requirements of the State of Utah Division of Purchasing, UDOH selected and retained PCG as an independent evaluator to complete the independent evaluation of the demonstration. UDOH contracted with the evaluator, PCG, to promote an independent evaluation, following the general requirements for each state contractor as well as project-specific standards.

The third-party evaluator, PCG, will conduct an evaluation following guidelines set forth by UDOH and CMS. The Department retains responsibility for monitoring the demonstration activities and providing oversight of the evaluation design and overall approach for the contractor. To ensure a fair and impartial evaluation and mitigate any potential conflict of interest, the independent evaluator, PCG, will:

- Conduct an evaluation of the waiver hypotheses for the Adult Expansion population, to include the community engagement and employer-sponsored insurance requirements, as well as the UMIC hypotheses, to determine if the goals and objectives of the demonstration have been achieved.
- Meet the evaluation requirements of the waiver STCs.
- Follow the CMS approved evaluation design.

[22] This procurement sought an Independent Evaluator for the Adult Expansion, ESI, Community Engagement, and UMIC components of the waiver. PCG was awarded a five-year contract covering these components.

- Provide UDOH with the required annual interim evaluation report and summative evaluation report at the end of the waiver approval period, by the due dates outlined in the contract.
- Provide future evaluations as required by the contract, at the option of the Department, and develop the evaluation design and implement the design upon CMS approval.
- Complete any required IRB applications, data sharing agreements, or other documents needed to protect human subjects and data confidentiality.
- Appropriately safeguard evaluation data in compliance with HIPAA requirements, protection of human subjects, data sharing agreements, state or federal laws, and other applicable regulations.

The waiver evaluation conducted by PCG will determine if the goals and objectives of the Adult Expansion program, community engagement requirement, employer-sponsored insurance requirement, and UMIC have been achieved. The evaluation will meet the requirement of the waiver STCs, follow the CMS approved evaluation design, and provide required deliverables.

UDOH staff worked with the evaluator to identify and address concerns that might arise during the administration of the contract. By requiring initial satisfaction of these standards by the contracting party in order to be awarded the contract, as well as ongoing maintenance of the requirements during the term of service, UDOH is in a position to receive an objective evaluation report that is the product of a fair, impartial, and conflict-free evaluation

PUBLIC CONSULTING GROUP

Solutions that Matter

PCG always strives to uphold the highest standards of ethical conduct for its employees and business partners, and we are proud of our excellent track record in this regard. PCG maintains a Code of Conduct and detailed policies and procedures that reflect our strong expectations for ethical conduct, a comprehensive risk assessment and management process, and a robust compliance monitoring and training program that is overseen by PCG's Governance, Risk and Compliance Department (GRC) in conjunction with the firm's Legal, Human Resources (HR), and Finance Departments. PCG's Legal, HR, and GRC functions work together to identify and monitor adherence to cooling periods and related disclosure and compliance requirements, which are designed to avoid even the appearance of conflicts of interest that may vary widely across states and contracts.

Before responding to any RFP or other opportunity, PCG conducts a conflict check. The check matches the potential services in the RFP against a database of all current and recent consulting and operations contracts performed by PCG and its employees, both in the RFP subject state and nationally. This conflict check includes determining if any employees associated with the potential project are former employees of the client or other stakeholder groups. Any circumstance presenting a potential conflict, real or perceived, is independently reviewed by GRC and Legal. If risk mitigation steps are deemed necessary, PCG will work with the client to implement all appropriate safeguards to ensure a common comfort level with the actions taken. Mitigation strategies may include, but not be limited to, reassigning employees to other projects, or constructing a compliance "wall" to prohibit interaction between the relevant employees. PCG does not submit proposals in cases where, in its judgment, the potential for conflict is beyond the limits of reasonable accommodations, which would otherwise not impair our ability to perform services to the satisfaction of a prospective client.

PCG applied this same protocol to the Utah 1115 Waiver Evaluation procurement, with the resulting conclusion that the operation of this project will not create a conflict of interest with any other work being performed by PCG.

Aaron Holman,
Associate Manager
PCG Health

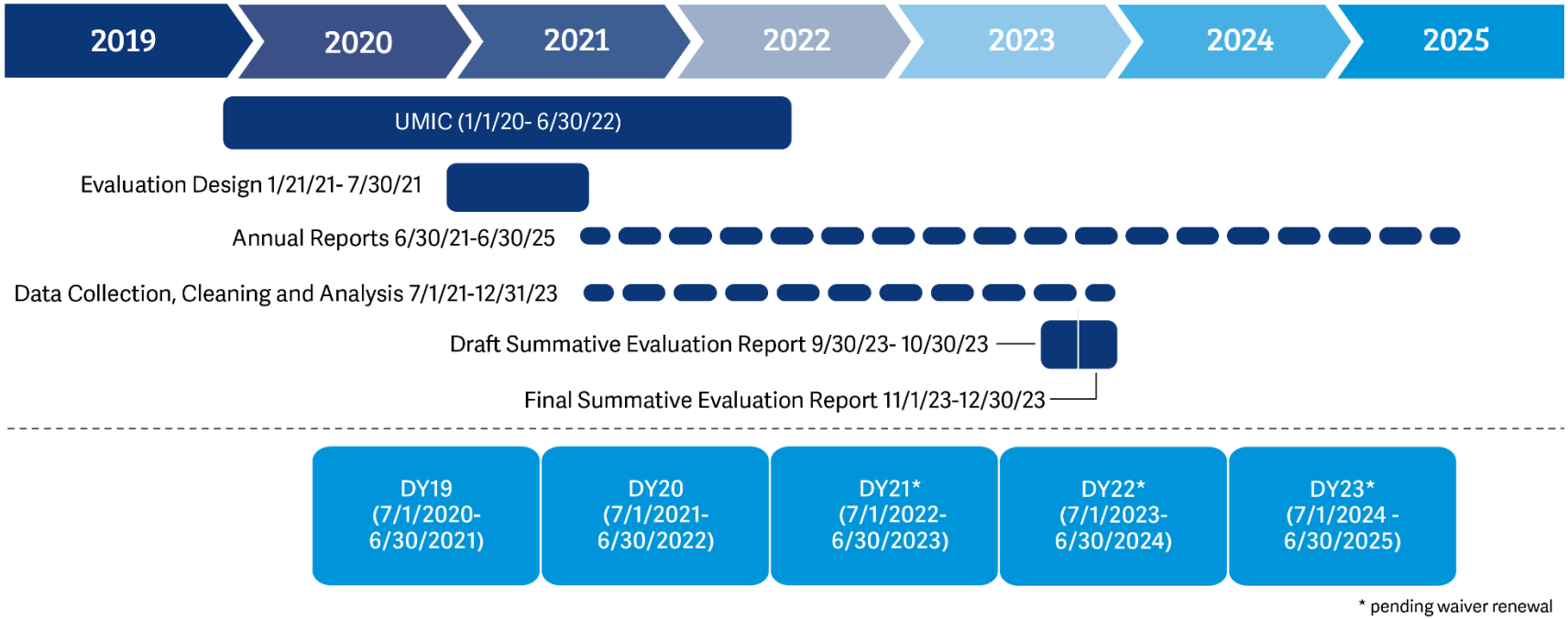
2.EVALUATION BUDGET

TABLE 9: BUDGET

Evaluation Activity	Total Estimated Cost					
	DY19 *(7/1/2020 - 6/30/2021)*	**DY20** *(7/1/2021 - 6/30/2022)*	**DY21** *(7/1/2022 - 6/30/2023)*	**DY22** *(7/1/2023 - 6/30/2024)*	**DY23** *(7/1/2024 - 6/30/2025)*	**Total**
Project Management (e.g., regular project meetings, status updates and ad hoc discussions)	$3,225	$5,375	$4,300	$4,300	$4,300	**$ 21,500.00**
Evaluation Design	$16,254	$6,966	$0	$0	$0	**$ 23,220.00**
Key Informant Interviews, Data Collection, Cleaning and Analysis	$0	$26,445	$26,445	$0	$0	**$ 52,890.00**
Quantitative Data-Collection, Cleaning and Analysis	$9,901	$29,702	$24,752	$24,752	$9,901	**$ 99,007.50**
Annual Reports	$0	$255	$255	$255	$255	**$ 1,021.25**
Summative Evaluation Report Generation	$0	$0	$5,208	$12,153	$0	**$ 17,361.25**
Total	**$29,380**	**$68,744**	**$60,961**	**$41,460**	**$14,456**	**$215,000**

3.TIMELINE AND MAJOR MILESTONES

FIGURE 3



4. EVALUATION TABLE

TABLE 10: UMIC EVALUATION TABLE

Comparison Strategy	Measure Name	Measure Description	Data Source	Analytic Approach
Hypothesis 1: The demonstration will increase the number of adult beneficiaries receiving benefits through managed care.				
Primary research question 1.1: Did the demonstration increase the number of adult beneficiaries receiving benefits through managed care?				
▪ *Subsidiary research question 1.1.1: Did enrollment in either form of managed care (ACOs or UMIC) differ among beneficiaries by demographic factors, such as by age, gender, race/ethnicity, or language?*				
Change over time in adult beneficiary population	Delivery system enrollment	Number of beneficiaries receiving care through each delivery model: 1) Physical health through FFS and BH through PMHP 2) Care for physical health through ACOs and BH through PMHP 3) Integrated care through UMIC	UDOH Administrative data	Descriptive statistics; ANOVA
Primary research question 1.2: Was the demonstration implemented effectively?				
▪ *Subsidiary research question 1.2.1: Did the Public Health Emergency/Covid-19 pandemic impact implementation?*				
N/A	Implementation	Implementation challenges and successes	Key Informant Interviews; Document review	Qualitative Analysis
Primary research question 1.3: Is patient satisfaction associated with enrollment in any managed care, or type of managed care				
▪ *Subsidiary research question 1.3.1: Was patient satisfaction associated with receiving care in person or by telehealth, including audio-only?*				

Group 1: Beneficiaries receiving care for physical health through FFS and BH through PMHP **Group 2:** Beneficiaries receiving care for physical health through ACOs and BH through PMHP **Group 3:** Beneficiaries receiving integrated care through UMIC	Patient satisfaction	CAHPS patient satisfaction measures (Q26) - Respondent rating of their health plan, overall (Q16) - Respondent rating of their 'personal doctor' (Q20) - Respondent rating of specialist they saw most	CAHPS aggregate data reported by plans	Descriptive statistics; ANOVA
Hypothesis 2: The demonstration will improve access to and engagement in health care.				
Primary research question 2.1: Did beneficiaries enrolled in managed care have increased access to and engagement in health care?				
Group 1: Beneficiaries receiving care for physical health through FFS and BH through PMHP **Group 2:** Beneficiaries receiving care for physical health through ACOs and BH through PMHP **Group 3:** Beneficiaries receiving integrated care through UMIC	Adults' Access to Preventative/Ambulatory Health Services (AAP)	Fraction of beneficiaries who had an ambulatory or preventive care visit during the measurement year.	Claims data	Multiple linear regression; ANOVA
	Comprehensive Diabetes Care (CDC) (modified)	Assesses adults 18–75 years of age with diabetes (type 1 and type 2) who had each of the following: • two A1C tests per year (CPT 83036) and one albumin lab test (CPT 80243) per year	Claims data	Multiple linear regression; ANOVA
Primary research question 2.2: Did beneficiaries enrolled in managed care have increased access to and engagement in behavioral health care?				

