

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

January 8, 2025

Judy Mohr Peterson, PhD
Med-QUEST Division Administrator
State of Hawai'i, Department of Human Services
601 Kanokila Blvd, Room 518
PO Box 700190
Kapolei, HI 96709-0190

Dear Director Mohr Peterson:

The Centers for Medicare & Medicaid Services (CMS) completed its review of Hawai'i's Final Report for the COVID-19 Public Health Emergency (PHE) demonstration entitled, "Hawai'i COVID-19 Section 1115 Demonstration Final Evaluation" (Project No: 11-W00351/9). This report covers the demonstration period from March, 2020 through July, 2023. CMS determined that the Final Report, submitted on May 10, 2024 is in alignment with the CMS-approved Evaluation Design, and therefore, approves the state's Final Report.

The approved Final Report may now be posted to the state's Medicaid website. CMS will also post the Final Report on Medicaid.gov.

We sincerely appreciate the state's commitment to evaluating the COVID-19 PHE demonstration under these extraordinary circumstances. We look forward to our continued partnership on Hawai'i's other section 1115 demonstration. If you have any questions, please contact your CMS demonstration team.

Sincerely,

Danielle
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Danielle Daly -S
Date: 2025.01.08
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Danielle Daly
Director
Division of Demonstration Monitoring and Evaluation

cc: Brian Zolynas, State Monitoring Lead, CMS Medicaid and CHIP Operations Group



UNIVERSITY
of HAWAII®
MĀNOA

HAWAII COVID-19 SECTION 1115 DEMONSTRATION FINAL EVALUATION

STATE OF HAWAII, DEPARTMENT OF
HUMAN SERVICES, MED-QUEST
DIVISION

APRIL 2024

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1. BACKGROUND INFORMATION ABOUT THE DEMONSTRATION

1.1 Demonstration Background

On April 8, 2020, the Hawai'i Department of Human Services, Med-QUEST Division ("MQD") obtained approval from the Centers for Medicare & Medicaid Services (CMS) to update the "Hawai'i QUEST Integration" 1115 Demonstration (Project No. 11-W-00001/9) by waiving certain requirements to the extent necessary to respond to the continued spread of COVID-19. These requested changes were incorporated into the demonstration's special terms and conditions as Appendix K. Subsequently, MQD applied for a COVID-19 Section 1115 Demonstration Waiver to seek expenditure authorities to support the Home and Community-Based Services (HCBS) flexibilities received under the Emergency Preparedness and Response Appendix K. Approval for the "Hawai'i Public Health Emergency" Demonstration (hereafter referred to as "PHE Demonstration") was obtained from CMS on June 25, 2020. The PHE Demonstration approval was retroactively applied from March 1, 2020 through a date that was sixty (60) days after the PHE ends.

The following expenditure authorities were granted as part of the PHE Demonstration, to provide additional Home and Community Based Services (HCBS) supports: retainer payments; HCBS visitor requirements; and 1915(i)-like initial Evaluations and assessments, and reevaluations and reassessments; and 1915(c) and 1915(c)-like HCBS waiver level of care determination and redetermination timeline. Please see Table 1 for more detailed descriptions of these authorities.

Table 1: PHE Demonstration Granted Expenditure Authorities

Authority	Description
Retainer Payments	Expenditures for the state to make retainer payments to providers of personal care services and habilitation that include personal care as a component as defined under section 1915(i) of the Act to maintain capacity during the emergency. The retainer payment time limit may not exceed 30 consecutive days. If the state currently has or submits and receives approval of an institutional facility bed hold SPA that is fewer than 30 days, then the state may only make retainer payment authorized under the 1115 authority that is less than or equal to the institutional nursing facility bed hold limit in the SPA. In addition, retainer payments may only be paid to providers with treatment relationships to beneficiaries that existed at the time the PHE was declared and who continue to bill for personal care services or habilitation services as though they were still providing these services to those beneficiaries in their absence. The retainer payments may not exceed the approved rate(s) or average expenditure amounts paid during the previous quarter for the service(s) that would have been provided.

Authority	Description
HCBS Visitor Requirements	Expenditures for the state to not comply with the HCBS settings requirement at 42 CFR 441.710(a)(1)(vi)(D) that individuals are able to have visitors of their choosing at any time for all HCBS in the state to minimize the spread of infection during the COVID-19 pandemic.
1915(i)-like Initial Evaluations and Assessments, and Revaluations and Reassessments	Expenditures to allow the state to modify the deadline for conducting initial evaluations of eligibility at 42 C.F.R. §441.715(d) and initial assessments of need to establish a care plan at 42 C.F.R. §441.720(a) for the 1915(i)-like home and community-based services (HCBS) waiver services in the Hawai'i QUEST Integration demonstration. This authority allows the state to delay the need for a functional assessment and LOC determination for one year. Expenditures to allow the state to modify the deadline for annual redetermination of eligibility required for the 1915(i)-like services, as described in 42 C.F.R. §441.715(e) and 1915(i)(1)(l) of the Act, and annual reassessment of need required for the 1915(i)-like services, as described in 42 C.F.R. §441.720(b). The annual eligibility determinations and reassessments of need that exceed the 12-month authorization period will remain in place and services authorized under a person-centered plan as described under 42 C.F.R. §441.725 will continue until the re-evaluation and reassessment can occur. These actions may be postponed for up to one year.

1.2 Demonstration Objectives

The PHE Demonstration flexibilities had the general goal to ensure that sufficient health care services were available to meet the needs of beneficiaries, and to ensure that health care providers who furnish such care and services, but were unable to comply with one or more requirements as a result of the COVID-19 pandemic, may be reimbursed for such items and services. Specifically, the key objective was to furnish medical assistance in a manner intended to protect, to the greatest extent possible, the health, safety, and welfare of individuals and providers who may be affected by COVID-19.

For Hawai'i's PHE Demonstration, the key objective was tailored and parsed into two objectives as follows:

1. Furnish medical assistance in a manner intended to protect, to the greatest extent possible, the health, safety, and welfare of beneficiaries receiving HCBS by mitigating the potential negative impacts of the COVID-19 PHE.
2. Ensure that HCBS providers who furnish medical assistance in good faith, who are unable to comply with one or more requirements as a result of the COVID-19 pandemic, are reimbursed for such items and services, exempted from sanctions for such noncompliance (absent any determination of fraud or abuse), and to the extent feasible, protected from the negative fiscal impact of the COVID-19 PHE.

1.3 Evaluation Questions

The evaluation of the PHE Demonstration tested whether and how the waiver and expenditure authorities affected the State’s response to the public health emergency, and how they affected utilization and costs of services. Also given CMS’s interests in learning from evaluation, we also explored the experiences of key implementing organizations.

Table 2 below summarizes the demonstration hypotheses to support each demonstration objective. Details for each hypothesis, including information on populations of interest, data sources and collection, and methodological framework are described in detail in Section 2.

Table 2: PHE Demonstration Objectives and Corresponding Demonstration Hypotheses

Evaluation Objectives	Evaluation Hypotheses
<p>1. Furnish medical assistance in a manner intended to protect, to the greatest extent possible, the health, safety, and welfare of beneficiaries receiving HCBS Services by mitigating the potential negative impacts of the COVID-19 PHE.</p>	<p>2.1. The allowance of a delay by up to one year in conducting initial evaluations of eligibility for HCBS Services enhanced timely access to HCBS Services for qualifying individuals.</p> <p>2.2. The allowance of a delay by up to one year in conducting eligibility redeterminations for HCBS Services enhanced timely access to HCBS Services for qualifying individuals.</p>
<p>2. Ensure that HCBS providers who furnish medical assistance in good faith, who are unable to comply with one or more requirements as a result of the COVID-19 pandemic, are reimbursed for such items and services, exempted from sanctions for such noncompliance (absent any determination of fraud or abuse), and to the extent feasible, protected from the negative fiscal impact of the COVID-19 PHE.</p>	<p>2.1 Retainer payments to HCBS providers who provide personal care services, and habilitation services that include personal care as a component, supported the maintenance of network capacity during the COVID-19 PHE.</p> <p>2.2 Allowances for the state to not comply with the HCBS settings requirement that individuals are able to have visitors of their choosing at any time minimized the spread of infection in residential HCBS settings during the COVID-19 pandemic.</p> <p>2.3 Allowances of delays in initial eligibility determinations and redeterminations for HCBS Services and provision of retainer payments together supported access to HCBS Services.</p>

Table 3 below describes the additional evaluation questions that we considered as part of this evaluation. These additional evaluation questions were explored primarily through qualitative interviews with MCOs and document review of the implemented expenditures.

Table 3 Additional Evaluation Questions

Additional Evaluation Questions	
1.	<p>What PHE Demonstration flexibilities were implemented by MQD?</p> <p>1.1. If any flexibilities were not implemented, why were they not implemented?</p> <p>1.2. For flexibilities that were implemented, how were they implemented?</p>
2.	<p>What were the principle challenges associated with implementation of PHE Demonstration Waiver authorities?</p> <p>2.1. What were the principle challenges associated with engaging beneficiaries in the implementation?</p> <p>2.2. What were the principle challenges associated with engaging providers in the implementation?</p>
3.	<p>What strategies were pursued to address the above-referenced challenges?</p> <p>3.1. What were the strategies pursued with beneficiaries?</p> <p>3.2. What were the strategies pursued with providers?</p>
4.	<p>What were the unresolved or ongoing challenges related to implementation of the PHE Demonstration flexibilities?</p> <p>4.1. What were the unresolved challenges with beneficiaries?</p> <p>4.2. What were the unresolved challenges with providers?</p>
5.	<p>What were some successes noted related to the implementation of the PHE Demonstration flexibilities?</p> <p>5.1. What were some successes noted for beneficiaries?</p> <p>5.2. What were some successes noted for providers?</p>
6.	<p>What are some recommendations for flexibilities that the state may seek to better serve the HCBS population and HCBS providers in future public health emergencies?</p> <p>6.1. What are some recommendations for HCBS beneficiaries?</p> <p>6.2. What are some recommendations for HCBS providers?</p>

2 EVALUATION QUESTIONS AND HYPOTHESES

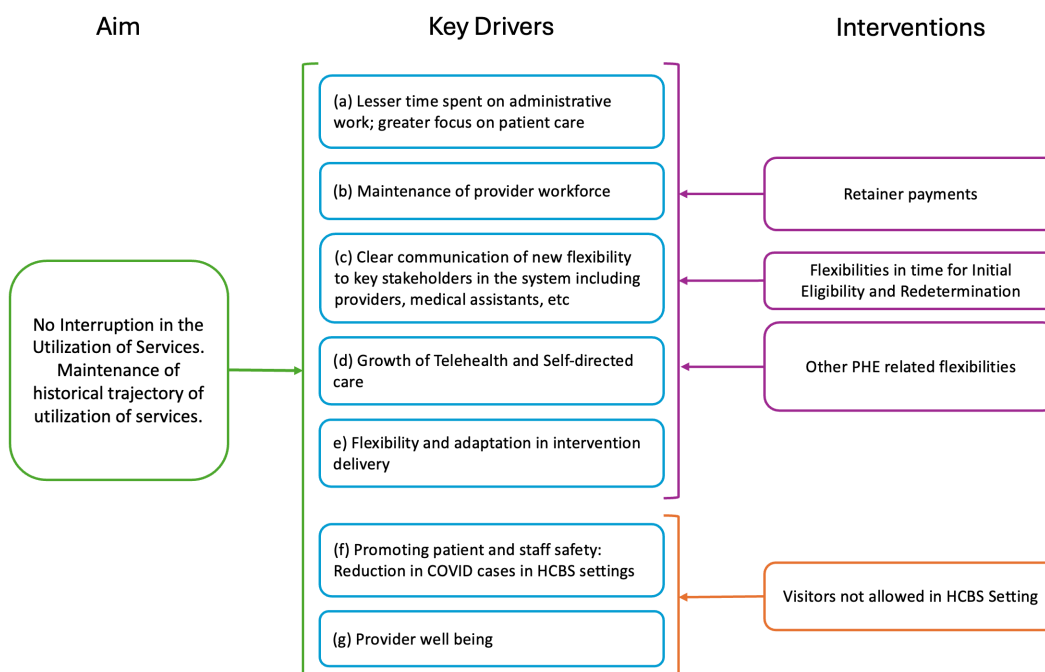
2.1 Evaluation Approach

This evaluation was guided from both an accountability and learning perspective. Through a summative and accountability lens, we explored if the interventions related to the PHE worked, principally by identifying any stabilizing patterns, particularly of utilization. We further evaluated if the trajectory of utilization (and costs) were maintained, despite the many “shocks” of the COVID-19 pandemic. From a learning perspective, we also explored the lessons to enhance future responses to emergencies. The key learning question we attempted to explore was: *“How could experiences in implementation of the PHE Demonstration flexibilities help the State to plan and respond to future emergencies (e.g., future pandemics, natural disasters)?”*

The driver diagram that informed the evaluation design is described in Figure 1. This driver diagram emphasized the key drivers in meeting the Demonstration Objectives. The key drivers that were explored in this evaluation include:

- a) Reduction of burden of administrative work; greater focus on patient care
- b) Maintenance of provider workforce
- c) Clear communication of new flexibilities to key stakeholders
- d) Growth of telehealth and self-directed care
- e) Flexibility and adaptation in intervention delivery
- f) Promoting patient and staff safety: Reduction in COVID cases in HCBS settings
- g) Provider well being

Figure 1: Driver Diagram



2.2 Evaluation Methodology

The PHE Demonstration offered an array of authorities to furnish medical assistance in a manner intended to protect, to the greatest extent possible, the health, safety, and welfare of individuals and providers who may be affected by COVID-19. Accordingly, this evaluation utilized a variety of methodological approaches to assess the impacts and outcomes of the demonstration authorities. This section outlines the evaluation design and describes the mixed methods approach used in the evaluation.