Group 1: Beneficiaries receiving care for physical health through FFS and BH through PMHP **Group 2:** Beneficiaries receiving care for physical health through ACOs and BH through PMHP **Group 3:** Beneficiaries receiving integrated care through UMIC	Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET)	Fraction with a new episode of alcohol or other drug dependence who: 1) initiated treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization, telehealth or medication-assisted treatment (MAT) within 14 days of diagnosis. 2) had two or more additional AOD services or MAT within 34 days of the initiation visit.	Claims data	Multiple linear regression; ANOVA
Primary research question 2.3: Did beneficiaries enrolled in managed care have increased access to care coordination?				
Group 1: Beneficiaries receiving care for physical health through FFS and BH through PMHP **Group 2:** Beneficiaries receiving care for physical health through ACOs and BH through PMHP **Group 3:** Beneficiaries receiving integrated care through UMIC	Getting Needed Care (Adult CAHPS)	**(Q9)**- Easy for respondent to get necessary care, tests, or treatment **(Q18)**- Respondent got appointment with specialists as soon as needed	Administrative data	ANOVA
	Getting Care Quickly (Adult CAHPS)	**(Q4)**- Respondent got care for illness/injury as soon as needed **(Q6)**- Respondent got non-urgent appointment as soon as needed	Administrative data	
	Follow-Up After Hospitalization for Mental Illness (HEDIS-FUH/NQF 0576)	Assesses adults and children 6 years of age and older who were hospitalized for treatment of selected mental illness or intentional self-harm and had an outpatient visit, an intensive outpatient encounter or a partial hospitalization with a mental health practitioner.	Claims data	
Hypothesis 3: The demonstration will improve the health of beneficiaries enrolled in managed care.				
Primary research question 3.1: Did beneficiaries enrolled in managed care have improved health outcomes, including behavioral health?				

▪ *Subsidiary research question 3.1.1 Did* the outcome of either form of managed care differ among subgroups of beneficiaries by demographic factors?				
Group 1: Beneficiaries receiving care for physical health through FFS and BH through PMHP **Group 2:** Beneficiaries receiving care for physical health through ACOs and BH through PMHP **Group 3:** Beneficiaries receiving integrated care through UMIC	Annual Monitoring for Patients on Persistent Medications (MPM)	Assesses adults 18 years and older who received at least 180 treatment days of ambulatory medication therapy for a select therapeutic agent (for hypertension or heart disease) during the measurement year and received at least one therapeutic monitoring event for the therapeutic agent during the measurement year:	Claims data	Multiple linear regression; ANOVA
Group 1: Beneficiaries receiving care for physical health through FFS and BH through PMHP **Group 2:** Beneficiaries receiving care for physical health through ACOs and BH through PMHP **Group 3:** Beneficiaries receiving integrated care through UMIC	Antidepressant Medication Management (AMM)	Assesses adults 18 years of age and older with a diagnosis of major depression who were newly treated with antidepressant medication and remained on their antidepressant medications.	Claims data	
Primary research question 3.2: Did the rate of ED visits decrease for beneficiaries in managed care?				
▪ *Subsidiary research question 3.2.1 Did the rate of ED visits for BH conditions decrease for beneficiaries in managed care?*				
▪ *Subsidiary research question 3.2.2 Did any change in the rate of ED visits differ among subgroups by demographic factors?*				
Group 1: Beneficiaries receiving care for physical health through FFS and BH through PMHP **Group 2:** Beneficiaries receiving care for physical health through ACOs and BH through PMHP **Group 3:** Beneficiaries	Emergency Department Utilization (EDU)	Rate of ED visits without a qualifying diagnosis (non-emergent).	Claims data	Multiple linear regression; ANOVA

receiving integrated care through UMIC				
Primary research question 3.3: Did the demonstration as a whole improve health care access and quality for the Medicaid beneficiary population?				
Comparison of Utah population in eligible income range to national average, and to a synthetic control derived from other states	Personal care provider	Fraction who says they have one person they think of as their person doctor or provider	BRFSS	Difference-in Difference, Synthetic Control Method (SCM)
	Primary care engagement	Time since last routine check up	BRFSS	
	Delayed or avoided care	Fraction who have delayed or avoided needed care because of cost	BRFSS	
	Health Related Quality of Life	Healthy Days Measures (covers physical and mental health)	BRFSS	
Hypothesis 4: The demonstration will improve the fiscal sustainability of the Utah Medicaid program.				
Primary research question 4.1: Did the total cost of care decrease for beneficiaries in managed care?				
Group 1: Beneficiaries receiving care for physical health through FFS and BH through PMHP **Group 2:** Beneficiaries receiving care for physical health through ACOs and BH through PMHP **Group 3:** Beneficiaries receiving integrated care through UMIC	Cost of care	PMPM cost of acute care PMPM cost of primary/ambulatory care PMPM total cost of care	Claims data	Multiple linear regression; ANOVA
Primary research question 4.2: Did the rate of hospitalization decrease for beneficiaries in managed care?				
Group 1: Beneficiaries receiving care for physical health through FFS and BH through PMHP	Inpatient Utilization (IPU)	All Cause Hospital Readmission Overall inpatient hospitalization per thousand	Claims/Administrative data	Multiple linear regression; ANOVA

Group 2: Beneficiaries receiving care for physical health through ACOs and BH through PMHP **Group 3:** Beneficiaries receiving integrated care through UMIC		Inpatient days per year		
Primary research question 4.3: Did the rate of utilization of low-value care decrease for beneficiaries in managed care?				
Group 1: Beneficiaries receiving care for physical health through FFS and BH through PMHP **Group 2:** Beneficiaries receiving care for physical health through ACOs and BH through PMHP **Group 3:** Beneficiaries receiving integrated care through UMIC	Rates of services identified as low value by the American Board of Internal Medicine (ABIM)	Head imaging for headache, without additional indicators Pre-operative testing for cataract surgery Inappropriate antibiotic prescriptions	Claims data	Multiple linear regression; ANOVA

Measure Specifications
for
UT UMIC

Prepared by Public Consulting Group

A. Table: Claims-based data performance measures

Population	Measure Name	Data Source	Data Steward(s)	Steward Version	NQF
Quantitative Measures					
AE	Adults' Access to Preventative/Ambulatory Health Services (AAP)	MMIS, APCD	NCQA	HEDIS MY 2020 & MY 2021	N/A
AE	Annual Monitoring for Patients on Persistent Medications (MPM)	MMIS	NCQA	HEDIS 2019	2371
AE	Antidepressant Medication Management (AMM)	MMIS	NCQA	HEDIS MY 2020 & MY 2021	0105
AE	Comprehensive Diabetes Care (CDC) (modified) 1 indicator	MMIS	NCQA	HEDIS MY 2020 & MY 2021	0731
AE	Emergency Department Utilization (EDU)	MMIS	NCQA	HEDIS MY 2020 & MY 2021	Based on 9999
AE	PMPM Cost of Care	MMIS	N/A	N/A	N/A
AE	Delayed or Avoided Care	BRFSS	CDC	N/A	N/A
AE	Delivery System Enrollment	MMIS, APCD	N/A	N/A	N/A
AE	Follow-Up After Hospitalization for Mental Illness: Age 18 and Older (FUH-AD)	MMIS	NCQA	HEDIS MY 2020 & MY 2021	0576
AE	Getting Care Quickly (Adult CAHPS)	CAHPS	AHRQ	5.0	N/A
AE	Getting Needed Care (Adult CAHPS)	CAHPS	AHRQ	5.0	N/A
AE	Health Related Quality of Life	BRFSS	CDC	N/A	N/A

AE	Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET)	MMIS	NCQA	HEDIS MY 2020 & MY 2021	0004
AE	Inpatient Admissions (IPU)	MMIS/Administrative	NCQA	HEDIS MY 2020 & MY 2021	Based on 9999
AE	Low-Value Care 1: Head imaging for headache	MMIS, APCD	MA Health Policy Commission	N/A	N/A
AE	Low-Value Care 2: Pre-operative testing for cardiac stress test	MMIS, APCD	MA Health Policy Commission	N/A	N/A
AE	Low-Value Care 3: Inappropriate antibiotic prescriptions	MMIS, APCD	MA Health Policy Commission	N/A	N/A
AE	Patient Satisfaction	CAHPS	AHRQ	5.0	N/A
AE	Personal care provider	BRFSS	CDC	N/A	N/A
AE	Primary Care Engagement	BRFSS	CDC	N/A	N/A
Qualitative Measures					
AE	Implementation/Implementation PHE impact	KIIs	N/A	N/A	N/A

B. Performance Measures Specifications

Summative Report	
Time period	January 1st, 2017 – December 31st, 2020 (Baseline Period for BRFSS and APCD measures); January 1st, 2020 - June 30th, 2022 (Intervention Period)

Data sources / Definitions	Medicaid Claims (MMIS) Member definition: ● DEMONSTRATION_POPULATION = “Adult Expansion” ● UMIC= “Utah Medicaid Integrated Care Plan” ● Both Genders ● Age 19 – 64 years at the time of starting last eligibility enrollment segment Claim definition ● PLAN = Payer Plan Type (FFS, ACO, UMIC, Mental Health Plan, Substance Use Disorder plan) All Payer Claim Database (APCD) Behavioral Health Risk Factor Survey (BRFSS) Adult Consumer Assessment of Healthcare Providers & Systems (Adult CAHPS)
Analyses	● Multiple Linear Regression ● ANOVA ● Difference-in-Difference ● Synthetic Control Method (SCM)
Approach	Inferential
Measures	Not Included in UMIC version of Databook: ● Some Adult Expansion and ESI measures
Findings	Trends within Medicaid population during the Demonstration Period.

QUANTITATIVE MEASURES

ADULTS' ACCESS TO PREVENTATIVE/AMBULATORY HEALTH SERVICES (AAP)

Measure Description:

The percentage of members 19 years and older who had an ambulatory or preventive care visit.

- Medicaid members who had an (AT LEAST ONE) ambulatory or preventive care visit during the measurement year.

Data Source(s): **APCD, MMIS**	NQF #: **N/A**
Measure Steward: **NCQA**	Measure Steward Version: **HEDIS MY 2020 & MY 2021**
Population(s): Adult Expansion	Stratifications: Plan Type, Age, Gender, BH diagnosis, chronic health conditions, race/ethnicity, language, county of residence

Numerator:

Medicaid: One or more ambulatory or preventive care visits during the measurement year. 7/1/19 – 6/30/20

Use the following value sets to identify ambulatory or preventive care visits:

Ambulatory:

1. Ambulatory Visits Value Set.
2. Other Ambulatory Visits Value Set
3. Other: PLACEOFSERVICE NOT IN ('04', '21', '23', '31', '33', '34',' 41', '42')
4. BILLTYPE <> '11X' (inpatient)

Non-Ambulatory

1. Telephone Visits Value Set.
2. Online Assessments Value Set.

Denominator:
The eligible population.

Exclusions:
Exclude members receiving Hospice Care (Hospice Encounter, Hospice Intervention Value Set) during the measurement year.

Result:
The result is expressed as a percentage.

ANNUAL MONITORING FOR PATIENTS ON PERSISTENT MEDICATIONS (MPM)

Measure Description:

The percentage of members 19 years of age and older who received at least 180 treatment days of ambulatory medication therapy for a select therapeutic agent during the measurement year and at least one therapeutic monitoring event for the therapeutic agent in the measurement year. For each product line, report each of the two rates separately and as a total rate.

- Annual monitoring for members on angiotensin converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARB).
- Annual monitoring for members on diuretics.
- Total rate (the sum of the two numerators divided by the sum of the two denominators).

Data Source: **MMIS**	NQF #: **2371**
Measure Steward: **NCQA**	Measure Steward Version: **HEDIS 2019 (retired)**
Population(s): Adult Expansion	Stratifications: Plan Type, Age, Gender, Race/Ethnicity

Numerator:

At least one serum potassium and a serum creatinine therapeutic monitoring test in the measurement year. Any of the following during the measurement year meet criteria:

- A lab panel test (Lab Panel Value Set).
- A serum potassium test (Serum Potassium Value Set) ***or*** a serum creatinine test (Serum Creatinine Value Set) on the same date of service or on different dates of service.
    - LOINC codes were unavailable as our analysis did not have access to nonclaims based data.