2.3 Evaluation Design

The evaluation used a mixed-methods approach, applying both quantitative and qualitative methods. The exploration of the hypotheses as well as learning about the demonstration implementation was done through four main methodological approaches:

1. Time Series Analysis of Utilization related to HCBS
2. Semi-Structured Interviews with Managed Care Organizations (MCOs)
3. Survey of Community Care Management Agencies (CCMAs)
4. Qualitative document review

The overall impacts of the package of interventions were explored by using interrupted time series methods. These methods provide an estimate of the potentially stabilizing influence of the PHE package. We explore the causal contribution of each of the flexibilities in our interview with MCOs and the survey of CCMAs. The details of each of these are described in the following sections below.

2.4 Populations of Interest

The evaluation focused on the Hawai'i Medicaid population that received HCBS services, and the providers that served those beneficiaries. Some comparisons are made between beneficiaries who received HCBS services under Medicaid's 1915(c) waiver for the I/DD population (Fee-for-Service [FFS]) and those who received services under the 1115 Demonstration (Managed Care). In Hawai'i, Medicaid services are offered both by MCOs and FFS providers. "Under MCO, the State pays a capitation fee to a MCO health plans for each beneficiary enrolls in the health plan. In turn, the health plan pays providers for all of the eligible Medicaid services a beneficiary may require that are included in the health plans' contract with the State. Under the FFS model, the State pays providers directly for each covered services received by a Medicaid beneficiary" (Med-QUEST, 2024). These two populations were explored separately due to the potential differences in impact due to the way they are administered.

2.5 Data Sources

There were four main data sources that were utilized for this evaluation. This included:

- Document review of provider memos and other related demonstration documentation. Appendix Table 4 includes a list of the documents reviewed.
- Med-QUEST enrollment, claims and encounters data
- Interviews with MCOs
- Surveys with CCMAs

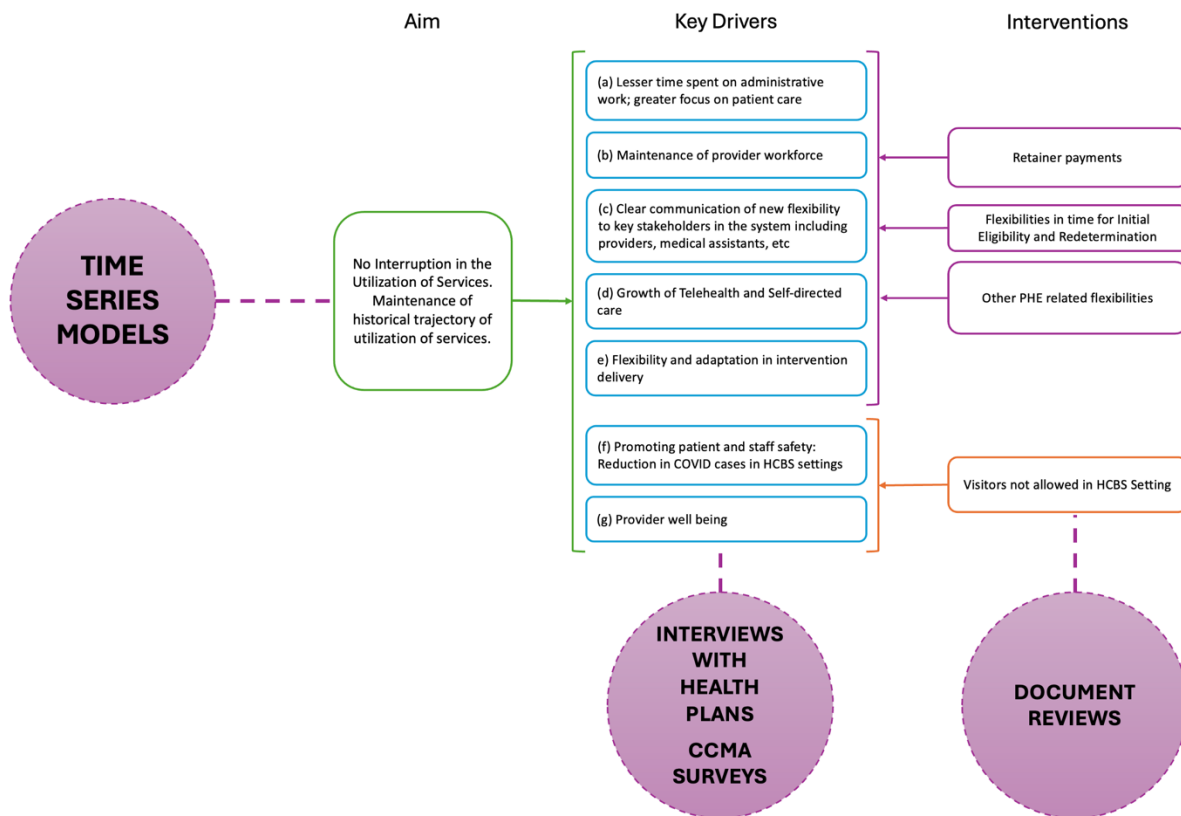
Table 4 below describes the relationship between the hypotheses, data sources, and analysis.

Table 4: Evaluation Hypotheses, Potential Data Sources and Potential Analyses Conducted

Evaluation Hypotheses	Data Sources	Analyses
1.1 The allowance of a delay by up to 1 year in conducting initial evaluations of eligibility for HCBS Services enhanced timely access to HCBS Services for qualifying individuals.	Claims and Encounter data submitted by MCOs and providers to MQD; document review; key informant interviews and surveys.	Evaluate implementation of flexibility; evaluate utilization of HCBS Services by beneficiaries during PHE compared to historic trends using interrupted time series analysis, thematic analysis of qualitative data from interviews and surveys
1.2 The allowance of a delay by up to 1 year in conducting eligibility redeterminations for HCBS Services enhanced timely access to HCBS Services for qualifying individuals.		Explore the details of intended flexibilities through document reviews
2.1 Retainer payments to HCBS providers who provide personal care services, and habilitation services that include personal care as a component, supported the maintenance of network capacity during the COVID-19 PHE.		The specific impacts of each of the flexibilities are also explored in the interviews and surveys.
2.2 Allowances for the state to not comply with the HCBS settings requirement that individuals are able to have visitors of their choosing at any time minimized the spread of infection in residential HCBS settings during the COVID-19 pandemic.		
2.3 Allowances of delays in initial eligibility determinations and redeterminations for HCBS Services and provision of retainer payments together supported access to HCBS Services		

Figure 2 below describes the key data sources mapped to the driver diagram.

Figure 2: Data Sources Mapped to the Driver Diagram



2.6 Interrupted Time Series Models

For the interrupted time series models, we chose to analyze claims and encounters separately. Due to the differences in payment structure between claims and encounters, we wanted to reduce the influence of this in the results, as groups served under one structure could be tangibly different from those served under the other. FFS claims for HCBS are largely submitted by the Hawai'i State Department of Health's Developmental Disabilities Division (DDD) to Med-QUEST Division for home- and community-based services provided to intellectually and developmentally disabled individuals. Encounters for HCBS are submitted by the contracted MCOs and generally detail services provided to adults and individuals with other types of chronic disabilities. Especially during the COVID-19 pandemic, the organizational structure of the delivering organization mattered. We explore the dynamics of utilization under the MCOs as well as FFS. It should also be noted that given the challenges of maintaining workforce during the COVID-19, we anticipate the dynamics of utilization might not be the same under MCOs and FFS.

Access to HCBS services was measured through the utilization of services over time. The PHE was a time of multiple shocks and focusing on the dynamics of utilization becomes important instead of a simple pre-post design. Our interest here is to estimate the impacts of the initial shocks of the pandemic before the introduction of the PHE Demonstration in March - April

2020. We explore the stabilizing influence of the PHE Demonstration by exploring if results revert to the original trajectories, prior to the PHE.

The outcomes explored in our report include:

- Count of HCBS services, grouped by year and month (based on service date)
 - a. Claims
 - b. Encounters
- Unique count of members receiving HCBS services, grouped by year and month (based on service date)
 - a. Claims
 - b. Encounters
- Unique count of HCBS providers, grouped by year and month (based on service date)
 - a. Claims
 - b. Encounters
- Costs associated with HCBS services including telehealth reported out separately: Sum total of paid amounts, grouped by year and month (based on service date)
 - a. Claims
 - b. Encounters

Quantitative data for the time series analyses were collected from existing administrative databases of Hawai'i Medicaid claims and encounters. We extracted all unique non-voided claims and encounters related to HCBS services (procedure and modifier code list can be found in Appendix Table 1) during the specified time period, along with the servicing provider IDs, member IDs, and paid amounts associated with them. We also subsetted services delivered via telehealth (procedure and modifier code list can be found in Appendix Table 2) in order to analyze related costs.

The data was pulled based on service date for the period of April 1, 2016 – November 30, 2023 and was retrieved on March 13, 2024.

2.7 Modeling

Given the importance of the dynamics of utilization during COVID-19, it was especially important to explore changes in utilization over time. The strengths of the interrupted time series model are explained by Schaffer et al: “Before and after study designs are often used to quantify the impact of population-level health interventions on processes of care and population-level health outcomes. They rely on the “natural experiment” resulting from implementing interventions, dividing time into “pre-intervention” and “post-intervention” periods. However, observational studies relying on a small number of measurements pre- and post-intervention are prone to bias as they do not account for pre-existing underlying short- and long-term trends. In contrast, interrupted time series (ITS) analysis (also called “intervention analysis”) is more robust as it does control for these issues by longitudinally

tracking the outcome before and after an intervention. ITS is considered one of the best designs for establishing causality when randomized controlled trials (RCTs) are neither feasible nor ethical. In fact, when combined with a control series, ITS designs often generate similar results to RCTs.”

Given the huge shocks experienced by all systems during COVID-19, our specific interest was in exploring if the flexibilities that allowed a delay by up to 1 year in conducting evaluations for initial eligibility and redetermination helped in stabilizing the numbers of HCBS claims and encounters, and also the number of unique members associated with HCBS. Similarly, the time series approaches were also implemented in exploring if the presence of multiple flexibilities helped support the maintenance of network capacity.

We posited that the allowance of a delay in conducting initial evaluations and redeterminations allowed qualifying individuals to maintain their eligibility and access HCBS services during the public health emergency. This is predicated on the assumption that the public health emergency would cause physical difficulties in conducting and recertifying needs evaluations due to limitations on movement needed to prevent the spread of COVID-19 infections.

Using a time series framework, the focus was on the ability of the PHE demonstration to help cushion and stabilize the impacts of COVID-19. This is explored by studying the time series both pre and during the pandemic – intuitively if the PHE demonstration was successful we would expect the historical patterns of the time series of key outcome being maintained both pre and during the pandemic.

A Box-Jenkins ARIMA (Bernal et al, 2017; Schaffer et al, 2021) modeling framework was used in developing the interrupted time series models. The models were developed using the *Gretl* econometric software (Balocchi and Distaso, 2003). The time series models include the trends and seasonality of the time series; a variable to measure the shock of COVID-19 and a variable that measures the stabilizing influence of the PHE package. Note that that the time series models were run separately for each outcome.

The performances of the models were studied by comparing the fitted with the actuals. Also, as recommended in time series modeling, we also ensured that there were no systematic patterns in the time series that required additional modeling. Autocorrelation and partial autocorrelation plots and residuals were also explored to ensure there were no systematic patterns remaining.

The results section presents the impacts of COVID-19 and the stabilizing influence of the PHE Demonstration.

2.8 Semi-Structured Interviews with Managed Care Organizations (MCOs)

In addition to the quantitative analyses, we also conducted semi-structured interviews with all five of the MCOs contracted by MQD. The MCOs interviewed include: AlohaCare, Hawai'i Medical Service Association (HMSA), Kaiser Permanente, 'Ohana Health Plan, and UnitedHealthcare Community Plan. The interviews explored their experiences with each of the

PHE demonstration flexibilities, impact of those flexibilities on services, flexibility and adaptability, patient care considerations, resource allocation, provider well-being, communication and collaboration, and overall alignment with policies in place.

Section 9.3 in the Appendix describes the questions posed to the MCOs.

2.9 Survey of Community Care Management Agencies (CCMAs)

We also explore implementation challenges and learning by surveying the CCMAs that serve many of Medicaid's HCBS members. CCMAs are front-line staff who are critical in the delivery of care. CCMAs provide services to persons living in Community Care Foster Family Homes (CCFFHs), Expanded Adult Residential Care Homes (E-ARCHs), Assisted Living Facilities (ALFs) and other community settings.

The survey was sent to 30 CCMAs. Of the 30 CCMAs, we received responses from 15 of them (50% response rate). Section 9.4 in the Appendix lists the survey questions sent to the CCMAs.

3 METHODOLOGICAL LIMITATIONS

3.1 Methodological Limitations

There were a number of threats to both internal validity (ability to make causal claims) and external validity (generalizability) of the PHE interventions.

Key threats to internal validity included:

- COVID-19 was a time of great complexity with rapid changes in both the contexts and the delivery of interventions. Being able to assess the contribution of *each* of the PHE flexibilities *separately* was difficult given this complexity.
- Changes in utilization could be driven by a number of other factors – such as perceived and real safety; other changes within Medicaid in response to the COVID-19 pandemic (e.g., encouragement/increased use of telehealth services, substantial increases in enrollment) may also impact care delivery in the HCBS setting, or influence the number of beneficiaries qualifying for HCBS services; these factors may, in turn, affect the ability to identify the causal effects of the PHE interventions.
- Despite substantial PHE Demonstration flexibilities, the COVID-19 pandemic had an unprecedented and unpredictable impact that superseded the mitigating flexibilities implemented by the demonstration. For example, a decrease in utilization due to a substantial number of deaths among beneficiaries receiving HCBS services may confound a positive impact of the flexibilities on utilization that may have otherwise resulted from delayed eligibility assessments/ reassessments.
- Despite the implementation of additional flexibilities, external factors (e.g., imposition of state lock downs, community-level fear, and decreased access to services, etc.) may also confound the outcomes of the evaluation.

We attempted to address the above threats to internal validity by exploring triangulation in patterns of results across the time series and the stakeholder interview/surveys. The time series analysis provides an estimate of the *overall* causal impacts of the package of PHE interventions. As discussed in the Appendix, we sought feedback on the effectiveness and utility of the specific flexibilities in the interviews/survey.

One threat to external validity (generalizability) was that some of the experiences in the workforce shortages were specific to Hawai'i because of some of the economic issues are driven by Hawai'i's reliance on tourism. A potential threat to external validity includes "Interactions of the causal relationship with setting...An effect found in one kind of setting may not hold if the study were conducted in another setting" (Matthay and Glymour, 2020). A key idea with threats to external validity is that 'context matters' in the generation of causal impacts of interventions. We sought to address this issue by exploring in the interviews and surveys the underlying mechanisms of change and exploring if such mechanisms could be generalized more broadly or whether these results were specific to the context of Hawai'i.

4 RESULTS

We first discuss the key results from the graphical and statistical analyses. Results of the document reviews and qualitative thematic analysis as it relates to the key hypotheses are then discussed.

4.1 Graphical Results

The time series for each of the outcomes are described below:

4.1.1 FFS

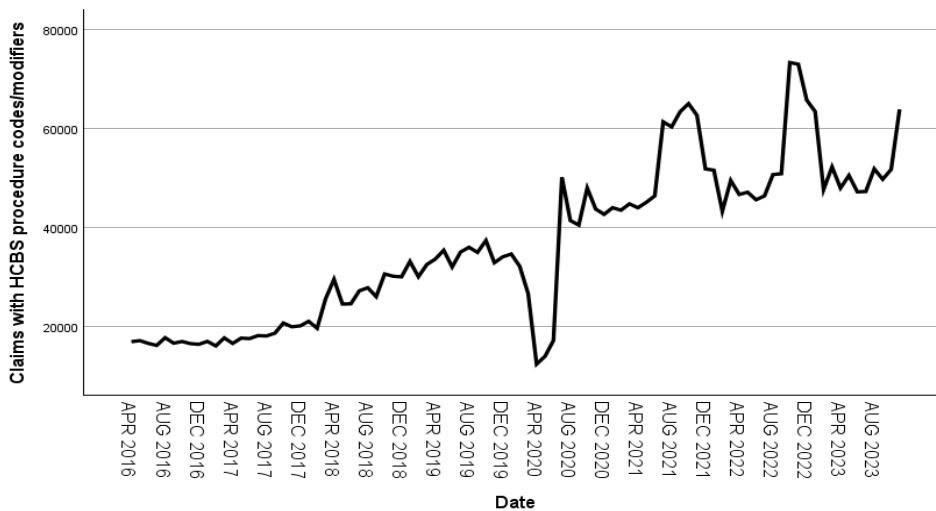


Figure 3: Monthly count of claim record containing any HCBS procedure/modifier code

Figure 3 describes the monthly count of claim record containing HCBS procedure/modifier code. There is a clear increasing trend over time. The patterns over time are also suggestive of seasonality. The monthly claims start at approximately 17,000 in April 2016 and reaches a peak of approximately 70,000 in November 2022. Corresponding to the onset of COVID-19, there is also a severe dip in monthly claims in April 2020. The patterns in Figure 3 suggest a stabilizing impact of the PHE Demonstration.

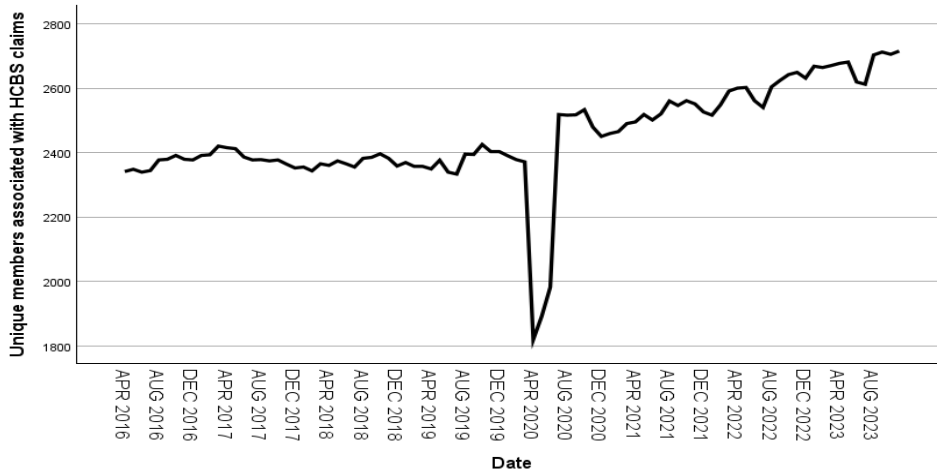


Figure 4: Monthly count of member ID associated with HCBS claims

Figure 4 describes the monthly count of member IDs associated with HCBS claims. There is a gradual trend that starts at around 2,300 monthly members in April 2016 and rises to 2,700 monthly members by November 2023. Both the negative shocks associated with COVID-19 and the stabilizing impacts of the PHE Demonstration are clearly discernible.

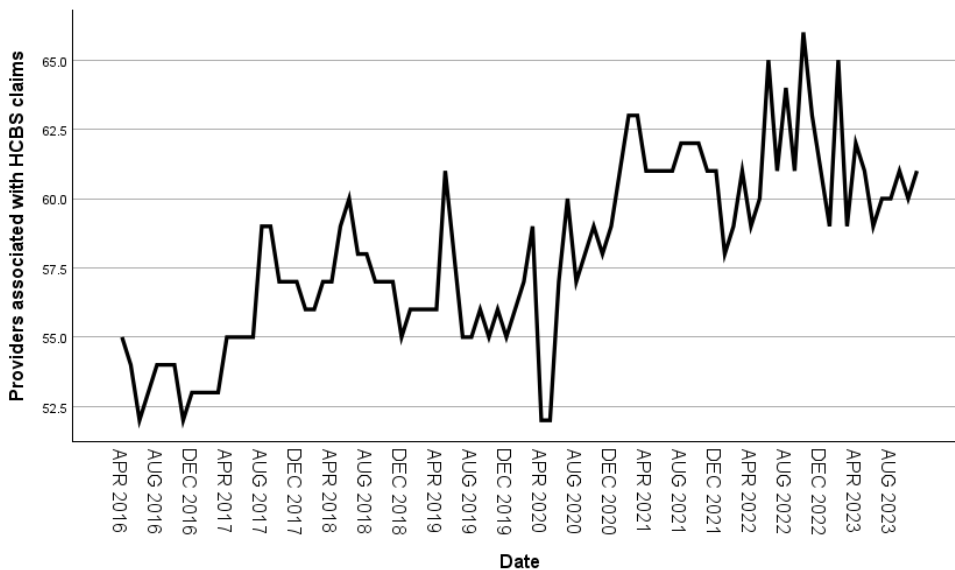


Figure 5: Monthly count of servicing provider IDs associated with HCBS claims

Figure 5 describes the monthly count of provider IDs associated with HCBS claims. A gradual trend is visible starting at 55 monthly providers in April 2016 and peaking close to 65 monthly providers for the period. The dip associated with COVID-19 is also visible. The patterns are also suggestive of potentially stabilizing influence of the PHE Demonstration.

4.1.2 Managed Care

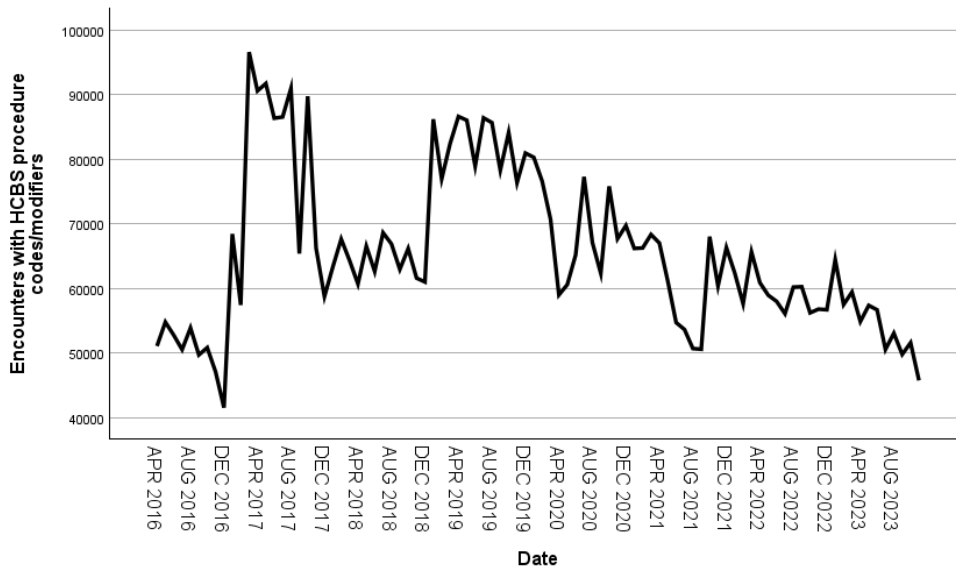


Figure 6: Monthly count of encounter record containing HCBS procedure/modifier code

Figure 6 describes the monthly count of encounter records containing HCBS procedures/modifier codes. The pattern of encounters is somewhat inconsistent in the pre-pandemic period. The numbers start at approximately 50,000 monthly encounters in April 2016 and also ends with a value around 50,000 monthly encounters in November 2023 (though there is variation within the period). There is a general observable pattern of a decreasing trend. There is also a decrease associated with the pandemic though this could also be a natural temporal variation of the time series. The stabilizing influence of the PHE Demonstration is not discernible.