Additional eligible population criteria

Members who received at least 180 treatment days of a diuretic (Diuretic Medications List) during the measurement year.

Note: *Members may switch therapy with any medication on the Diuretic Medications List during the measurement year and have the days supply for those medications count toward the total 180 treatment days.*

Diuretic Medications

Description	Prescription	
Antihypertensive combinations	• Aliskiren-hydrochlorothiazide	• Fosinopril-hydrochlorothiazide • Hydrochlorothiazide-irbesartan

	• Aliskiren-hydrochlorothiazide-amlodipine • Amiloride-hydrochlorothiazide • Amlodipine-hydrochlorothiazide-olmesartan • Amlodipine-hydrochlorothiazide-valsartan • Atenolol-chlorthalidone • Azilsartan-chlorthalidone • Benazepril-hydrochlorothiazide • Bendroflumethiazide-nadolol • Bisoprolol-hydrochlorothiazide • Candesartan-hydrochlorothiazide • Captopril-hydrochlorothiazide • Chlorthalidone-clonidine • Enalapril-hydrochlorothiazide • Eprosartan-hydrochlorothiazide	• Hydrochlorothiazide-lisinopril • Hydrochlorothiazide-losartan • Hydrochlorothiazide-methyldopa • Hydrochlorothiazide-metoprolol • Hydrochlorothiazide-moexipril • Hydrochlorothiazide-olmesartan • Hydrochlorothiazide-propranolol • Hydrochlorothiazide-quinapril • Hydrochlorothiazide-spironolactone • Hydrochlorothiazide-telmisartan • Hydrochlorothiazide-triamterene • Hydrochlorothiazide-valsartan
Loop diuretics	• Bumetanide • Ethacrynic acid	• Furosemide • Torsemide
Potassium-sparing diuretics	• Amiloride • Eplerenone	• Spironolactone • Triamterene
Thiazide diuretics	• Chlorothiazide • Chlorthalidone	• Hydrochlorothiazide • Indapamide • Methyclothiazide • Metolazone

Denominator:
19 years and older as of June 30 of the measurement year.

Event/ diagnosis

Members on persistent medications (i.e., members who received at least 180 treatment days of ambulatory medication in the measurement year). Refer to *Additional Eligible Population Criteria* for each rate.

Treatment days are the actual number of calendar days covered with prescriptions within the measurement year (i.e., a prescription of 90 days supply dispensed on June 1 of the measurement year counts as 30 treatment days). Sum the days supply for all medications and subtract any days supply that extends beyond June 30 of the measurement year.

Administrative Specification

For each product line, report each of the two rates separately and as a combined rate. The total rate is the sum of the two numerators divided by the sum of the two denominators.

Rate 1: Annual Monitoring for Members on ACE Inhibitors or ARBs

Additional eligible population criteria

Members who received at least 180 treatment days of ACE inhibitors or ARBs during the measurement year (ACE Inhibitor/ARB Medications List).

Note: *Members may switch therapy with any medication on the ACE Inhibitor/ARB Medications List during the measurement year and have the days supply for those medications count toward the total 180 treatment days (i.e., a member who received 90 days of ACE inhibitors and 90 days of ARBs meets the denominator definition for rate 1).*

ACE Inhibitor/ARB Medications[23]

Description	Prescription
Angiotensin converting enzyme inhibitors	● Benazepril ● Enalapril ● Lisinopril ● Perindopril ● Ramipril ● Captopril ● Fosinopril ● Moexipril ● Quinapril ● Trandolapril
Angiotensin II inhibitors	● Azilsartan ● Eprosartan ● Losartan ● Telmisartan ● Candesartan ● Irbesartan ● Olmesartan ● Valsartan
Antihypertensive combinations	● Aliskiren-valsartan ● Amlodipine-benazepril ● Amlodipine-hydrochlorothiazide-valsartan ● Amlodipine-hydrochlorothiazide-olmesartan ● Amlodipine-olmesartan ● Amlodipine-perindopril ● Amlodipine-telmisartan ● Amlodipine-valsartan ● Azilsartan-chlorthalidone ● Benazepril-hydrochlorothiazide ● Candesartan-hydrochlorothiazide ● Captopril-hydrochlorothiazide ● Enalapril-hydrochlorothiazide ● Eprosartan-hydrochlorothiazide ● Fosinopril-hydrochlorothiazide ● Hydrochlorothiazide-irbesartan ● Hydrochlorothiazide-lisinopril ● Hydrochlorothiazide-losartan ● Hydrochlorothiazide-moexipril ● Hydrochlorothiazide-olmesartan ● Hydrochlorothiazide-quinapril ● Hydrochlorothiazide-telmisartan ● Hydrochlorothiazide-valsartan ● Sacubitril-valsartan ● Trandolapril-verapamil

Exclusions:

Members in hospice are excluded from this measure.

Optional: Exclude members from each eligible population who had an acute inpatient encounter (Acute Inpatient Value Set) or nonacute inpatient encounter (Nonacute Inpatient Value Set) during the measurement year.

Result:
The result is expressed as a percentage.

ANTIDEPRESSANT MEDICATION MANAGEMENT (AMM)

Measure Description:

The percentage of members 18 years of age and older who were treated with antidepressant medication, had a diagnosis of major depression and who remained on an antidepressant medication treatment. Two rates are reported.

1. *Effective Acute Phase Treatment.* The percentage of members who remained on an antidepressant medication for at least 84 days (12 weeks).
2. *Effective Continuation Phase Treatment.* The percentage of members who remained on an antidepressant medication for at least 180 days (6 months).

Data Source: **MMIS**	NQF #: **2732**
Measure Steward: **NCQA**	Measure Steward Version: **HEDIS MY 2020 & MY 2021**
Population(s): Adult Expansion	Stratifications: Plan Type, Age, Gender, Race/Ethnicity

SUMMARY OF CHANGES TO HEDIS MY 2020 & MY 2021

- Added e-visits and virtual check-ins to the event/diagnosis (step 2 required exclusion).

Description

The percentage of members 18 years of age and older who were treated with antidepressant medication, had a diagnosis of major depression and who remained on an antidepressant medication treatment. Two rates are reported.

2. *Effective Acute Phase Treatment.* The percentage of members who remained on an antidepressant medication for at least 84 days (12 weeks).
3. *Effective Continuation Phase Treatment.* The percentage of members who remained on an antidepressant medication for at least 180 days (6 months).

Definitions

Intake Period	The 12-month window starting on May 1 of the year prior to the measurement year and ending on April 30 of the measurement year.
IPSD	Index Prescription Start Date. The earliest prescription dispensing date for an antidepressant medication where the date is in the Intake Period and there is a Negative Medication History.
Negative Medication History	A period of 105 days prior to the IPSD when the member had no pharmacy claims for either new or refill prescriptions for an antidepressant medication.
Treatment days	The actual number of calendar days covered with prescriptions within the specified 180-day (6-month) measurement interval. For Effective Continuation Phase Treatment, a prescription of 90 days (3 months) supply dispensed on the 151st day will have 80 days counted in the 231-day interval.

Eligible Population

Note: *Members in hospice are excluded from the eligible population. Refer to General Guideline 17: Members in Hospice.*

Product lines	Commercial, Medicaid, Medicare (report each product line separately).
Ages	18 years and older as of April 30 of the measurement year.
Continuous enrollment	105 days prior to the IPSD through 231 days after the IPSD.

Allowable gap One gap in enrollment of up to 45 days. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage (e.g., a member whose coverage lapses for 2 months [60 days] is not considered continuously enrolled.

Anchor date IPSD.

Benefits Medical and pharmacy.

Event/diagnosis Follow the steps below to identify the eligible population, which is used for both rates.

Step 1 Determine the IPSD. Identify the date of the earliest dispensing event for an antidepressant medication (Antidepressant Medications List) during the Intake Period.

Step 2: Required exclusion Exclude members who did not have an encounter with a diagnosis of major depression during the 121-day period from 60 days prior to the IPSD, through the IPSD and the 60 days after the IPSD. Members who meet any of the following criteria remain in the eligible population:

- An acute or nonacute inpatient stay with any diagnosis of major depression (Major Depression Value Set) on the discharge claim. To identify acute and nonacute inpatient stays:
  1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set).
  2. Identify the admission and discharge dates for the stay. Either an admission or discharge during the required time frame meets criteria.
- An acute inpatient encounter with any diagnosis of major depression: Acute Inpatient Value Set ***with*** Major Depression Value Set.
- A nonacute inpatient encounter with any diagnosis of major depression: Nonacute Inpatient Value Set ***with*** Major Depression Value Set.
- An outpatient visit with any diagnosis of major depression: Visit Setting Unspecified Value Set ***with*** Outpatient POS Value Set ***with*** Major Depression Value Set.
- An outpatient visit with any diagnosis of major depression: BH Outpatient Value Set ***with*** Major Depression Value Set.
- An intensive outpatient encounter or partial hospitalization with any diagnosis of major depression: Visit Setting Unspecified Value Set ***with*** Partial Hospitalization POS Value Set ***with*** Major Depression Value Set.
- An intensive outpatient encounter or partial hospitalization with any diagnosis of major depression: Partial Hospitalization or Intensive Outpatient Value Set ***with*** Major Depression Value Set.
- A community mental health center visit with any diagnosis of major depression: Visit Setting Unspecified Value Set ***with*** Community Mental Health Center POS Value Set ***with*** Major Depression Value Set.
- Electroconvulsive therapy with any diagnosis of major depression: Electroconvulsive Therapy Value Set ***with*** Major Depression Value Set.
- Transcranial magnetic stimulation visit with any diagnosis of major depression: Transcranial Magnetic Stimulation Value Set ***with*** Major Depression Value Set.

Page Break

- A telehealth visit with any diagnosis of major depression: Visit Setting Unspecified Value Set ***with*** Telehealth POS Value Set ***with*** Major Depression Value Set.
- An observation visit (Observation Value Set) ***with*** any diagnosis of major depression (Major Depression Value Set).
- An ED visit (ED Value Set) ***with*** any diagnosis of major depression (Major Depression Value Set).
- An ED visit with any diagnosis of major depression: Visit Setting Unspecified Value Set ***with*** ED POS Value Set ***with*** Major Depression Value Set.
- A telephone visit (Telephone Visits Value Set) ***with*** any diagnosis of major depression (Major Depression Value Set).
- An e-visit or virtual check-in (Online Assessments Value Set) ***with*** any diagnosis of major depression (Major Depression Value Set).

Step 3 Test for Negative Medication History. Exclude members who filled a prescription for an antidepressant medication 105 days prior to the IPSD.

Step 4 Calculate continuous enrollment. Members must be continuously enrolled for 105 days prior to the IPSD to 231 days after the IPSD.

Administrative Specification

Denominator The eligible population.

Numerators

Effective Acute Phase Treatment At least 84 days (12 weeks) of treatment with antidepressant medication (Antidepressant Medications List), beginning on the IPSD through 114 days after the IPSD (115 total days). This allows gaps in medication treatment up to a total of 31 days during the 115-day period. Gaps can include either washout period gaps to change medication or treatment gaps to refill the same medication.