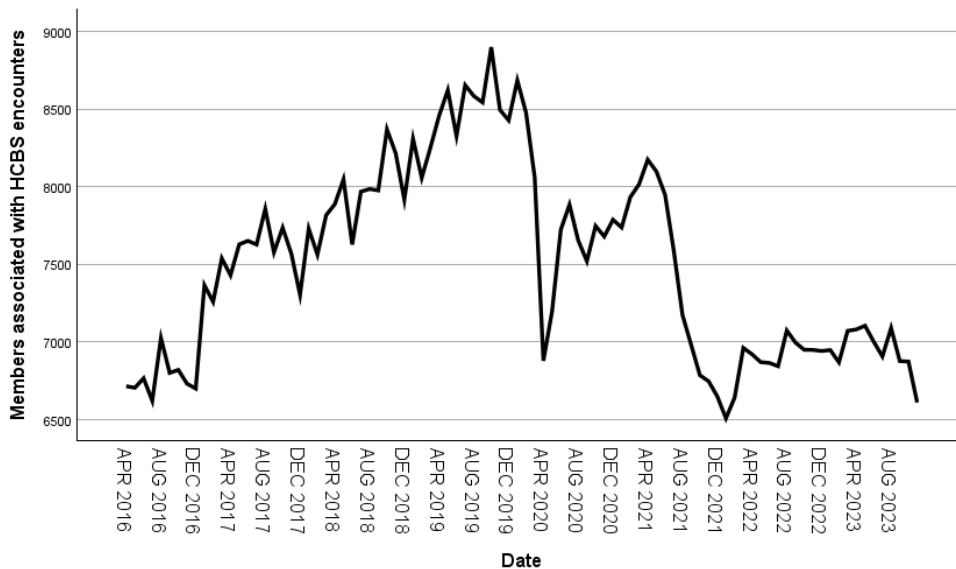


Figure 7: Monthly count of member IDs associated with HCBS encounters

Figure 7 describes the monthly count of member IDs associated with HCBS encounters. There is an increasing trend in the pre-pandemic period. There are significant drops associated with pandemic but also the time series is a little more complex in the PHE Demonstration period.

There is also a significant decrease in June 2021 and it remains at reduced level in the following months. This may be suggestive of fewer providers taking larger workloads and not being able to maintain services.

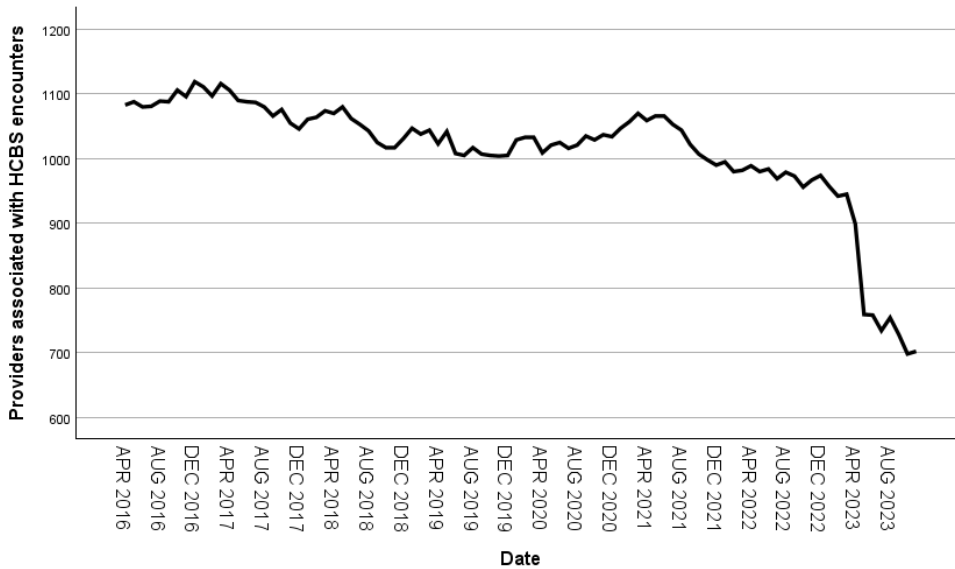


Figure 8: Monthly count of servicing provider IDs associated with HCBS encounters

Figure 8 describes the monthly count of provider IDs associated with HCBS encounters. There is a declining trend starting in August 2021 with a steep decline in May 2023. No clear additional drop during COVID-19 is visible and the stabilizing influence of the PHE Demonstration is not discernible.

4.1.3 Costs

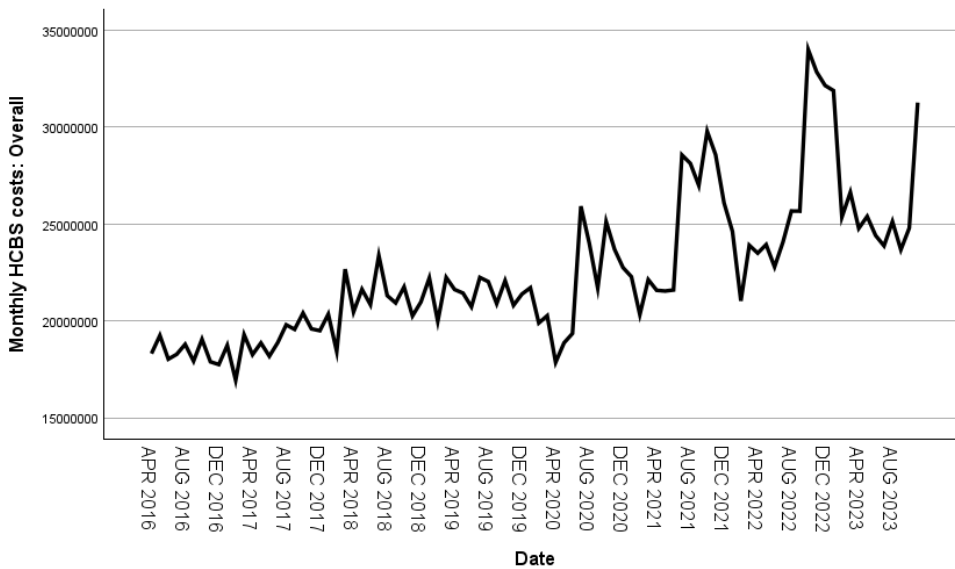


Figure 9: Monthly Overall HCBS Costs

Figure 9 describes the total monthly costs of HCBS Services. Figure 10 and Figure 11 break these costs down by monthly costs for claims and monthly costs for encounters respectively. Both the clear shocks associated with the pandemic and the stabilizing influence of the flexibilities associated with HCBS are discernible.

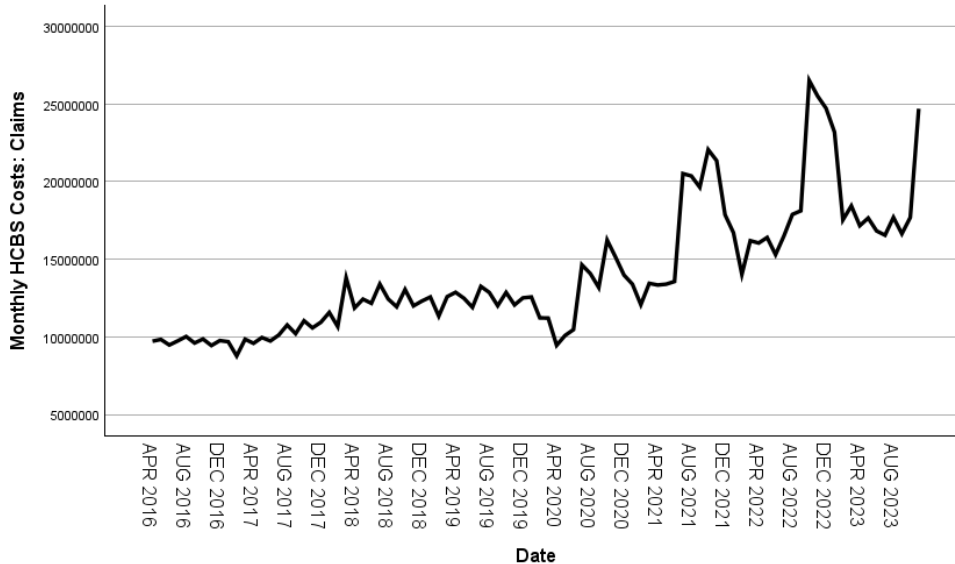


Figure 10: Monthly HCBS costs associated with claims

Figure 10 describes the overall monthly costs associated with claims. Figure 9 and Figure 10 provide further evidence of the pattern of increased trend observed in Figure 3 and Figure 4.

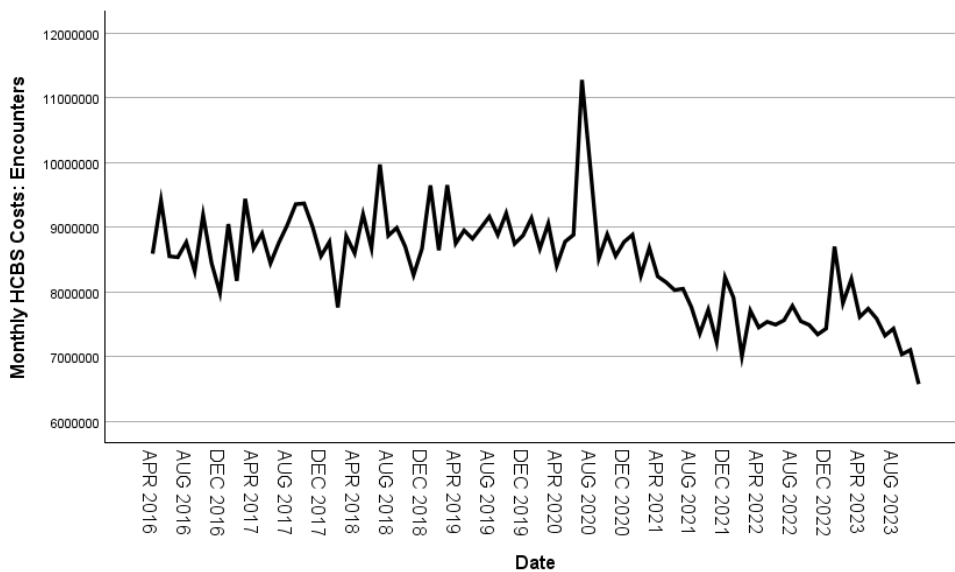


Figure 11: Monthly HCBS costs associated with encounters

Figure 11 describes the overall monthly costs associated with encounters. The downward trends associated with encounters in Figure 6 and Figure 7 are also discernible in Figure 11.

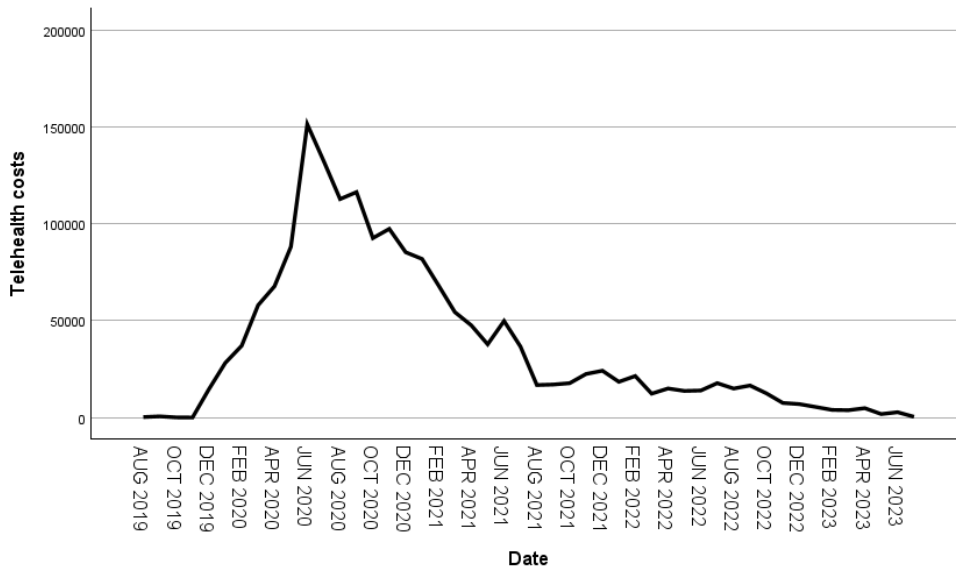


Figure 12: Monthly Telehealth costs

Figure 12 describes the costs associated with telehealth. The graph shows a marked increase in the months immediately following the COVID-19 PHE with a peak around August 2020. Following August 2020, costs decline, reaching levels near the costs in December 2019 by June 2023 suggesting that services transitioned back to in person.