Page Break

Antidepressant Medications

Description	Prescription		
Miscellaneous antidepressants	● Bupropion ● Vilazodone ● Vortioxetine		
Monoamine oxidase inhibitors	● Isocarboxazid ● Phenelzine ● Selegiline ● Tranylcypromine		
Phenylpiperazine antidepressants	● Nefazodone ● Trazodone		
Psychotherapeutic combinations	● Amitriptyline-chlordiazepoxide ● Amitriptyline-perphenazine ● Fluoxetine-olanzapine		
SNRI antidepressants	● Desvenlafaxine ● Duloxetine ● Levomilnacipran ● Venlafaxine		
SSRI antidepressants	● Citalopram ● Escitalopram ● Fluoxetine ● Fluvoxamine ● Paroxetine ● Sertraline		
Tetracyclic antidepressants	● Maprotiline ● Mirtazapine		

Tricyclic antidepressants	● Amitriptyline ● Amoxapine ● Clomipramine	● Desipramine ● Doxepin (>6 mg) ● Imipramine	● Nortriptyline ● Protriptyline ● Trimipramine		

Effective Continuation Phase Treatment At least 180 days (6 months) of treatment with antidepressant medication (Antidepressant Medications List), beginning on the IPSD through 231 days after the IPSD (232 total days). This allows gaps in medication treatment up to a total of 52 days during the 232-day period. Gaps can include either washout period gaps to change medication or treatment gaps to refill the same medication.

Note

- *Organizations may have different methods for billing intensive outpatient encounters and partial hospitalizations. Some methods may be comparable to outpatient billing, with separate claims for each date of service; others may be comparable to inpatient billing, with an admission date, a discharge date and units of service. Organizations whose billing methods are comparable to inpatient billing may count each unit of service as an individual visit. The unit of service must have occurred during the period specified.*

Page Break

Data Elements for Reporting

Organizations that submit HEDIS data to NCQA must provide the following data elements.

Table AMM-1/2/3: Data Elements for Antidepressant Medication Management

	Administrative
Measurement year	✔▪
Eligible population	✔▪
Number of required exclusions	✔▪
Numerator events by administrative data	*Each of the 2 rates*
Numerator events by supplemental data	*Each of the 2 rates*
Reported rate	*Each of the 2 rates*

Page Break

Rules for Allowable Adjustments of HEDIS

This section *may not* be used for reporting health plan HEDIS.

NCQA's Rules for Allowable Adjustments of HEDIS describe how NCQA's HEDIS measure specifications can be adjusted for non-health plan reporting. Refer to the *Guidelines for the Rules of Allowable Adjustments of HEDIS* for additional information.

Rules for Allowable Adjustments for Antidepressant Medication Management

NONCLINICAL COMPONENTS		
Eligible Population	**Adjustments Allowed (Yes/No)**	**Notes**
Product Lines	Yes	Organizations are not required to use product line criteria; product lines may be combined and all (or no) product line criteria may be used.
Ages	Yes, with limits	The age determination dates may be changed (e.g., select, "age as of June 30"). Changing the denominator age range below age 18 is allowed.
Continuous enrollment, Allowable gap, Anchor Date	Yes	Organizations are not required to use enrollment criteria; adjustments are allowed.

		Note: *Changes to these criteria can impact how the event/diagnosis would be calculated using the Intake Period, IPSD, Negative Diagnosis History and Treatment Days.*
Benefits	Yes	Organizations are not required to use a benefit; adjustments are allowed.
Other	Yes	Organizations may use additional eligible population criteria to focus on a population of interest such as gender, sociodemographic characteristic or geographic region.
CLINICAL COMPONENTS		
Eligible Population	**Adjustments Allowed (Yes/No)**	**Notes**
Event/Diagnosis	Yes, with limits	Only events or diagnoses that contain (or map to) codes in the medication lists and value sets may be used to identify visits. Medication lists, value sets and logic may not be changed. ***Note:*** *This measure uses treatment with antidepressant medication; modifying the measurement period can affect other dates; however, the order and relationship of the events may not be changed.*
Denominator Exclusions	**Adjustments Allowed (Yes/No)**	**Notes**
Required Exclusions	No	Apply required exclusions according to specified value sets.
Numerator Criteria	**Adjustments Allowed (Yes/No)**	**Notes**
● Effective Acute Phase treatment ● Effective Continuation Phase treatment	No	Medication lists, value sets and logic may not be changed.

COMPREHENSIVE DIABETES CARE (CDC)

Measure Description:

The percentage of members 19–64 years of age with diabetes (type 1 and type 2) who had Hemoglobin A1c (HbA1c) testing.

Data Source: **APCD, MMIS**	NQF #: **0731**
Measure Steward: **NCQA**	Measure Steward Version: **HEDIS MY 2020 & MY 2021**
Population(s): Adult Expansion	Stratifications: Plan Type, Age, Gender, Race/Ethnicity

Numerator:

HbA1c Testing An HbA1c test (HbA1c Lab Test Value Set; HbA1c Test Result or Finding Value Set) performed during the measurement year. 7/1/19 – 6/30/20

Denominator:

Members 19–64 years as of June 30 of the measurement year 2020, with a diabetes diagnosis.

Event/diagnosis A member only needs to be identified by claim/encounter data or by pharmacy data to be included in the measure. Members may be identified as having diabetes during the measurement year.

Claim/encounter data. Members who met any of the following criteria during the measurement year :

- At least one acute inpatient encounter (Acute Inpatient Value Set) with a diagnosis of diabetes (Diabetes Value Set) ***without*** telehealth (Telehealth Modifier Value Set; Telehealth POS Value Set).
- At least one acute inpatient discharge with a diagnosis of diabetes (Diabetes Value Set) on the discharge claim. To identify an acute inpatient discharge:
  1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set).
  2. Exclude nonacute inpatient stays (Nonacute Inpatient Stay Value Set).
  3. Identify the discharge date for the stay.
- At least two outpatient visits (Outpatient Value Set), observation visits (Observation Value Set), telephone visits (Telephone Visits Value Set),e-visits or virtual check-ins (Online Assessments Value Set), ED visits (ED Value Set), nonacute inpatient encounters (Nonacute Inpatient Value Set) or nonacute inpatient discharges (instructions below; the diagnosis must be on the discharge claim), on different dates of service, with a diagnosis of diabetes (Diabetes Value Set). Visit type need not be the same for the two encounters. To identify a nonacute inpatient discharge:
  1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set).
  2. Confirm the stay was for nonacute care based on the presence of a nonacute code (Nonacute Inpatient Stay Value Set) on the claim.

3. Identify the discharge date for the stay.

Only include nonacute inpatient encounters (Nonacute Inpatient Value Set) ***without*** telehealth (Telehealth Modifier Value Set; Telehealth POS Value Set).

Pharmacy data. Members who were dispensed insulin or hypoglycemics/ antihyperglycemics on an ambulatory basis during the measurement year (Diabetes Medications List).

Diabetes Medications

Description	Prescription		
Alpha-glucosidase inhibitors	● Acarbose	● Miglitol	
Amylin analogs	● Pramlintide		
Antidiabetic combinations	● Alogliptin-metformin ● Alogliptin-pioglitazone ● Canagliflozin-metformin ● Dapagliflozin-metformin ● Empagliflozin-linagliptin	● Empagliflozin-metformin ● Glimepiride-pioglitazone ● Glipizide-metformin ● Glyburide-metformin ● Linagliptin-metformin	● Metformin-pioglitazone ● Metformin-repaglinide ● Metformin-rosiglitazone ● Metformin-saxagliptin ● Metformin-sitagliptin
Insulin	● Insulin aspart ● Insulin aspart-insulin aspart protamine ● Insulin degludec ● Insulin detemir ● Insulin glargine ● Insulin glulisine	● Insulin isophane human ● Insulin isophane-insulin regular ● Insulin lispro ● Insulin lispro-insulin lispro protamine ● Insulin regular human ● Insulin human inhaled	
Meglitinides	● Nateglinide	● Repaglinide	
Glucagon-like peptide-1 (GLP1) agonists	● Dulaglutide ● Exenatide	● Albiglutide ● Liraglutide (excluding *Saxenda*®)	
Sodium glucose cotransporter 2 (SGLT2) inhibitor	● Canagliflozin	● Dapagliflozin	● Empagliflozin
Sulfonylureas	● Chlorpropamide ● Glimepiride	● Glipizide ● Glyburide	● Tolazamide ● Tolbutamide
Thiazolidinediones	● Pioglitazone	● Rosiglitazone	
Dipeptidyl peptidase-4 (DDP-4) inhibitors	● Alogliptin ● Linagliptin	● Saxagliptin ● Sitagliptin	

Note: *Glucophage/metformin as a solo agent is not included because it is used to treat conditions other than diabetes; members with diabetes on these medications are identified through diagnosis codes only.*

Exclusions:
Exclude members receiving palliative care (Palliative Care Assessment Value Set; Palliative Care Encounter Value Set; Palliative Care Intervention Value Set) during the measurement year.

Exclusion (Optional):

Members who do not have a diagnosis of diabetes (Diabetes Value Set), in any setting, during the measurement year or the year prior to the measurement year ***and*** who had a diagnosis of polycystic ovarian syndrome, gestational diabetes or steroid-induced diabetes (Diabetes Exclusions Value Set), in any setting, during the measurement year or the year prior to the measurement year.

Organizations that apply optional exclusions must exclude members from the denominator for all indicators. The denominator for all rates must be the same. If the member was included in the measure based on claim or encounter data, as described in the event/diagnosis criteria, the optional exclusions do not apply because the member had a diagnosis of diabetes.

Result:
The result is expressed as a percentage.

PMPM COST OF CARE

Measure Description:
The PMPM cost of acute care and primary care for Medicaid members 19 years and older within the eligible populations.

- Medicaid members within the eligible populations who had an (AT LEAST ONE of the following) acute care visit, ambulatory or preventive care visit, or outpatient or specialty care visit during the measurement year.

Data Source(s):	NQF #:
APCD, MMIS	**N/A**
Measure Steward:	Measure Steward Version:
N/A	**N/A**
Population(s):	Stratifications:
Adult Expansion	Plan Type

Numerator:

Medicaid:

Total Cost of Acute Care
Total cost of acute care claims for members with one or more acute care visits during the measurement year. 7/1/19—6/30/20
Use the following value sets to identify acute care visits:
Acute Inpatient Value Set

Total Cost of Primary Care
Total cost of ambulatory or preventative care claims for members with one or more ambulatory or preventive care visits during the measurement year. 7/1/19 – 6/30/20
Use the following value sets to identify ambulatory or preventive care visits:
Ambulatory:

1. Ambulatory Visits Value Set.
2. Other Ambulatory Visits Value Set
3. Other: PLACEOFSERVICE NOT IN ('04', '21', '23', '31', '33', '34',' 41', '42')
4. BILLTYPE <> '11X' (inpatient)

Non-Ambulatory

1. Telephone Visits Value Set.
2. Online Assessments Value Set.

Denominator:
The total number of member months within the eligible population.
Exclusions:
Exclude all member months for members receiving Hospice Care (Hospice Encounter, Hospice Intervention Value Set) during the measurement year.

Result:
The result is expressed as a dollar amount.

DELAYED OR AVOIDED CARE

Measure Description:
Fraction of Medicaid Beneficiaries in the eligible population who have delayed or avoided care due to cost.

Data Source(s):	NQF #:
BRFSS	**N/A**
Measure Steward:	Measure Steward Version:
N/A	**N/A**
Population(s):	Stratifications:
Adult Expansion	Plan Type

Survey Question:

Members of the eligible population who answered yes to BRFSS Health Care Access question CHCA.03

Question CHA.03: Was there a time in the past 12 months when you needed to see a doctor but could not because of cost?

- 1 Yes
- 2 No
- 7 Don't know / Not sure
- 9 Refused

Result:

The result is expressed as a percentage.