4.2 Statistical Results

We provide the summary of the results in Table 5 with a focus on two key coefficients. Note that the time series models were run separately for each of the six outcomes.

The table presents the two important coefficients from each of the models:

- The impact of COVID-19 on utilization (note a statistically significant negative term for the impact of COVID-19 suggests the instantaneous impacts of COVID-19 significantly reduces utilization).
- The stabilizing influence of the PHE Demonstration (a statistically significant positive coefficient corresponding to this term suggests a stabilizing influence of the PHE Demonstration interventions).

The coefficient and the standard errors (in parenthesis) corresponding to the above coefficients are also shown in Table 5.

We ran multiple time series models to ensure best fit with the data.

Table 5: Results for the Impact of COVID and the Stabilizing Influence of PHE Waiver Authorities

	Impact of COVID-19 Pandemic	Stabilizing Influence of PHE Demonstration Authorities	Substantive Implications
Claims with HCBS procedure codes/modifiers	-8258.2** (3530.5)	12557.1*** (2891.70)	Negative impacts of COVID-19; Stabilizing influence of PHE Demonstration
Unique members associated with HCBS claims	-359.6*** (34.4)	202.2*** (43.7)	Negative impacts of COVID-19; Stabilizing influence of PHE Demonstration
Providers associated with HCBS claims	-4.2** (1.6)	2.3*** (0.7)	Negative impacts of COVID-19; Stabilizing influence of PHE Demonstration
Encounters with HCBS procedure codes/modifiers	-12461.8** (6350.5)	3666.9 (4789.8)	Negative impacts of COVID-19; No evidence of the stabilizing influence of PHE Demonstration
Members associated with HCBS encounters	-859.0*** (178.0)	171.5 (153.1)	Negative impacts of COVID-19; No evidence of the stabilizing influence of PHE Demonstration
Providers associated with HCBS encounters	-17.97 (13.8)	-2.25 (14.0)	No discernible impacts of COVID-19 and PHE Demonstration

* p < 0.05; ** p < 0.01; *** p < 0.001

An additional way the performance of the models is studied is by comparing the fitted model values with the actual values. All of the six models demonstrated that they were faithfully replicating the features of the time series. As an example, Figure 13 describes the fitted and actual values of the monthly claims with HCBS procedures.



Figure 13: Actual and Fitted Values of Monthly Claims with HCBS procedure codes/modifiers

As recommended in time series modeling, we also ensured that there were no systematic patterns in the residuals from the models that required additional modeling. The Appendix Figure 1 and Appendix Table 3 describes the diagnostics associated with the residuals. As can be seen, no systematic patterns remain to be modeled.

4.3 Examples of Flexibilities Implemented

Multiple flexibilities were implemented by the MCOs. A few key themes that emerged in the responses by Heath Plans in the interviews included:

- Not all of the flexibilities were utilized:
 - HCBS Waiver Level of Care Determination and Redetermination assurances were utilized
 - The visitor requirements were implemented by MCOs but many of the Adult Day Care and Adult Day Health facilities were closed due to the pandemic
 - Initial Evaluations and Assessments, and Revaluations and Reassessments assurances were utilized.
 - The allowable flexibility in shifting from in-person visits to virtual/telephonic visits were widely utilized

- Some of the MCOs did not choose to utilize retainer payments. With some Adult Day Care and Adult Day Health facilities being closed, such facilities would not have utilized retainer payments

Table 6 describes one typical response from a MCO from the semi-structured interviews.

Table 6: Example Flexibilities Implemented by a MCO

Topic/Authority	Example Response
General Comments	“_____ complied with all directives issued from MQD as part of their COVID-19 Pandemic Action Plan. These waivers were communicated from MQD to health plans via a series of memos issued throughout 2020 and 2021. Though all the flexibilities allowable by MQD were made available to our members and providers, not all were equally utilized.”
Retainer Payments	“Retainer payments were made available to providers in accordance with state memo QI-2037, however this flexibility was not utilized by (all of) our providers. Of note, Adult Day Care and Adult Day Health facilities opted for closure throughout the pandemic so would not have sought retainer payments.”
HCBS Visitor Requirements	“Outlined in MQD memos QI-2009 and QI-2015. This flexibility was widely utilized throughout HCBS care settings with the exception of Adult Day Care and Adult Day Health, settings which opted to close entirely throughout much of the pandemic.”
1915(i)-like Initial Evaluations and Assessments, and Revaluations and Reassessments	“MQD did not issue flexibilities regarding the timeliness of assessments/ reassessment completion, however they did offer flexibilities in the methodology for completing those assessments. The allowable flexibility was in shifting from in-person visits to virtual/telephonic visits. This flexibility was widely utilized by _____ throughout the pandemic.”
HCBS Waiver Level of Care Determination and Redetermination	“Outlined in MQD’s memo QI 2123, this flexibility was widely utilized for our LTSS members. These LOC extensions ensured continuity in the delivery of home and community based services during those times health coordination staff were unable to safely conduct in-person assessments.”

4.4 Document Reviews

The discussion below highlights some of the key mechanisms that the demonstration provided based on the Document Review. Appendix Table 5 describes these themes in greater detail.

We do not highlight all of the various mechanisms that the flexibilities provided but provide an indication of how the program was intended to work to stabilize the disruptions caused by COVID-19.

- Instruments provided by the flexibilities provided multiple mechanisms to navigate safety of health care beneficiaries and providers during the pandemic
- Another set of instruments were used to enhance access to healthcare during COVID. This included rules against disenrolling members and notifying members of their coverage.
- One key theme in multiple documents was the strong focus on the prioritization of telehealth as one means of managing safety. An additional theme was coverage for telehealth visits regardless of vaccination status.
- Another key theme was the conditions and processes in place for retainer payments.
- There also was a focus on setting up processes to ensure safety for transporting patients.
- Another theme was expanded coverage for different kinds of facilities.
- There was also a plan for transitioning away from the HCBS-related flexibilities and planning for the ending of the flexibilities

4.5 Learnings from Interviews and Surveys

Key themes that emerged from the interviews with the five MCOs and survey responses from the fifteen (15) CCMA respondents included:

- The utility of the HCBS flexibilities in responding to the negative impacts of the pandemic
- The need to be pro-active about strengthening the HCBS ecosystem
- The challenges of the depletion of the HCBS workforce
- Responding to the COVID-19 crisis adaptively through telehealth and self-directed programs
- The need for enhanced communication on the ending date of the flexibilities
- Other specific feedback from MCOs on improving the HCBS system

We discuss the first of the themes in this section as it relates directly to the hypotheses being explored. Other themes while also relevant to the hypotheses being explored are discussed in subsequent sections.

The package of HCBS flexibilities as a whole helped with navigating the uncertainties and negative impacts of COVID.

- MCO respondents had a hard time articulating about the merits and *specifics* of each of the expenditure authorities. Instead, their responses often focused on the *complete package* of PHE-related HCBS flexibilities. As noted in the methodological limitation's sections, given the wide varieties of COVID-19 related interventions that were happening during the pandemic, it was difficult to *attribute* changes in outcomes to any one specific intervention.
- Yet stakeholders felt that the package of the PHE Demonstration as a whole helped with navigating the uncertainties of COVID-19. There was a recognition that this was a very complex time and there were limits to what policy interventions could do. As representatives of one MCO mentioned, they were "unsure if the State could have done any better; there may be a larger underlying issues that preceded that...Can't think of anything more other than designated way-outside-of-the box options."
- Most MCOs and CCMAAs felt that the allowance of delay in the initial evaluation and redetermination helped. One CCMA respondent said: "With handling a lot of members in the program, a one-year backdate was very helpful, especially renewing the 1147s, especially due to the hardship of conducting an evaluation when most hospitals were closed for assessment and the hardship of visiting homes to re-evaluate clients."
- The retainer payments may have also helped but most respondents felt that the challenges of the depletion of the HCBS work force were greater than what the retainer payment could stabilize.
- Very few stakeholders could speak to the causal impact of not complying with the HCBS settings requirement that individuals are able to have visitors of their choosing at any time. However, representatives of one MCO remarked that this flexibility did help greatly in helping reduce spread of COVID-19. However, this recognition was also tempered by the reality that it continued to be a challenge to encourage and coach members to receive vaccinations. One CCMA respondent remarked: "A lot of homes were able to minimize infections due to this rule, and a lot of homes did follow this."
- Two of the MCOs also remarked that the demand for services were more limited given the realities of larger sections of the population were working from home. As mentioned by one of the MCOs: "During PHE many members were able to figure things out on their own - people were quieter and could do things on their own; post-PHE members requesting more than during pandemic."
- Two of the MCOs felt that while waivers were sufficient to prevent service gaps for non-complex members, more targeted planning for more complex individuals were needed: "Not all of the waivers helped with waitlisted members; there was a need

to work closely with Independent Provider facilities to free beds since they were overwhelmed with COVID. There was some relief when hotel rooms were opened; not a lot of options for members needing a lot of support given the realities of workforce gaps. Waivers were not enough since there were so many that fell in the 'difficult-to-place' category".

- The pandemic forced organizations to make flexible decisions, especially as the workforce did not grow with membership growth. The MCOs mentioned the vital importance of telehealth and self-directed programs in helping navigate the challenges of the pandemic. This is discussed in the next section.

The following sections further discuss some of the learnings associated with the above feedback gathered from the respondents and interviewees.

5 CONCLUSIONS

5.1 The Effectiveness of Interventions

COVID-19 was a time of unprecedented crisis and a time where systems needed to be flexible to prevent collapse. To simply measure the effectiveness of the package of flexibilities in the PHE Demonstration we evaluated whether the interventions served to “stabilize” the overall system from the initial shocks of the COVID-19 pandemic. The interrupted time series analysis demonstrated that the package was effective in stabilizing utilization for the FFS model. However, the same patterns of stabilization were not as discernible for the time series associated with encounters from the MCOs. One potential explanation was that the organization structure for FFS implementation was nimbler than the implementation of flexibilities for the MCOs. This finding also highlights the importance of considering contexts in assessing the effectiveness of interventions.

While most of the individual flexibilities had evidence in its support, the evidence was more limited of the effectiveness of each individual flexibility, given the methodological challenges noted previously. As noted earlier, a methodological challenge was that the stakeholders viewed the package in its totality and had a challenge disentangling the individual contributions of each of the flexibilities.

Two key areas for learning included:

- (a) The importance of *proactively* improving systems and working to build the HCBS workforce both in the short and long terms.
- (b) The depletion of HCBS workforce over time. Multiple MCOs mentioned that the network capacity of providers was depleted as a result of COVID-19. Some of the challenges in the retention of the workforce had preceded the onset of the pandemic, and have persisted since.

Both of these points are further expanded in the sections that follow.

5.2 Opportunities for Learning and Improvement

The need to proactively strengthen HCBS systems to enhance readiness for future emergencies

A central message from all MCOs was that while the waivers helped to stabilize, there was a need for the system to be more ready for emergencies. Many MCOs felt a need to think proactively about strengthening the HCBS systems, and to apply the lessons learned during the COVID-19 pandemic in making changes. Multiple ideas proposed included: enhancing long-term workforce development within Hawai'i through training schools for Certified Nursing Assistants (CNAs); increased pay for CNAs; pre-identifying at-risk members; creating a proactive emergency plan for at risk members

Multiple MCOs argued for taking a systems approach based on collaboration across organizations to develop such plans. MCOs noted (and were highly appreciative of) the high levels of collaboration between MCOs, MQD, and hospitals during the COVID-19 pandemic. Representatives from a MCO based in Maui remarked that their experience working collaboratively during the pandemic had better prepared them to respond to the emergencies of the Maui fires in August 2023. The same representatives also noted the need to continue to think about readiness of the HCBS system proactively and enhance the system to respond to coming crisis like future pandemics and other natural disasters.

This suggestion on enhancing the HCBS ecosystem as a way to respond to future emergencies is consistent with a National Council on Disability report (2022) that argues: “the HCBS ecosystem must be working at full capacity to ensure that appropriate community living options and supports remain available to people with disabilities. Going forward, there might be a need to think more explicitly about the “building blocks” (WHO, 2010) by which the HCBS system can be strengthened.”