DELIVERY SYSTEM ENROLLMENT

Measure Description:
Fraction of Medicaid Beneficiaries in the eligible population receiving care through each delivery model:

1) Physical health through FFS and BH through PMHP
2) Care for physical health through ACOs and BH through PMHP
3) Integrated care through UMIC

Data Source(s):	NQF #:
UDOH Administrative	**N/A**
Measure Steward:	Measure Steward Version:
N/A	**N/A**
Population(s):	Stratifications:
Adult Expansion	Plan Type

Numerator:

Members of the eligible population receiving care through each delivery model:

- Physical health through FFS and BH through PMHP
- Care for physical health through ACOs and BH through PMHP
- Integrated care through UMIC

Denominator:

The total number of members within the eligible population.

Exclusions:

None.

Result:

The result is expressed as a percentage.

EMERGENCY DEPARTMENT UTILIZATION (EDU)

Measure Description:

The rate per 1,000 of members 19 years and older who had emergency department (ED) visits during the measurement year.

Data Source: **APCD, MMIS**	NQF #: **9999**
Measure Steward: **NCQA**	Measure Steward Version: **HEDIS MY 2020 & MY 2021**
Population(s): Adult Expansion	Stratifications: Plan Type, Age, Gender, BH diagnosis, chronic health conditions, race/ethnicity, language, county of residence

Numerator:

The number of observed ED visits within each:

- Age and gender group, and
- The overall total

Visit definition:

*A unique combination of the variables CLIENTID – TCN – SERVICEBEGINDATE
This accounts for members that may have more than one claim for the same or different diagnosis and procedure per day.

Step 1:

- Count each visit to an ED once, regardless of the intensity or duration of the visit.
- Count multiple ED visits on the same date of service as one visit.
- Identify all ED visits during the measurement year using either of the following:

*Note: measurement year has been altered from CY to fiscal year

- An ED Visit (ED Value Set). (CPT Code OR UBRev Code)
- A procedure code (ED Procedure Code Value Set) with (AND) an ED place of service code (ED POS Value Set).

1. **INPATIENT**:
   - An inpatient stay (Inpatient Stay Value Set) OR
   - An acute inpatient stay (Acute Inpatient Value Set) OR
   - Non-acute inpatient stay (NonAcute Inpatient Value Set)
   - BILLTYPE IN ('11X', '12X', '21X', '22X')

   OR

   - An observation (Observation Value Set) OR
   - An observation stay (Observation Stay Value Set)

   OR

Step 2:

- Exclude encounters with any of the following:

- A **principal diagnosis** of (see **UT BH dx Master Listing for EDU**)[24]

Step 3:

- For the remaining ED visits, calculate the:
- number of visits per member and
- remove visits for outlier members.

OUTLIER DEFINITION: Medicaid members 19–64 years of age with **four or more ED visits** during the measurement year (7/1/19 – 6/30/20).

Step 4:

- Calculate the total using all ED visits identified after completing steps 1–3.

Assign each remaining ED visit to an age and stratification category.

Denominator:
The number of members in the eligible population for each age and gender combination.

Result:

The result is expressed as a rate.

[24] Mental and Behavioral Disorders Value Set, Psychiatry Value Set, and Electroconvulsive Therapy value sets have been modified and combined into the UT BH dx Master Listing for EDU to fit needs of UT Interim Evaluation.

FOLLOW UP AFTER HOSPITALIZATION FOR MENTAL ILLNESS (FUH)

Measure Description:

The percentage of discharges for patients 19 years of age and older who were hospitalized for treatment of selected mental health disorders or intentional self-harm diagnoses and who had a follow-up visit with a mental health provider. Two rates are reported:

1. The percentage of discharges for which the member received follow-up within 30 days after discharge.
2. The percentage of discharges for which the member received follow-up within 7 days after discharge.

Data Source: **MMIS**	NQF #: **0576**
Measure Steward: **NCQA**	Measure Steward Version: **HEDIS MY 2020 & MY 2021**
Population(s): Adult Expansion	Stratifications: Plan Type, Age, Gender, Race/Ethnicity

Numerator:

30-Day Follow-Up A follow-up visit with a mental health provider within 30 days after discharge. Do not include visits that occur on the date of discharge.

7-Day Follow-Up A follow-up visit with a mental health provider within 7 days after discharge. Do not include visits that occur on the date of discharge.

For both indicators, any of the following meet criteria for a follow-up visit.

- An outpatient visit (Visit Setting Unspecified Value Set) ***with*** (Outpatient POS Value Set) ***with*** a mental health provider.
- An outpatient visit (BH Outpatient Value Set) ***with*** a mental health provider.
- An intensive outpatient encounter or partial hospitalization (Visit Setting Unspecified Value Set) ***with*** (Partial Hospitalization POS Value Set).
- An intensive outpatient encounter or partial hospitalization (Partial Hospitalization or Intensive Outpatient Value Set).
- A community mental health center visit (Visit Setting Unspecified Value Set; BH Outpatient Value Set; Observation Value Set; Transitional Care Management Services Value Set) ***with*** (Community Mental Health Center POS Value Set).
- Electroconvulsive therapy (Electroconvulsive Therapy Value Set) ***with*** (Ambulatory Surgical Center POS Value Set; Community Mental Health Center POS Value Set; Outpatient POS Value Set; Partial Hospitalization POS Value Set).
- A telehealth visit: (Visit Setting Unspecified Value Set) ***with*** (Telehealth POS Value Set) ***with*** a mental health provider.
- An observation visit (Observation Value Set) ***with*** a mental health provider.
- Transitional care management services (Transitional Care Management Services Value Set), ***with*** a mental health provider.
- A visit in a behavioral healthcare setting (Behavioral Healthcare Setting Value Set).

- A telephone visit (Telephone Visits Value Set) ***with*** a mental health provider.

Denominator:

Members 18+ years who were discharged alive from an acute inpatient with a principal mental illness diagnosis or intentional self-harm.

Event/diagnosis

An acute inpatient discharge with a principal diagnosis of mental illness or intentional self-harm (Mental Illness Value Set; Intentional Self-Harm Value Set) on the discharge claim on or between July 1, 2019 and June 30, 2020 of the measurement year. To identify acute inpatient discharges:

1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set).
2. Exclude nonacute inpatient stays (Nonacute Inpatient Stay Value Set).
3. Identify the discharge date for the stay.

The denominator for this measure is based on discharges, not on members. If members have more than one discharge, include all discharges on or between July 1, 2019 and June 30, 2020 of the measurement year.

Acute readmission or direct transfer

Identify readmissions and direct transfers to an acute inpatient care setting during the 30-day follow-up period:

1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set).
2. Exclude nonacute inpatient stays (Nonacute Inpatient Stay Value Set).
3. Identify the admission date for the stay.

Exclude both the initial discharge and the readmission/direct transfer discharge if the last discharge occurs after June 1 of the measurement year.

If the readmission/direct transfer to the acute inpatient care setting was for a principal diagnosis (use only the principal diagnosis on the discharge claim) of mental health disorder or intentional self-harm (Mental Health Diagnosis Value Set; Intentional Self-Harm Value Set), count only the last discharge.

If the readmission/direct transfer to the acute inpatient care setting was for any other principal diagnosis (use only the principal diagnosis on the discharge claim) exclude both the original and the readmission/direct transfer discharge.

Nonacute readmission or direct transfer

Exclude discharges followed by readmission or direct transfer to a nonacute inpatient care setting within the 30-day follow-up period, regardless of principal diagnosis for the readmission. To identify readmissions and direct transfers to a nonacute inpatient care setting:

1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set).
2. Confirm the stay was for nonacute care based on the presence of a nonacute code (Nonacute Inpatient Stay Value Set) on the claim.
3. Identify the admission date for the stay.

These discharges are excluded from the measure because rehospitalization or direct transfer may prevent an outpatient follow-up visit from taking place.

Exclusions:

- Exclude nonacute inpatient stays (Nonacute Inpatient Stay Value Set).
- Exclude both the initial discharge and the readmission/direct transfer discharge if the last discharge occurs after June 1 of the measurement year.
- Exclude both the original and the readmission/direct transfer discharge if the readmission/direct transfer to the acute inpatient care setting was for any other principal diagnosis (use only the principal diagnosis on the discharge claim).

- Exclude discharges followed by readmission or direct transfer to a nonacute inpatient care setting within the 30-day follow-up period, regardless of principal diagnosis for the readmission.
- Exclude if used hospice during the measurement period (Hospice Encounter, Hospice Intervention Value Set).

Result:
The result is expressed as a percentage.

GETTING CARE QUICKLY (CAHPS)

Measure Description:
The survey asked enrollees how often they got care as soon as needed when sick or injured and got non-urgent appointments as soon as needed.

Data Source(s):	NQF #:
CAHPS Health Plan Adult Survey	**N/A**
Measure Steward:	Measure Steward Version:
AHRQ	5.0
Population(s):	Stratifications:
Adult Expansion	Plan Type

Survey Questions

Members of the eligible population who answered either Q4 or Q6 on the CAHPS Health Plan Adult Survey.

Q4: Respondent got care for illness/injury as soon as needed.

- Never
- Sometimes
- Usually
- Always

Q6: Respondent got non-urgent appointment as soon as needed

- Never
- Sometimes
- Usually
- Always

Result:

The result is expressed as a percentage.

GETTING NEED CARE (CAHPS)

Measure Description:
The survey asked enrollees how often it was easy for them to get appointments with specialists and get the care, tests, or treatment they needed through their health plan.

Data Source(s):	NQF #:
CAHPS Health Plan Adult Survey	**N/A**
Measure Steward:	Measure Steward Version:
AHRQ	5.0
Population(s):	Stratifications:
Adult Expansion	Plan Type

Survey Questions:

Members of the eligible population who answered either Q9 or Q18 on the CAHPS Health Plan Adult Survey.

Q9: Easy for respondent to get necessary care, tests, or treatment.

- Never
- Sometimes
- Usually
- Always

Q18: Respondent got appointment with specialists as soon as needed

- Never
- Sometimes
- Usually
- Always

Result:

The result is expressed as a percentage.

HEALTH RELATED QUALITY OF LIFE

Measure Description:
Healthy Days Measures Core Module from the CDC HRQOL.

Data Source(s):	NQF #:
BRFSS	**N/A**
Measure Steward:	Measure Steward Version:
CDC	**N/A**
Population(s):	Stratifications:
Adult Expansion	Plan Type

Survey Questions:

Members of the eligible population who answered CDC HRQOL-4.

Healthy Days Core Module (CDC HRQOL-4):

Question 1: Would you say that in general your health is:

- 1. Excellent
- 2. Very Good
- 3. Good
- 4, Fair
- 5. Poor
- 7 Don't know / Not sure
- 9 Refused

Question 2: Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?

- Number of Days
- 88. None
- 77 Don't know / Not sure
- 99 Refused

Question 3: Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?1. Excellent

- Number of Days
- 88. None
- 77 Don't know / Not sure
- 99 Refused

Question 4: During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

- Number of Days
- 88. None
- 77 Don’t know / Not sure
- 99 Refused

Result:

The result is expressed as a percentage.

INITIATION AND ENGAGEMENT OF ALCOHOL AND OTHER DRUG ABUSE OR DEPENDENCE TREATMENT (IET)

	Measure Description: The percentage of adolescent and adult members with a new episode of alcohol or other drug (AOD) abuse or dependence who received the following. ● *Initiation of AOD Treatment.* The percentage of members who initiate treatment through an inpatient AOD admission, outpatient visit, intensive outpatient encounter or partial hospitalization, telehealth or medication treatment within 14 days of the diagnosis. ● *Engagement of AOD Treatment.* The percentage of members who initiated treatment and who were engaged in ongoing AOD treatment within 34 days of the initiation visit.	
	Data Source: **MMIS**	NQF #: **0004**
	Measure Steward: **NCQA**	Measure Steward Version: **HEDIS MY 2020 & MY 2021**
	Population(s): Adult Expansion	Stratifications: Plan Type, Age, Gender, Race/Ethnicity

Numerator:

Initiation of AOD Treatment

Initiation of AOD treatment within 14 days of the IESD.

If the Index Episode was an inpatient discharge (or an ED/observation visit that resulted in an inpatient stay), the inpatient stay is considered initiation of treatment and the member is compliant.

If the Index Episode was an opioid treatment service that bills monthly (OUD Monthly Office Based Treatment Value Set), the opioid treatment service is considered initiation of treatment and the member is compliant.

If the Index Episode was not an inpatient discharge, the member must initiate treatment on the IESD or in the 13 days after the IESD (14 total days). Any of the following code combinations meet criteria for initiation:

- An acute or nonacute inpatient admission ***with*** a diagnosis (on the discharge claim) matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set. To identify acute and nonacute inpatient admissions:
  1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set).
  2. Identify the admission date for the stay.
- IET Stand Alone Visits Value Set ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
- Observation Value Set ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set,

Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.

- IET Visits Group 1 Value Set ***with*** IET POS Group 1 Value Set ***and*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
- IET Visits Group 2 Value Set ***with*** IET POS Group 2 Value Set ***and*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
- A telephone visit (Telephone Visit Value Set) ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
- An e-visit or virtual check-in (Online Assessments Value Set) ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
- If the Index Episode was for a diagnosis of opioid abuse or dependence (Opioid Abuse and Dependence Value Set) an opioid treatment service (OUD Weekly Non Drug Service Value Set).
- If the Index Episode was for a diagnosis of opioid abuse or dependence (Opioid Abuse and Dependence Value Set) an opioid treatment service (OUD Monthly Office Based Treatment Value Set).
- If the Index Episode was for a diagnosis of alcohol abuse or dependence (Alcohol Abuse and Dependence Value Set) a medication treatment dispensing event (Alcohol Use Disorder Treatment Medications List) or medication treatment during a visit (AOD Medication Treatment Value Set).
- If the Index Episode was for a diagnosis of opioid abuse or dependence (Opioid Abuse and Dependence Value Set) a medication treatment dispensing event (Opioid Use Disorder Treatment Medications List) or medication treatment during a visit (AOD Medication Treatment Value Set; OUD Weekly Drug Treatment Service Value Set).

For all initiation events except medication treatment (AOD Medication Treatment Value Set; Alcohol Use Disorder Treatment Medications List; Opioid Use Disorder Treatment Medications List), initiation on the same day as the IESD must be with different providers in order to count.

If a member is compliant for the Initiation numerator for any diagnosis cohort (alcohol, opioid, other drug) or for multiple cohorts, count the member only once in the Total Initiation numerator. The "Total" column is not the sum of the diagnosis columns.

Exclude the member from the denominator for both indicators *(Initiation of AOD Treatment* and *Engagement of AOD Treatment)* if the initiation of treatment event is an inpatient stay with a discharge date after November 27 of the measurement year.

Engagement of AOD Treatment

Step 1 Identify all members compliant for the Initiation of AOD Treatment numerator.

For members who initiated treatment via an inpatient admission, the 34-day period for engagement begins the day after discharge.

Step 2 Identify members who had an opioid treatment service that bills monthly (OUD Monthly Office Based Treatment Value Set) or who had a visit that included medication administration (OUD Weekly Drug Treatment Service Value Set) beginning on the day after the initiation encounter through 34 days after the initiation event.

For these members, if the IESD Diagnosis cohort was a diagnosis of opioid abuse or dependence (Opioid Abuse and Dependence Value Set), the member is numerator compliant for Engagement of AOD Treatment.

Step 3 Identify members whose initiation of AOD treatment was a medication treatment event (Alcohol Use Disorder Treatment Medications List; Opioid Use Disorder Treatment Medications List; AOD Medication Treatment Value Set).

These members are numerator compliant if they have two or more engagement events, where only one can be an engagement medication treatment event, beginning on the day after the initiation encounter through 34 days after the initiation event (total of 34 days).

Step 4 Identify the remaining members whose initiation of AOD treatment was *not* a medication treatment event (members not identified in step 3).

These members are numerator compliant if they meet *either* of the following:

- At least one engagement medication treatment event.
- At least two engagement visits.

Two engagement visits can be on the same date of service but they must be with different providers in order to count as two events. An engagement visit on the same date of service as an engagement medication treatment event meets criteria (there is no requirement that they be with different providers).

Refer to the descriptions below to identify engagement visits and engagement medication treatment events.

Engagement visits Any of the following beginning on the day after the initiation encounter through 34 days after the initiation event (total of 34 days) meet criteria for an engagement visit:

- An acute or nonacute inpatient admission with a diagnosis (on the discharge claim) matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set. To identify acute or nonacute inpatient admissions:
  1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set).
  2. Identify the admission date for the stay.
- IET Stand Alone Visits Value Set ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
- Observation Value Set ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.

- IET Visits Group 1 Value Set ***with*** IET POS Group 1 Value Set ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
- IET Visits Group 2 Value Set ***with*** IET POS Group 2 Value Set ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
- A telephone visit (Telephone Visits Value Set) ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
- An e-visit or virtual check-in (Online Assessments Value Set) ***with*** a diagnosis matching the IESD diagnosis cohort using one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
- If the IESD Diagnosis cohort was a diagnosis of opioid abuse or dependence (Opioid Abuse and Dependence Value Set) an opioid treatment service (OUD Weekly Non-Drug Service Value Set).

Engagement medication treatment events

Either of the following meets criteria for an engagement medication treatment event:

- If the IESD diagnosis was *a diagnosis of alcohol abuse or dependence* (Alcohol Abuse and Dependence Value Set), one or more medication treatment dispensing events (Alcohol Use Disorder Treatment Medications List) or medication treatment during a visit (AOD Medication Treatment Value Set), beginning on the day after the initiation encounter through 34 days after the initiation event (total of 34 days), meets criteria for Alcohol Abuse and Dependence Treatment.
- If the IESD diagnosis was *a diagnosis of opioid abuse or dependence* (Opioid Abuse and Dependence Value Set), one or more medication dispensing events (Opioid Use Disorder Treatment Medications List) or medication treatment during a visit (AOD Medication Treatment Value Set), beginning on the day after the initiation encounter through 34 days after the initiation event (total of 34 days), meets criteria for Opioid Abuse and Dependence Treatment.

If the member is compliant for multiple cohorts, only count the member once for the Total Engagement numerator. The Total column is not the sum of the Diagnosis columns.

Alcohol Use Disorder Treatment Medications

Description	Prescription
Aldehyde dehydrogenase inhibitor	• Disulfiram (oral)
Antagonist	• Naltrexone (oral and injectable)
Other	• Acamprosate (oral; delayed-release tablet)

Opioid Use Disorder Treatment Medications

Description	Prescription
Antagonist	● Naltrexone (oral and injectable)
Partial agonist	● Buprenorphine (sublingual tablet, injection, implant) ● Buprenorphine/naloxone (sublingual tablet, buccal film, sublingual film)

Note

- *Organizations may have different methods for billing intensive outpatient encounters and partial hospitalizations. Some organizations may bill comparable to outpatient billing, with separate claims for each date of service; others may bill comparable to inpatient billing, with an admission date, a discharge date and units of service. Organizations whose billing is comparable to inpatient billing may count each unit of service as an individual visit. The unit of service must have occurred during the required time frame for the rate.*
- *For members in the "other drug abuse or dependence" cohort, medication treatment does not meet numerator criteria for Initiation of AOD Treatment or Engagement of AOD Treatment.*
- *Methadone is not included in the medication lists for this measure. Methadone for opioid use disorder is only administered or dispensed by federally certified opioid treatment programs and does not show up in pharmacy claims data. A pharmacy claim for methadone would be more indicative of treatment for pain than treatment for an opioid use disorder; therefore, they are not included in the medication lists. The AOD Medication Treatment Value Set includes some codes that identify methadone treatment because these codes are used on medical claims, not pharmacy claims.*

Denominator: Members that are 19 years or older with a new episode of AOD abuse or dependence during the Intake Period.

AOD diagnosis cohorts

Report the following diagnosis cohorts for each age stratification and the total rate:

- Alcohol abuse or dependence.
- Opioid abuse or dependence.
- Other drug abuse or dependence.
- Total.

Event/diagnosis

New episode of AOD abuse or dependence during the Intake Period.

Follow the steps below to identify the eligible population, which is the denominator for both rates.

Step 1

Identify the Index Episode. Identify all members in the specified age range who during the Intake Period had one of the following:

- An outpatient visit, telehealth, intensive outpatient visit or partial hospitalization with a diagnosis of AOD abuse or dependence. Any of the following code combinations meet criteria:
  - IET Stand Alone Visits Value Set ***with*** one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
  - IET Visits Group 1 Value Set ***with*** IET POS Group 1 Value Set and with one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.

- IET Visits Group 2 Value Set ***with*** IET POS Group 2 Value Set and ***with*** one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
- OUD Weekly Non Drug Service Value Set ***with*** Opioid Abuse and Dependence Value Set.
- OUD Monthly Office Based Treatment Value Set ***with*** Opioid Abuse and Dependence Value Set.
- OUD Weekly Drug Treatment Service Value Set ***with*** Opioid Abuse and Dependence Value Set.

- A detoxification visit (Detoxification Value Set) ***with*** one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
- An ED visit (ED Value Set) ***with*** one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
- An observation visit (Observation Value Set) ***with*** one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
- An acute or nonacute inpatient discharge ***with*** one of the following on the discharge claim: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set. To identify acute and nonacute inpatient discharges:
  1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set).
  2. Identify the discharge date for the stay.
- A telephone visit (Telephone Visits Value Set) ***with*** one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
- An e-visit or virtual check-in (Online Assessments Value Set) ***with*** one of the following: Alcohol Abuse and Dependence Value Set, Opioid Abuse and Dependence Value Set, Other Drug Abuse and Dependence Value Set.
- An opioid treatment service (OUD Weekly Non Drug Service Value Set; OUD Monthly Office Based Treatment Value Set; OUD Weekly Drug Treatment Service Value Set) with a diagnosis of opioid abuse of dependence (Opioid Abuse and Dependence Value Set).

For members with more than one episode of AOD abuse or dependence, use the first episode.

For members whose first episode was an ED or observation visit that resulted in an inpatient stay, use the diagnosis from the ED or observation visit to determine the diagnosis cohort and use the inpatient discharge date as the IESD.

Step 2 Select the Index Episode and stratify based on age and AOD diagnosis cohort.

- If the member has a diagnosis of alcohol abuse or dependence (Alcohol Abuse and Dependence Value Set), place the member in the alcohol cohort.
- If the member has a diagnosis of opioid abuse of dependence (Opioid Abuse and Dependence Value Set), place the member in the opioid cohort.
- If the member has a drug abuse or dependence that is neither for opioid or alcohol (Other Drug Abuse and Dependence Value Set), place the member in the other drug cohort.

If the member has multiple substance use diagnosis for the visit, report the member in all AOD diagnosis stratifications for which they meet criteria.

The total is not a sum of the diagnosis cohorts. Count members in the total denominator rate if they had at least one alcohol, opioid or other drug abuse or dependence diagnosis during the measurement period. Report member with multiple diagnoses during the Index Episode only once for the total rate for the denominator.

Step 3 Test for Negative Diagnosis History. Exclude members who had a claim/ encounter with a diagnosis of AOD abuse or dependence (AOD Abuse and Dependence Value Set), AOD medication treatment (AOD Medication Treatment Value Set) or an alcohol or opioid dependency treatment medication dispensing event (Alcohol Use Disorder Treatment Medications List; Opioid Use Disorder Treatment Medications List) during the 60 days (2 months) before the IESD.