The challenges of the shrinking HCBS workforce

Perhaps the central theme echoed in the interviews were the severe workforce shortages in the HCBS sector that had started before the pandemic. Many MCOs remarked that many caregivers working within agencies left and looked for different employment; one MCO mentioned that this was first time there was an agency gap since starting HCBS.

In the context of Hawai‘i, given its reliance on tourism, the reduction in the workforce needed to be understood dynamically over time. The pandemic served to further amplify shortages in the workforce. Agency workers had fewer options, as the tourism industry was shut down during pandemic, and there were fewer available jobs. After the pandemic ended, many care workers returned or moved to tourism-related hospitality work. Given Hawai‘i’s strong reliance on tourism, this dynamic has had implications for its workforce to support HCBS services. Two of the MCOs referred to the *present* time (post-pandemic) crisis as the ‘perfect storm’ in terms of challenges in delivering care given the growing shortages in work force (see time series in Figure 8).

The workforce also did not grow alongside membership growth in HCBS. Even though MCOs adapted to the shortages by shifting and actively promoting telehealth and self-directed programs, one of the MCOs mentioned that they could not keep up, even with telehealth visits or responding to clients with increased acuity and complexity.

Even though the workforce challenges were particularly acute in Hawai‘i, especially with its reliance on tourism, this challenge can also be seen within a National context, in which workforce challenges in HCBS are acute in most States (Watts et al, 2022).

Adaptation and innovation: telehealth and self-directed programs

All of the MCOs spoke about the importance of telehealth in responding to the challenges of the pandemic, especially given the workforce shortages. MCOs noted that telehealth helped provide quality care more efficiently. It enhanced access and reach and opened up more

services to rural members. It also provided the ability to see patients who did not want to risk coming into the office. Telehealth-related flexibilities was a big step and opened up new avenues for members who may have been reluctant with the health system prior to the pandemic.

One CCMA respondent remarked: "...the use of telehealth, it made it possible for our clinical staff to continue to assess our clients in the home and helped the clients, caregivers and clinicians feel safe."

Friedman (2022) has noted the growing use of telehealth for people with intellectual and developmentally disabled (I/DD) population: "Although telehealth technologies are not new, they had not widely been used with people with intellectual and developmental disabilities (IDD) prior to the pandemic, especially because people with IDD are less likely to have access to technology. Friedman (2022) also notes: "While telehealth may be one of the advances of the pandemic, currently almost all IDD HCBS telehealth delivery services are designed to revert to requiring in-person service delivery after the PHE ends unless states make permanent changes to their HCBS waiver programs."

All of the MCOs saw telehealth as a critical means of continuing and responding to the workforce challenges and using in person resources for complex individuals—in terms of continuing PHE innovations, continuing telehealth was the recommendation of all of the MCOs. One MCO spoke of telehealth as creating a new norm. While telehealth has obvious advantages, Friedman (2022) also notes one of the challenges of telehealth: "While telehealth has the potential to reduce health care disparities, barriers to access and utilization, such as a lack of accessibility or requirements of independence, could serve to further increase disparities (Centers for Disease Control and Prevention, 2020). As such, when developing and implementing telehealth, including in HCBS, it is important to consider the needs of people with IDD."

Two of the MCOs identified self-directed programs as another important innovation that grew during COVID-19. The advantages of the self-directed program included members being more comfortable with friends and family, given the dangers of the spread of infection during COVID-19. These programs provided family caregiving opportunities for HCBS beneficiaries. Caldwell et al (2022) notes some of the strengths of self-directed programs: "The use of family members seemed to be particularly prevalent among individuals from racial and ethnic minority backgrounds in our sample. Previous research has suggested greater interest in self-direction among some racial and ethnic minority groups; there may be opportunities for self-direction to support health equity through the provision of culturally competent supports. Control over hiring and managing workers also allowed individuals to adopt person-centered strategies to manage safety for themselves and workers and individualized decisions to limit potential exposure to COVID-19."

5.3 Feedback from MCOs on Improving the HCBS System

In addition to the above learning themes, Table 7 lists some specific suggestions that respondents provided given the learning goals of this evaluation. We believe that some of these suggestions can help support improvement of the HCBS systems in the future:

Table 7: Feedback on Improving HCBS

<i>Feedback</i>	<i>Description</i>
<i>Need for increase in Increase CNA pay</i>	Offer differential pay for areas that have a higher need or more difficult to staff.
<i>Training schools for CNAs - grants from the state to build the workforce</i>	Need to think of the longer-term capacities of the HCBS workforce; Allow contracts with training schools to feed into agencies, like a guaranteed job placement once training is completed.
<i>Good partnership but needs greater nimbleness in decision-making for future emergencies</i>	Many of the MCOs noted the good partnership between MCOs, MQD, and hospitals during COVID and mentioned the excellent communication and collaboration. Two of the MCOs also mentioned the need for the State to make quick decisions in future emergencies. One MCO mentioned the need to have some decision makers in place to help with nimble decision making
<i>Need for Synergies in renewals</i>	One MCO noted the importance of staggering renewal dates. While the MCO was grateful that the State renewed the 1147s twice during PHE. However, one ramification of this was that all 1147s were renewed at the same time leading to heavy influx of renewals on the same time schedule.
<i>Ability to terminate members</i>	One MCO mentioned the challenges of being unable to locate members despite a lot of effort but were not allowed to terminate services even if member could not be located despite best efforts and research. The MCO suggested MCO to update members' contact information directly or to give MCOs more flexibility to terminate members/services with standard, appropriate criteria.
<i>Need for more discharge options</i>	One MCO noted that despite flexibilities and waivers, the state lacked appropriate discharge options particularly for members with special needs such as substance use disorder issues.
<i>Role of unlicensed staff: lessons from pilot projects</i>	One MCO noted the results of a pilot project allowing clinically unlicensed staff to do some assessments and

	<p>reassessments for SHCN. This plan recommended MQD formalize the pilot by providing flexibility on who does assessments. For example, allow community health workers (CHW) to conduct follow-up reassessments. Licensed staff should handle the initial assessment and any abnormal reports from unlicensed staff, ensuring that there is a clear care plan in place for the unlicensed staff to follow as a guideline.</p>
<p><i>State lacks placement options for Behavioral Health issues.</i></p>	<p>Some facilities have open beds, but these are private and not Medicaid-certified; there are additional administrative barriers to accessing these placement options, even during an emergency.</p>

6 INTERPRETATIONS, POLICY IMPLICATIONS, AND INTERACTIONS WITH OTHER STATE INITIATIVES

6.1 Implications of Findings both at the State and National levels

While this report provides evidence for the effectiveness of the package of interventions, it also highlights the importance of strengthening the HCBS system and also improving its resiliency. Through this evaluation, we found that the package of HCBS-related flexibilities worked -- the broader package of PHE was critical in helping creating stability of the system. However, this success should be seen as a part of a larger complex system of PHE interventions. While there is support for the effectiveness of some of the specific flexibilities, we stress that the results highlight the importance of the government's (Federal and State) role in stabilizing systems. Recent literature has highlighted the importance of resilience as an organizing principle for health systems (Smaggus et al, 2022): "Resilience, a system's ability to maintain a desired level of performance when circumstances disturb its functioning, is an increasingly important concept in healthcare. ... Embracing resilience as an organizing principle could help governments coordinate their preparation and responses to disruptive events. A focus on learning relevant to the nature of complex systems represents an opportunity to enhance resilience throughout healthcare." Given the multiple emergencies that Hawai'i has faced in recent years, including flooding and wildfires, it becomes of utmost importance to focus on the resilience of the HCBS system.

Organizing questions for such a focus on resilience can include: *What actions can lead to more resilient home and community based care systems? How can the learnings during COVID-19 lead to systems that can more nimbly respond to emergencies such as future pandemics or natural disasters?*

Recent developments within CMS already point to a recognition of the need to strengthen systems by building workforce. "The Centers for Medicare and Medicaid Services (CMS) is releasing new guidance outlining how states can use worker registries for Medicaid-funded Home and Community Based Services to ensure beneficiaries have awareness of and access to qualified workers to deliver these critical services. Worker registries are an important tool – helping families that need care match with care professionals as well as helping workers find clients and build sustainable work schedules" (Whitehouse, 2023).

Another important learning was the critical role of improving coordination within government to help respond to such crisis. For example, a recent OECD report argues for the government to promote learning: "As governments face unprecedented governance challenges, the pandemic has uncovered gaps in both government co-ordination and the use of evidence for policy making, which directly affect the nature and quality of the measures adopted to tackle the crisis and its aftermath. These challenges have led to a number of quick fixes and agile responses, which will need to be assessed when the worst of the crisis is over."

Additionally, through the pandemic, many of the emergency response needs have been identified. There should be a renewed and ongoing discussion about proactively identifying these needs, and pre-approving them for emergency use as appropriate. Moving forward,

finding ways to proactively set up our systems to implement these authorities more rapidly and with more flexibility should be prioritized.

6.2 Interpretation of Data using Evaluative Reasoning

The key learning from an evaluative reasoning perspective was to not only focus on the “effectiveness” of interventions but also explore how such interventions contribute to the resilience and capacities of systems. This has implications for the types of *evaluation criteria* that matter for evaluating interventions focussed on *strengthening systems*.

The role of evaluation in helping the systems learn and strengthen systems over time becomes increasingly important. Evaluations themselves need to be seen as interventions. Evaluations of HCBS interventions need to pay attention to the complexity of systems. Some of the questions that can help inform learning are:

- How to measure impacts of interventions that are in settings which are highly complex and dynamic?
- How best to operationalize concepts of leverage of interventions when faced with extreme crisis?
- How best can learning systems be developed to learn from crises like the pandemic?
- How can evaluation promote nimble learning in multilevel systems containing the Federal and State governments, Medicaid, and HCBS?

7 LESSONS LEARNED AND RECOMMENDATIONS

7.1 Waivers as a Policy Instrument

As a policy instrument, there is empirical support for the effectiveness of the flexibilities of instruments used. But the effectiveness might depend on the contexts and organizational supports for the intervention. For example, the stabilizing influence of PHE was discernible for FFS but not for the MCOs. Understanding the contexts under which these instruments work might be an important research agenda for the future.

Another important research area is whether (and which) demonstration authorities should be continued or implemented permanently. An important question that needs to be addressed is: Can State-specific flexibilities be determined now to help support nimbleness and speed when addressing emergencies in real time? It behooves us to be more proactive in identifying the needs and authorities needed to respond to emergencies in advance, implement processes to approve these authorities, and efficiently and quickly implement them as emergencies arise.

7.2 Interventions and Systems Strengthening

A number of MCOs argued for the importance of paying attention to issues of stability of the long- and short-term capacities of the HCBS systems. There is a rich literature on what it takes to strengthen health systems across contexts. We think there is value in developing similar learnings across States to strengthen the HCBS system.

Such a focus needs to be centered on the strengthening of systems to make them more ready and nimble to respond to emergencies such as the pandemic. We think there is value in promoting dialogue on how the resilience of systems and how resilience can itself be an organizing principle for designing and building HCBS systems.

8 REFERENCES

- Baiocchi, G., & Distaso, W. (2003). GRET: Econometric software for the GNU generation. JSTOR.
- Bernal, J. L., Cummins, S., & Gasparrini, A. (2017). Interrupted time series regression for the evaluation of public health interventions : a tutorial. June 2016, 348–355. <https://doi.org/10.1093/ije/dyw098>
- Caldwell J, Heyman M, Atkins M, & Ho S (2022). Experiences of individuals self-directing Medicaid Home and Community-Based Services during COVID-19. *Disability and Health Journal*, 15(3), 101313. [10.1016/j.dhjo.2022.101313](https://doi.org/10.1016/j.dhjo.2022.101313) -
- Centers for Disease Control and Prevention. (2020). Using telehealth to expand access to essential health services during the COVID-19 pandemic. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/telehealth.html#print>
Centers
- Friedman, C. (2022). Telehealth Service Delivery in Medicaid Home-and Community-Based Services for People With Intellectual and Developmental Disabilities. *International Journal of Telerehabilitation*, 14(1), 1–9. <https://doi.org/10.5195/ijt.2022.6478>
- Matthay, E. C., & Glymour, M. M. (2020). A Graphical Catalog of Threats to Validity: Linking Social Science with Epidemiology. *Epidemiology*, 31(3), 376–384. <https://doi.org/10.1097/EDE.0000000000001161>
- National Council on Disability: Strengthening the HCBS Ecosystem – Responding to Dangers of Congregate Settings during COVID-19. (2022.). Retrieved from <https://www.ncd.gov/report/strengthening-the-hcbs-ecosystem-responding-to-dangers-of-congregate-settings-during-covid-19/>
- Schaffer, A. L., & Dobbins, T. A. (2021). Interrupted time series analysis using autoregressive integrated moving average (ARIMA) models : a guide for evaluating large-scale health interventions. 8, 1–12.
- Smaggus, A., Long, J. C., Ellis, L. A., Clay-Williams, R., & Braithwaite, J. (2022). Government Actions and Their Relation to Resilience in Healthcare During the COVID-19 Pandemic in New South Wales, Australia and Ontario, Canada. *International Journal of Health Policy and Management*, 11(9), 1682–1694. <https://doi.org/10.34172/IJHPM.2021.67>
- Watts, Molly O'Malley, Burns, Alice, and Ammula, Meghanna. 2022. “Ongoing Impacts of the Pandemic on Medicaid Home and Community-Based Services (HCBS) Programs: Findings from a 50-State Survey.” Kaiser Family Foundation, November 28. <https://www.kff.org/medicaid/issue-brief/ongoing-impacts-of-the-pandemic-on-medicaid-home-community-based-services-hcbs-programs-findings-from-a-50-state-survey/>.
- Whitehouse (2023.). Retrieved from <https://www.whitehouse.gov/wp-content/uploads/2024/04/Progress-Summary.pdf>
- WHO. (2010). *Monitoring the Building Blocks of Health Systems : a Handbook of Indicators and*. 110.

9 APPENDIX

9.1 HCBS Procedure Codes

Appendix Table 1: HCBS Procedure Codes

Service/Procedure Code	Modifier Code	Code Short Description
98960	95	COVID-19 Training and Consultation, Behavior Analyst, by telehealth
98960	96	Training and Consultation, Behavior Analysis Designee
98960	97	Training and Consultation, Behavior Analysis Designee, Inter-Island
98960	AE	Training and Consultation, Dietician
98960	AH	Training and Consultation, Psychologist
98960	G0	COVID-19 Training and Consultation, Psychologist, by telehealth
98960	GN	Training and Consultation, Speech
98960	GO	Training and Consultation, OT
98960	GP	Training and Consultation, PT
98960	GQ	COVID-19 Training and Consultation, All Other Professionals, by telehealth
98960	GT	COVID-19 Training and Consultation, Registered Nurse, by telehealth
98960	HI	Training and Consultation, Behavior
98960	HO	Training and Consultation, Licensed, Marriage Family Therapist, Clinical Social Worker, Mental Health Counselor
98960	TD	Training and Consultation, Registered Nurse
98960	U1	Training and Consultation, Specialized Medical Equipment and Supplies
98960	U2	Training and Consultation, Assistive Technology
98960	U4	Training and Consultation, Dietician, Inter-Island
98960	U5	Training and Consultation, Psychologist, Inter-Island
98960	U6	Training and Consultation, Behavior, Inter-Island
98960	U7	Training and Consultation, Speech, Inter-Island
98960	U8	Training and Consultation, OT, Inter-Island
98960	U9	Training and Consultation, PT, Inter-Island
98960	UA	Training and Consultation, Specialized Medical Equipment and Supplies, Inter-Island
98960	UB	Training and Consultation, Assistive Technology, Inter-Island
98960	UC	Training and Consultation, Licensed, Marriage Family Therapist, Clinical Social Worker, Mental Health Counselor, Inter-Island

Service/Procedure Code	Modifier Code	Code Short Description
98960	UD	Training and Consultation, Registered Nurse, Inter-Island
99509	51	BI Personal Assistance/Habilitation, Consumer-Directed, 1:2
99509	95	COVID-19 BI Personal Assistance/Habilitation, 1:2, by telehealth
99509	CR	BI Personal Assistance/Habilitation, 1:1, Retainer
99509	G0	COVID-19 BI Personal Assistance/Habilitation, 1:3, by telehealth
99509	GQ	COVID-19 BI Personal Assistance/Habilitation, RBT, 1:1, by telehealth
99509	GT	COVID-19 BI Personal Assistance/Habilitation, 1:1, by telehealth
99509	HM	BI Personal Assistance/ Habilitation, Registered Behavior Technician, 1:1
99509	SE	BI Personal Assistance/Habilitation, 2:1, Retainer
99509	U1	BI Personal Assistance/Habilitation, Consumer-Directed, 1:1
99509	U2	BI Personal Assistance/Habilitation, Consumer-Directed, 1:1
99509	U3	BI Personal Assistance/Habilitation, 3:1, Retainer
99509	U4	BI Personal Assistance/Habilitation, 3:1
99509	U5	BI Personal Assistance/ Habilitation, Registered Behavior Technician, 1:1, Retainer
99509	U6	BI Personal Assistance/Habilitation, 1:1
99509	U7	BI Personal Assistance/Habilitation, 2:1
99509	U8	BI Personal Assistance/ Habilitation, Registered Behavior Technician, 2:1, Retainer
99509	U9	BI Personal Assistance/ Habilitation, Registered Behavior Technician, 2:1
99509	UC	BI Personal Assistance/ Habilitation, Registered Behavior Technician, 3:1, Retainer
99509	UD	BI Personal Assistance/ Habilitation, Registered Behavior Technician, 3:1
99509	UN	BI Personal Assistance/Habilitation, 1:2
99509	UP	BI Personal Assistance/Habilitation, 1:3
99600	UN	COVID-19 BI Additional Residential Supports, 1:2
99600	UP	COVID-19 BI Additional Residential Supports, 1:3
99600	UQ	COVID-19 BI Additional Residential Supports, 1:4
99600	UR	COVID-19 BI Additional Residential Supports, 1:5
99600	US	COVID-19 BI Additional Residential Supports, 1:6
99600		BI Additional Residential Supports
H0044	U1	Residential Habilitation, Tier 1, 3-bed

Service/Procedure Code	Modifier Code	Code Short Description
H0044	U2	Residential Habilitation, Tier 1, 4-bed
H0044	U3	Residential Habilitation, Tier 1, 5-bed
H0044	U4	Residential Habilitation, Tier 2, 3-bed
H0044	U5	Residential Habilitation, Tier 2, 4-bed
H0044	U6	Residential Habilitation, Tier 2, 5-bed
H0044	U7	Residential Habilitation, Tier 3, 3-bed
H0044	U8	Residential Habilitation, Tier 3, 4-bed
H0044	U9	Residential Habilitation, Tier 3, 5-bed
H0044	UA	Residential Habilitation, Adult Therapeutic Living Program
H0045		Respite not-in-home per diem
H2016	CR	COVID-19 Retainer, CLS-G, per month
H2021	52	BI Community Learning Services, Group
H2021	59	Community Learning Service, 1:3
H2021	96	Community Learning Service, 1:2
H2021	U1	Community Learning Service, Group, Tier 1
H2021	U2	Community Learning Service, Group, Tier 2
H2021	U3	Community Learning Service, Group, Tier 3
H2021	U4	Community Learning Service, Individual
H2021	U5	Community Learning Service, Individual, Consumer-Directed
H2021	U6	Community Learning Service, Registered Behavior Technician, 1:1
H2021	U7	Community Learning Service, Registered Behavior Technician, 2:1
H2021	U8	Community Learning Service, Registered Behavior Technician, 3:1
H2021	UA	Community Learning Service
H2021	UN	Community Learning Service, 2:1
H2021	UP	Community Learning Service, 3:1
H2025	GT	COVID-19 Individual Employment Support, Job Coaching, by telehealth
H2025	U1	BI Individual Employment Support, Job Coaching
H2025	U2	Individual Employment Support, Job Coaching
H2025	U3	BI Individual Employment Support, Job Coaching, by telehealth
H2025	U4	Individual Employment Support, Job Coaching, by telehealth

Service/Procedure Code	Modifier Code	Code Short Description
H2032	95	COVID-19 Adult Day Health, RBT, 1:1, by telehealth
H2032	GQ	COVID-19 Adult Day Health, 1:1, by telehealth
H2032	GT	COVID-19 Adult Day Health, Group, by telehealth
H2032	U1	Adult Day Health, Tier 1
H2032	U2	Adult Day Health, Tier 2
H2032	U3	Adult Day Health, Tier 3
H2032	U4	Adult Day Health, 1:1
H2032	U5	Adult Day Health, Registered Behavior Technician, 1:1
S0209		Wheelchair Van
S0215	U1	BI Non-Medical Transportation
S0215	U2	Non-Medical Transportation
S0215	U3	BI Non-Medical Transportation
S0215	U4	Non-Medical Transportation
S0215		Non-Medical Transportation, mile
S5051	UA	Respite, Hourly, Consumer-Directed, 1:1
S5075	U9	Other
S5100	95	COVID-19 BI Adult Day Health, RBT, 1:1, by telehealth
S5100	GQ	COVID-19 BI Adult Day Health, 1:1, by telehealth
S5100	GT	COVID-19 BI Adult Day Health, Group, by telehealth
S5100	U1	BI Adult Day Health, Tier 1
S5100	U2	BI Adult Day Health, Tier 2
S5100	U3	BI Adult Day Health, Tier 3
S5100	U4	BI Adult Day Health, 1:1
S5100	U5	BI Adult Day Health, Registered Behavior Technician, 1:1
S5100	UA	BI Adult Day Health
S5101		Adult day care per half day
S5102	U1	Adult Day Health - Level 1
S5102	U2	Adult Day Health - Level 2
S5102	U3	Adult Day Health - Level 3
S5102		Adult Day Health
S5105		Center-based day care per diem

Service/Procedure Code	Modifier Code	Code Short Description
S5108		Home care training, per 15 minutes
S5109		Home care training per session
S5110		Family homecare training, per 15 minutes
S5111	95	COVID-19 BI Training and Consultation, Behavior Analyst, by telehealth
S5111	96	BI Training and Consultation, Behavior Analysis Designee
S5111	AE	BI Training and Consultation, Dietician
S5111	AH	BI Training and Consultation, Psychologist
S5111	GO	COVID-19 BI Training and Consultation, Psychologist, by telehealth
S5111	GN	BI Training and Consultation, Speech
S5111	GO	BI Training and Consultation, OT
S5111	GP	BI Training and Consultation, PT
S5111	GQ	COVID-19 BI Training and Consultation, All Other Professionals, by telehealth
S5111	GT	COVID-19 BI Training and Consultation, Registered Nurse, by telehealth
S5111	HI	BI Training and Consultation, Behavior
S5111	HO	BI Training and Consultation, Licensed, Marriage Family Therapist, Clinical Social Worker, Mental Health Counselor
S5111	TD	BI Training and Consultation, Registered Nurse
S5111	U1	BI Training and Consultation, Specialized Medical Equipment and Supplies
S5111	U2	BI Training and Consultation, Assistive Technology
S5112		Unknown
S5113		Unknown
S5114		Unknown
S5115		Non-family homecare training, per 15 minutes
S5116	AE	Training and Consultation for caregivers, Dietician
S5116	AF	Training and Consultation for caregivers, Psychiatrist
S5116	AH	Training and Consultation for caregivers, Psychologist
S5116	GN	Training and Consultation for caregivers, Speech
S5116	GO	Training and Consultation for caregivers, OT
S5116	GP	Training and Consultation for caregivers, PT
S5116	HI	Training and Consultation for caregivers, Behaviorist