For an inpatient IESD, use the admission date to determine the 60-day Negative Diagnosis History period.

For ED or observation visits that result in an inpatient stay, use the earliest date of service (either the ED/observation date of service or the inpatient admission date) to determine the Negative Diagnosis History.

Step 4 Calculate continuous enrollment. Members must be continuously enrolled for 60 days (2 months) before the IESD through 47 days after the IESD (108 total days), with no gaps.

Exclusions:

- Exclude members who had a claim/encounter with a diagnosis of AOD abuse or dependence (AOD Abuse and Dependence Value Set), AOD medication treatment (AOD Medication Treatment Value Set) or an alcohol or opioid dependency treatment medication dispensing event (Alcohol Use Disorder Treatment Medications List; Opioid Use Disorder Treatment Medications List) during the 60 days (2 months) before the IESD.
- Exclude if used hospice during the measurement period (Hospice Encounter, Hospice Intervention Value Set).

Result:
The result is expressed as a percentage.

INPATIENT UTILIZATION—GENERAL HOSPITAL/ACUTE CARE (IPU)

Measure Description:

The rate of members 19–64 years of age who utilized acute inpatient care and services in the following categories:

- Maternity
- Surgery
- Medicine

- Total Inpatient (the sum of Maternity, Surgery, and Medicine)

Note: Final Outputs are Discharges per 1,000 Member Months, Days per 1,000 Member Months, and Average Length of Stay.

Data Source: **MMIS,**	NQF #: **N/A**
Measure Steward: **NCQA**	Measure Steward Version: **HEDIS MY 2020 & MY 2021**
Population(s): Adult Expansion	Stratifications: Plan Type, Age, Gender, Race/Ethnicity

Numerator:
The following steps identify and categorize inpatient discharges.

Step 1 Identify all acute inpatient discharges between 7/1/19 – 6/30/20 of the measurement year. To identify acute inpatient discharges: Include surgery in this step and remove in later step

1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set).
2. Pt 1b. Exclude nonacute inpatient stays (Nonacute Inpatient Stay Value Set).
3. Identify the discharge date for the stay.
2.

Step 2 Exclude discharges with a principal diagnosis of mental health or chemical dependency (Mental and Behavioral Disorders Value Set) on the discharge claim.

Step 3 Report total inpatient, using all discharges identified after completing steps 1 and 2.

Step 4 Report maternity. A delivery is not required for inclusion in the Maternity category; any maternity-related stay is included. Include birthing center deliveries and count them as one day of stay.

Starting with all discharges identified in step 3, identify maternity using either of the following:

- A maternity-related principal diagnosis (Maternity Diagnosis Value Set).
- A maternity-related stay (Maternity Value Set).

3.

Step 5 Report surgery (Surgery Value Set).

Step 6 Report medicine. Categorize as medicine the discharges remaining after removing maternity (identified in step 4) and surgery (identified in step 5) from total inpatient (identified in step 3).

Denominator:

Member months For each table, report all member months for the measurement year. Refer to *Specific Instructions for Utilization Tables* for more information.

Additional calculations:

Days	Count all days associated with the identified discharges. Report days for total inpatient, maternity, surgery and medicine.
ALOS	Refer to *Specific Instructions for Utilization Tables* for the formula. Calculate average length of stay for total inpatient, maternity, surgery and medicine.

Exclusions:

Members in hospice are excluded from this measure

Result:
The result is expressed as a percentage.

LOW-VALUE CARE: HEAD IMAGING FOR HEADACHE

Measure Description:
Rate of utilization of services identified as low value by the American Board of Internal Medicine (ABIM)/ Milliman Waste Calculator. Low value service is head imaging for headache, without additional indicators.

- Inappropriate antibiotic prescriptions

Data Source(s):	NQF #:
MMIS, APCD	**N/A**
Measure Steward:	Measure Steward Version:
MA Health Policy Commission	**N/A**
Population(s):	Stratifications:
Adult Expansion	Plan Type

Numerator:

Step1: Identify the low value service claims.

Brain CT/MRI with non-post-traumatic, non-thunderclap headache diagnosis. (CPT: 70450,70460, 70470, 70551-70553**)**

Step 2: Exclude diagnoses in claim warranting imaging.

Step 3: Report as a rate.

Denominator:

Patients with uncomplicated Headache or Migraine. (ICD-9: 30781 339xx 346x 7840)

Exclusions:

No diagnoses in claim warranting imaging. Exclusion diagnoses include epilepsy, giant cell arteritis, head trauma, convulsions, altered mental status, nervous system symptoms (e.g., hemiplegia), disturbances of skin sensation, speech problems, stroke/TIA, history of stroke, cancer or history of cancer. (CPT: 33920-33922 33943 14xx–208xx 230xx-239xx 3463x 3466x 4465 345xx 7803x 43xx 800xx-804xx 850xx-854xx 870xx-873xx 9590x 910xx 920xx-921xx 78097 781xx 7820 7845x 79953 V1254 V10xx)

Result:

The result is expressed as a rate.

LOW-VALUE CARE: PRE-OPERATIVE TESTING FOR CARDIAC STRESS TEST

Measure Description:
Rates of utilization of services identified as low value by the American Board of Internal Medicine (ABIM)/ Milliman Waste Calculator. Low value service is Pre-operative testing for cardiac stress test (low-risk non cardiac surgery).

Data Source(s): MMIS, APCD	NQF #: **N/A**
Measure Steward: MA Health Policy Commission	Measure Steward Version: **N/A**
Population(s): Adult Expansion	Stratifications: Plan Type

Numerator:

Step1: Identify the low value service claims.

Pre-operative testing for cardiac stress test: Stress testing CPT: 78451-78454 78460 78461 78464 78465 78472 78473 78481 78483 78491 78492 93015-93018 93350 93351

Step 2: Encounters were excluded from the initial population if the surgery claim occurred in the 30-day period following an inpatient admission or the 1-day period following an emergency department claim.

Step 3: Report as a rate.

Denominator:

Patients undergoing selected surgeries BETOS: p1x, P3D, P4A, P4B, P4C, P5C, P5D, P8A, P8G CPT: 19120 19125 47562 47563 49560 58558.

Exclusions:

Encounters were excluded from the initial population if the surgery claim occurred in the 30-day period following an inpatient admission or the 1-day period following an emergency department claim.

Result:

The result is expressed as a rate.

LOW-VALUE CARE: INAPPROPRIATE ANTIBIOTIC PRESCRIPTIONS

Measure Description:
Rate of utilization of services identified as low value by the American Board of Internal Medicine (ABIM)/ Milliman Waste Calculator. Low value service is Inappropriate antibiotic prescriptions.

Data Source(s): MMIS, APCD	NQF #: **N/A**
Measure Steward: MA Health Policy Commission	Measure Steward Version: **N/A**
Population(s): Adult Expansion	Stratifications: Plan Type

Numerator:

Step1: Identify the low value service claims.

Patients prescribed antibiotics. 2016 HEDIS Table ABX-A: Antibiotic Medications.

Step 2: Exclude patients with diagnoses of chronic bronchitis, emphysema, COPD, conditions where antibiotics are always indicated -miscellaneous bacterial infections, pneumonia, urinary tract infections (ICD-9 491 492 496 010-018 020-027 030-033 036-041 070-104 130-139 320-323 383 475 481 482 483 484 485 486 5901 5902 5908 5909 5950 5950 5990).

Step 3: Report as a rate.

Denominator:

Patients with diagnosis of acute sinusitis, pharyngitis, suppurative otitis media, bronchitis ICD-9: 461, 463, 462x, 382x, 490x, 466x.

Exclusions:

Patients with diagnoses of chronic bronchitis, emphysema, COPD, conditions where antibiotics are always indicated -miscellaneous bacterial infections, pneumonia, urinary tract infections (ICD-9 491 492 496 010-018 020-027 030-033 036-041 070-104 130-139 320-323 383 475 481 482 483 484 485 486 5901 5902 5908 5909 5950 5950 5990).

Result:

The result is expressed as a rate.

PATIENT SATISFACTION (CAHPS)

Measure Description:
CAHPS Patient Satisfaction Measures.

Data Source(s):	NQF #:
CAHPS Health Plan Adult Survey	**N/A**
Measure Steward:	Measure Steward Version:
AHRQ	5.0
Population(s):	Stratifications:
Adult Expansion	Plan Type

Survey Questions:

Members of the eligible population who answered either Q26, Q16, and Q20 on the CAHPS Health Plan Adult Survey.

Q26: Respondent rating of their health plan, overall.

- 0-10

Q16: Respondent rating of their personal doctor

- 0-10

Q20: Respondent rating of specialist they saw most.

- 0-10

Result:

The result is expressed as a percentage.

PERSONAL CARE PROVIDER

Measure Description:
Fraction of Medicaid Beneficiaries who say they have one person they think of as their person doctor or provider.

Data Source(s):	NQF #:
BRFSS	**N/A**
Measure Steward:	Measure Steward Version:
N/A	**N/A**
Population(s):	Stratifications:
Adult Expansion	Plan Type

Numerator:

Members of the eligible population who answered yes to BRFSS Health Care Access question CHCA.03

Question CHA.02: Do you have one person you think of as your personal doctor or health care provider?

- 1 Yes
- 2 No
- 7 Don't know / Not sure
- 9 Refused

Denominator:

The total number of members within the eligible population.

Exclusions:

None.

Result:

The result is expressed as a percentage.

PRIMARY CARE ENGAGEMENT

Measure Description:
Time since last routine check up

Data Source(s):	NQF #:
BRFSS	**N/A**
Measure Steward:	Measure Steward Version:
N/A	**N/A**
Population(s):	Stratifications:
Adult Expansion	Plan Type

Survey Question:

Members of the eligible population who answered yes to BRFSS Health Care Access question CHCA.03

Question CHA.04: About how long has it been since you last visited a doctor for a routine checkup?

- 1. Within the year (anytime less than 12 months ago)
- 2. Within the past 2 years (1 year but less than 2 years ago)
- 3. Within the past 5 years (2 years but less than 5 years ago)
- 4. 5 or more years ago
- 7. Don't know/Not sure
- 8. Never
- 9. Refused

Result:

The result is expressed as a percentage.

QUALITATIVE MEASURES
IMPLEMENTATION

Measure Description:
Description of implementation challenges and successes as well as the Public Health Emergency's/Covid-19 pandemic's impact on implementation.

Data Source(s):	NQF #:
Key Informant Interviews (KII)	**N/A**
Measure Steward:	Measure Steward Version:
N/A	**N/A**
Population(s):	Stratifications:
Adult Expansion	Plan Type

KII interview guide is in development.

Appendix A: Value Code Sets by Measure

Adults' Access to Preventative/Ambulatory Health Services (AAP)

Value Set Name	Value Set OID
Ambulatory Visits	2.16.840.1.113883.3.464.1004.1022
Hospice Encounter	2.16.840.1.113883.3.464.1004.1761
Hospice Intervention	2.16.840.1.113883.3.464.1004.1762
Online Assessments	2.16.840.1.113883.3.464.1004.1446
Other Ambulatory Visits	2.16.840.1.113883.3.464.1004.1198
Telephone Visits	2.16.840.1.113883.3.464.1004.1246

Annual Monitoring for Patients on Persistent Medications (MPM)

Value Set Name	Value Set OID
Acute Inpatient	2.16.840.1.113883.3.464.1004.1017
Lab Panel	2.16.840.1.113883.3.464.1004.1145
Nonacute Inpatient	2.16.840.1.113883.3.464.1004.1189
Serum Creatinine	2.16.840.1.113883.3.464.1004.1236
Serum Potassium	2.16.840.1.113883.3.464.1004.1237

Antidepressant Medication Management (AMM)

Value Set Name	Value Set OID
Acute Inpatient	2.16.840.1.113883.3.464.1004.1810
BH Outpatient	2.16.840.1.113883.3.464.1004.1481
Community Mental Health Center POS	2.16.840.1.113883.3.464.1004.1484
ED	2.16.840.1.113883.3.464.1004.1086
ED POS	2.16.840.1.113883.3.464.1004.1087
Electroconvulsive Therapy	2.16.840.1.113883.3.464.1004.1294
Hospice Encounter	2.16.840.1.113883.3.464.1004.1761
Hospice Intervention	2.16.840.1.113883.3.464.1004.1762
Inpatient Stay	2.16.840.1.113883.3.464.1004.1395
Major Depression	2.16.840.1.113883.3.464.1004.1166
Nonacute Inpatient	2.16.840.1.113883.3.464.1004.1189
Observation	2.16.840.1.113883.3.464.1004.1191
Online Assessments	2.16.840.1.113883.3.464.1004.1446
Outpatient POS	2.16.840.1.113883.3.464.1004.1443
Partial Hospitalization or Intensive Outpatient	2.16.840.1.113883.3.464.1004.1492
Partial Hospitalization POS	2.16.840.1.113883.3.464.1004.1491
Telehealth POS	2.16.840.1.113883.3.464.1004.1460
Telephone Visits	2.16.840.1.113883.3.464.1004.1246
Transcranial Magnetic Stimulation	2.16.840.1.113883.3.464.1004.1486

Comprehensive Diabetes Care (CDC)

Value Set Name	Value Set OID
Acute Inpatient	2.16.840.1.113883.3.464.1004.1810
Advanced Illness	2.16.840.1.113883.3.464.1004.1465
Bilateral Modifier	2.16.840.1.113883.3.464.1004.1043
CKD Stage 4	2.16.840.1.113883.3.464.1004.1052
Diabetes	2.16.840.1.113883.3.464.1004.1077
Diabetes Exclusions	2.16.840.1.113883.3.464.1004.1105
Diabetes Mellitus Without Complications	2.16.840.1.113883.3.464.1004.1407
Diabetic Retinal Screening	2.16.840.1.113883.3.464.1004.1078
Diabetic Retinal Screening Negative In Prior Year	2.16.840.1.113883.3.464.1004.1079
Dialysis Procedure	2.16.840.1.113883.3.464.1004.1952
Diastolic 80-89	2.16.840.1.113883.3.464.1004.1082
Diastolic Blood Pressure	2.16.840.1.113883.3.464.1004.1965
Diastolic Greater Than or Equal To 90	2.16.840.1.113883.3.464.1004.1083
Diastolic Less Than 80	2.16.840.1.113883.3.464.1004.1084
ED	2.16.840.1.113883.3.464.1004.1086
ESRD Diagnosis	2.16.840.1.113883.3.464.1004.1747
Eye Exam With Evidence of Retinopathy	2.16.840.1.113883.3.464.1004.2229
Eye Exam Without Evidence of Retinopathy	2.16.840.1.113883.3.464.1004.2230
Frailty Device	2.16.840.1.113883.3.464.1004.1530

Frailty Diagnosis	2.16.840.1.113883.3.464.1004.1531
Frailty Encounter	2.16.840.1.113883.3.464.1004.1532
Frailty Symptom	2.16.840.1.113883.3.464.1004.1533
HbA1c Lab Test	2.16.840.1.113883.3.464.1004.1755
HbA1c Level Greater Than 9.0	2.16.840.1.113883.3.464.1004.1114
HbA1c Level Greater Than or Equal To 7.0 and Less Than 8.0	2.16.840.1.113883.3.464.1004.1976
HbA1c Level Greater Than or Equal To 8.0 and Less Than or Equal To 9.0	2.16.840.1.113883.3.464.1004.1977
HbA1c Level Less Than 7.0	2.16.840.1.113883.3.464.1004.1115
HbA1c Test Result or Finding	2.16.840.1.113883.3.464.1004.1756
Hospice Encounter	2.16.840.1.113883.3.464.1004.1761
Hospice Intervention	2.16.840.1.113883.3.464.1004.1762
Inpatient Stay	2.16.840.1.113883.3.464.1004.1395
Kidney Transplant	2.16.840.1.113883.3.464.1004.1141
Nephrectomy	2.16.840.1.113883.3.464.1004.1909
Nephropathy Treatment	2.16.840.1.113883.3.464.1004.1184
Nonacute Inpatient	2.16.840.1.113883.3.464.1004.1189
Nonacute Inpatient Stay	2.16.840.1.113883.3.464.1004.1398
Observation	2.16.840.1.113883.3.464.1004.1191
Online Assessments	2.16.840.1.113883.3.464.1004.1446
Outpatient	2.16.840.1.113883.3.464.1004.1202
Palliative Care Assessment	2.16.840.1.113883.3.464.1004.2225

Palliative Care Encounter	2.16.840.1.113883.3.464.1004.1450
Palliative Care Intervention	2.16.840.1.113883.3.464.1004.2224
Remote Blood Pressure Monitoring	2.16.840.1.113883.3.464.1004.1469
Systolic Blood Pressure	2.16.840.1.113883.3.464.1004.1964
Systolic Greater Than or Equal To 140	2.16.840.1.113883.3.464.1004.1242
Systolic Less Than 140	2.16.840.1.113883.3.464.1004.1243
Telehealth Modifier	2.16.840.1.113883.3.464.1004.1445
Telehealth POS	2.16.840.1.113883.3.464.1004.1460
Telephone Visits	2.16.840.1.113883.3.464.1004.1246
Unilateral Eye Enucleation	2.16.840.1.113883.3.464.1004.1454
Unilateral Eye Enucleation Left	2.16.840.1.113883.3.464.1004.1455
Unilateral Eye Enucleation Right	2.16.840.1.113883.3.464.1004.1456
Urine Protein Tests	2.16.840.1.113883.3.464.1004.1400

PMPM Cost of Care

Value Set Name	**Value Set OID**
Acute Inpatient	2.16.840.1.113883.3.464.1004.1810
Ambulatory Visits	2.16.840.1.113883.3.464.1004.1022
Hospice Encounter	2.16.840.1.113883.3.464.1004.1761
Hospice Intervention	2.16.840.1.113883.3.464.1004.1762
Online Assessments	2.16.840.1.113883.3.464.1004.1446

Other Ambulatory Visits	2.16.840.1.113883.3.464.1004.1198
Telephone Visits	2.16.840.1.113883.3.464.1004.1246

Emergency Department Utilization (EDU)

Value Set Name	Value Set OID
Acute Inpatient	2.16.840.1.113883.3.464.1004.1810
ED	2.16.840.1.113883.3.464.1004.1086
ED POS	2.16.840.1.113883.3.464.1004.1087
ED Procedure Code	2.16.840.1.113883.3.464.1004.1088
Electroconvulsive Therapy	2.16.840.1.113883.3.464.1004.1294
Hospice Encounter	2.16.840.1.113883.3.464.1004.1761
Hospice Intervention	2.16.840.1.113883.3.464.1004.1762
Inpatient Stay	2.16.840.1.113883.3.464.1004.1395
Mental and Behavioral Disorders	2.16.840.1.113883.3.464.1004.1300
Nonacute Inpatient	2.16.840.1.113883.3.464.1004.1189
Observation	2.16.840.1.113883.3.464.1004.1191
Observation Stay	2.16.840.1.113883.3.464.1004.1461
Outpatient	2.16.840.1.113883.3.464.1004.1202
Psychiatry	2.16.840.1.113883.3.464.1004.1272
Telephone Visits	2.16.840.1.113883.3.464.1004.1246

Follow Up After Hospitalization for Mental Illness (FUH)

Value Set Name	Value Set OID
Ambulatory Surgical Center POS	2.16.840.1.113883.3.464.1004.1480

Behavioral Healthcare Setting	2.16.840.1.113883.3.464.1004.2214
BH Outpatient	2.16.840.1.113883.3.464.1004.1481
Community Mental Health Center POS	2.16.840.1.113883.3.464.1004.1484
Electroconvulsive Therapy	2.16.840.1.113883.3.464.1004.1294
Hospice Encounter	2.16.840.1.113883.3.464.1004.1761
Hospice Intervention	2.16.840.1.113883.3.464.1004.1762
Inpatient Stay	2.16.840.1.113883.3.464.1004.1395
Intentional Self-Harm	2.16.840.1.113883.3.464.1004.1468
Mental Health Diagnosis	2.16.840.1.113883.3.464.1004.1178
Mental Illness	2.16.840.1.113883.3.464.1004.1179
Nonacute Inpatient Stay	2.16.840.1.113883.3.464.1004.1398
Observation	2.16.840.1.113883.3.464.1004.1191
Outpatient POS	2.16.840.1.113883.3.464.1004.1443
Partial Hospitalization or Intensive Outpatient	2.16.840.1.113883.3.464.1004.1492
Partial Hospitalization POS	2.16.840.1.113883.3.464.1004.1491
Telehealth POS	2.16.840.1.113883.3.464.1004.1460
Telephone Visits	2.16.840.1.113883.3.464.1004.1246
Transitional Care Management Services	2.16.840.1.113883.3.464.1004.1462
Visit Setting Unspecified	2.16.840.1.113883.3.464.1004.1493

Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET)

Value Set Name	**Value Set OID**
Alcohol Abuse and Dependence	2.16.840.1.113883.3.464.1004.1424
AOD Abuse and Dependence	2.16.840.1.113883.3.464.1004.1013

AOD Medication Treatment	2.16.840.1.113883.3.464.1004.2017
Detoxification	2.16.840.1.113883.3.464.1004.1076
ED	2.16.840.1.113883.3.464.1004.1086
Hospice Encounter	2.16.840.1.113883.3.464.1004.1761
Hospice Intervention	2.16.840.1.113883.3.464.1004.1762
IET POS Group 1	2.16.840.1.113883.3.464.1004.1129
IET POS Group 2	2.16.840.1.113883.3.464.1004.1130
IET Stand Alone Visits	2.16.840.1.113883.3.464.1004.1131
IET Visits Group 1	2.16.840.1.113883.3.464.1004.1132
IET Visits Group 2	2.16.840.1.113883.3.464.1004.1133
Inpatient Stay	2.16.840.1.113883.3.464.1004.1395
Observation	2.16.840.1.113883.3.464.1004.1191
Online Assessments	2.16.840.1.113883.3.464.1004.1446
Opioid Abuse and Dependence	2.16.840.1.113883.3.464.1004.1425
Other Drug Abuse and Dependence	2.16.840.1.113883.3.464.1004.1426
OUD Monthly Office Based Treatment	2.16.840.1.113883.3.464.1004.2220
OUD Weekly Drug Treatment Service	2.16.840.1.113883.3.464.1004.2221
OUD Weekly Non-Drug Service	2.16.840.1.113883.3.464.1004.2222
Telephone Visits	2.16.840.1.113883.3.464.1004.1246

Inpatient Utilization—General Hospital/Acute Care (IPU)

Value Set Name	Value Set OID
Deliveries Infant Record	2.16.840.1.113883.3.464.1004.1073
Hospice Encounter	2.16.840.1.113883.3.464.1004.1761
Hospice Intervention	2.16.840.1.113883.3.464.1004.1762
Inpatient Stay	2.16.840.1.113883.3.464.1004.1395
Maternity	2.16.840.1.113883.3.464.1004.1169
Maternity Diagnosis	2.16.840.1.113883.3.464.1004.1170
Mental and Behavioral Disorders	2.16.840.1.113883.3.464.1004.1300
Nonacute Inpatient Stay	2.16.840.1.113883.3.464.1004.1398
Surgery	2.16.840.1.113883.3.464.1004.1241