Service/Procedure Code	Modifier Code	Code Short Description
S5116	TN	Training and Consultation for caregivers, Out of Service Area
S5116	U1	Training and Consultation for caregivers, Audiologist
S5116		Training and Consultation for caregivers
S5120	U1	BI Chore
S5120	U2	Chore
S5120	U3	BI Chore, Consumer-Directed
S5120	U4	Chore, Consumer-Directed
S5120	UB	Chore Services Agency/Consumer Directed
S5120		Chore Services Agency
S5121		Chore services, per diem
S5125	51	Personal Assistance/Habilitation, Consumer-Directed, 1:2
S5125	95	COVID-19 Personal Assistance/Habilitation, 1:2, by telehealth
S5125	CR	Personal Assistance/Habilitation, 1:1, Retainer
S5125	G0	COVID-19 Personal Assistance/Habilitation, 1:3, by telehealth
S5125	GQ	COVID-19 Personal Assistance/Habilitation, RBT, 1:1, by telehealth
S5125	GT	COVID-19 Personal Assistance/Habilitation, 1:1, by telehealth
S5125	HM	Personal Assistance/ Habilitation, Registered Behavior Technician, 1:1
S5125	SE	Personal Assistance/Habilitation, 2:1, Retainer
S5125	U1	Personal Assistance/Habilitation, Consumer-Directed, 1:1
S5125	U2	Personal Assistance/ Habilitation
S5125	U3	Personal Assistance/Habilitation, 3:1, Retainer
S5125	U4	Personal Assistance/Habilitation, 3:1
S5125	U5	Personal Assistance/ Habilitation, Registered Behavior Technician, 1:1, Retainer
S5125	U6	Personal Assistance/Habilitation, 1:1
S5125	U7	Personal Assistance/Habilitation, 2:1
S5125	U8	Personal Assistance/ Habilitation, Registered Behavior Technician, 2:1, Retainer
S5125	U9	Personal Assistance/ Habilitation, Registered Behavior Technician, 2:1
S5125	UA	Personal Assistance/Habilitation, Consumer-Directed
S5125	UC	Personal Assistance/ Habilitation, Registered Behavior Technician, 3:1, Retainer

Service/Procedure Code	Modifier Code	Code Short Description
S5125	UD	Personal Assistance/ Habilitation, Registered Behavior Technician, 3:1
S5125	UN	Personal Assistance/Habilitation, 1:2
S5125	UP	Personal Assistance/Habilitation, 1:3
S5125	UR	Personal Assistance/ Habilitation
S5126		Attendant care service per 15 minutes
S5127		Attendant care service per 15 minutes
S5130		Home-maker service NOS per 15 minutes
S5135		Adult companion care per 15 minutes
S5140	U1	BI Residential Habilitation, Adult Foster Homes, Tier 1 (no bed size requirement)
S5140	U2	BI Residential Habilitation, Adult Foster Homes, Tier 2 (no bed size requirement)
S5140	U3	BI Residential Habilitation, Adult Foster Homes, Tier 3 (no bed size requirement)
S5140	U4	Residential Habilitation, Adult Foster Homes, Tier 1 (no bed size requirement)
S5140	U5	Residential Habilitation, Adult Foster Homes, Tier 2 (no bed size requirement)
S5140	U6	Residential Habilitation, Adult Foster Homes, Tier 3 (no bed size requirement)
S5150	U1	Respite Hourly
S5150	U4	Respite Hourly
S5150	U5	Respite Hourly
S5150	UA	Respite, Hourly, Consumer-Directed, 1:1
S5150	UB	Respite, Hourly, Consumer-Directed, 1:2
S5150	UN	Respite Hourly, 1:2
S5150	UP	Respite Hourly, 1:3
S5150		Respite Hourly, 1:1
S5151		Unskilled respite care per diem
S5160		Personal Emergency Response System, Installation
S5161		Personal Emergency Response System, Service Fee, Per Month
S5162		Emergency response system purchase
S5165	U1	Environmental Accessibility Adaptations, Permits
S5165		Environmental Accessibility Adaptations, Construction

Service/Procedure Code	Modifier Code	Code Short Description
S5170		Home-delivered prepared meal
S5185		Medication reminder service, per month
S9122		Home health aide or certified nurse assistant
S9123		Nursing care in home (RN)
S9124		Nursing care, in the home; by LPN, per hour
S9125	U1	COVID-19 Medical Respite, by RN, with room & board, per day
S9125	U2	COVID-19 Medical Respite, by LPN, with room & board, per day
S9125	U3	COVID-19 Medical Respite, by CNA, with room & board, per day
S9125	U4	COVID-19 Medical Respite, by RN, without room & board, per day
S9125	U5	COVID-19 Medical Respite, by LPN, without room & board, per day
S9125	U6	COVID-19 Medical Respite, by CNA, without room & board, per day
S9129	U1	BI Training and Consultation, Environmental Accessibility Adaptations
S9129	U2	Training and Consultation, Environmental Accessibility Adaptations
S9129	U3	Training and Consultation, Environmental Accessibility Adaptations, Inter-Island
S9445	GT	COVID-19 Discovery and Career Planning, Benefits Counseling, by telehealth
S9445	U1	BI Discovery and Career Planning, Benefits Counseling
S9445	U2	Discovery and Career Planning, Benefits Counseling
S9452		Nutrition class
T1000	22	Skilled Nursing (RN), Couple
T1000	52	Skilled Nursing (LPN), Couple
T1000	TD	Skilled Nursing (RN)
T1000	U1	BI Private Duty Nursing, Registered Nurse, 1:1
T1000	U2	BI Private Duty Nursing, Registered Nurse, 1:2
T1000	U3	BI Private Duty Nursing, Licensed Practical Nurse, 1:1
T1000	U4	BI Private Duty Nursing, Licensed Practical Nurse, 1:2
T1000	U5	Private Duty Nursing, Registered Nurse, 1:1
T1000	U6	Private Duty Nursing, Registered Nurse, 1:2
T1000	U7	Private Duty Nursing, Licensed Practical Nurse, 1:1
T1000	U8	Private Duty Nursing, Licensed Practical Nurse, 1:2
T1000		Skilled Nursing (LPN)

Service/Procedure Code	Modifier Code	Code Short Description
T1002	22	Respite Daily, 1:1
T1002	TD	Skilled Nursing, Registered Nurse, 1:1
T1002	U1	BI Skilled Nursing, Registered Nurse, 1:2
T1002	U2	BI Respite Hourly, Registered Nurse, 1:1
T1002	U3	BI Respite Hourly, Registered Nurse, 1:2
T1002	U4	BI Respite Hourly, Registered Nurse, 1:3
T1002	U5	BI Respite Hourly, Licensed Practical Nurse, 1:1
T1002	U6	BI Respite Hourly, Licensed Practical Nurse, 1:2
T1002	U7	BI Respite Hourly, Licensed Practical Nurse, 1:3
T1002	U8	Respite Hourly, Registered Nurse, 1:1
T1002	U9	Respite Hourly, Registered Nurse, 1:2
T1002	UA	Respite Hourly, Registered Nurse, 1:3
T1002	UB	Respite Hourly, Licensed Practical Nurse, 1:1
T1002	UC	Respite Hourly, Licensed Practical Nurse, 1:2
T1002	UD	Respite Hourly, Licensed Practical Nurse, 1:3
T1002	UN	Skilled Nursing, Registered Nurse, 1:2
T1002		BI Skilled Nursing, Registered Nurse, 1:1
T1003	52	BI Skilled Nursing, Licensed Practical Nurse, 1:2
T1003	TE	Skilled Nursing, Licensed Practical Nurse, 1:1
T1003	UN	Skilled Nursing, Licensed Practical Nurse, 1:2
T1003		BI Skilled Nursing, Licensed Practical Nurse, 1:1
T1004	UN	COVID-19 Additional Residential Supports, 1:2
T1004	UP	COVID-19 Additional Residential Supports, 1:3
T1004	UQ	COVID-19 Additional Residential Supports, 1:4
T1004	UR	COVID-19 Additional Residential Supports, 1:5
T1004	US	COVID-19 Additional Residential Supports, 1:6
T1004		Additional Residential Supports
T1005	22	Respite Services - Agency/Consumer-Directed, Daily
T1005	U1	BI Respite Hourly, 1:1
T1005	U5	BI Respite Hourly
T1005	UA	BI Respite, Hourly, Consumer-Directed, 1:1

Service/Procedure Code	Modifier Code	Code Short Description
T1005	UB	BI Respite, Hourly, Consumer-Directed, 1:2
T1005	UN	BI Respite Hourly, 1:2
T1005	UP	BI Respite Hourly, 1:3
T1005		Respite Services - Agency, 15 Minute/Consumer-Directed
T1019	U1	Personal Assistance/Habilitation - (PAB) Level 1 (1:1), Consumer Directed
T1019	U2	Personal Assistance/Habilitation Level 3 (1:1)
T1019	U3	Personal Assistance/Habilitation Level 3 (2:1)
T1019	U4	Personal Assistance/Habilitation Level 3 (3:1)
T1019	U5	Personal Assistance/Habilitation Level 3 (4:1)
T1019	U6	Personal Assistance/Habilitation Level 1 (1:1)
T1019	U7	Personal Assistance/Habilitation Level 1 (2:1)
T1019	U8	Personal Assistance/Habilitation Level 1 (3:1)
T1019	U9	Personal Assistance/Habilitation Level 1 (4:1)
T1019	UA	Personal Assistance/Habilitation Level 2 (1:1)
T1019	UB	Personal Assistance/Habilitation Level 2 (2:1)
T1019	UC	Personal Assistance/Habilitation Level 2 (3:1)
T1019	UD	Personal Assistance/Habilitation Level 2 (4:1)
T1019		Respite Services - Agency
T1020	A1	Personal Assistance/ Habilitation
T1020	U5	Personal Assistance/ Habilitation
T1020		Personal Assistance/ Habilitation, Level 1, Daily
T2001		Non-emergency transportation; patient attendant/escort
T2003	U1	Non-Medical Transportation, Trip
T2004		Non-emergency transport; commercial carrier, multi-pass
T2005		Non-emergency transportation; stretcher van
T2015	GT	COVID-19 Discovery and Career Planning, by telehealth
T2015	U1	BI Discovery and Career Planning
T2015	U2	Discovery and Career Planning
T2015	UN	Pre-Vocational Services - 2 Participants
T2015	UP	Pre-Vocational Services - 3 Participants

Service/Procedure Code	Modifier Code	Code Short Description
T2015	UQ	Pre-Vocational Services - 4 Participants
T2015		Pre-Vocational Services
T2016	22	Residential Habilitation Level 2A
T2016	U1	Residential Habilitation, Tier 1, 3-bed
T2016	U2	Residential Habilitation, Tier 1, 4-bed
T2016	U3	Residential Habilitation, Tier 1, 5-bed
T2016	U4	Residential Habilitation, Tier 2, 3-bed
T2016	U5	Residential Habilitation, Tier 2, 4-bed
T2016	U6	Residential Habilitation, Tier 2, 5-bed
T2016	U7	Residential Habilitation, Tier 3, 3-bed
T2016	U8	Residential Habilitation, Tier 3, 4-bed
T2016	U9	Residential Habilitation, Tier 3, 5-bed
T2016	UA	Residential Habilitation, Adult Therapeutic Living Program
T2016	UB	Residential Habilitation, Licensed Homes, Tier 1 (no bed size requirement)
T2016	UC	Residential Habilitation, Licensed Homes, Tier 2 (no bed size requirement)
T2016	UD	Residential Habilitation, Licensed Homes, Tier 3 (no bed size requirement)
T2016		Residential Habilitation
T2018	CR	COVID-19 Retainer, IES-Job Coaching, per month
T2019	GT	COVID-19 Individual Employment Support, Job Development, by telehealth
T2019	U1	BI Individual Employment Support, Job Development
T2019	U2	Individual Employment Support, Job Development
T2019	U3	BI Individual Employment Support, Job Development, by telehealth
T2019	U4	Individual Employment Support, Job Development, by telehealth
T2019	UN	Group Employment Supports
T2019	UP	Group Employment Supports
T2019	UQ	Group Employment Supports
T2019		Individual Employment Supports
T2020	CR	COVID-19 Retainer, ADH, per month
T2021	52	Community Learning Service, Group

Service/Procedure Code	Modifier Code	Code Short Description
T2021	59	BI Community Learning Service, 1:3
T2021	96	BI Community Learning Service, 1:2
T2021	U1	BI Community Learning Service, Group, Tier 1
T2021	U2	BI Community Learning Service, Group, Tier 2
T2021	U3	BI Community Learning Service, Group, Tier 3
T2021	U4	BI Community Learning Service, Individual
T2021	U5	BI Community Learning Service, Individual, Consumer-Directed
T2021	U6	BI Community Learning Service, Registered Behavior Technician, 1:1
T2021	U7	BI Community Learning Service, Registered Behavior Technician, 2:1
T2021	U8	BI Community Learning Service, Registered Behavior Technician, 3:1
T2021	UA	Community Learning Service, unclassified
T2021	UN	BI Community Learning Service, 2:1
T2021	UP	BI Community Learning Service, 3:1
T2022		Case management, per month
T2025		Personal Emergency Response System
T2028		Specialized Medical Supplies
T2029	U1	Assistive Technology
T2029		Specialized Medical Equipment
T2031	U1	BI Waiver Emergency Services, Shelter
T2031	U2	Waiver Emergency Services, Shelter
T2033	U1	BI Residential Habilitation, Tier 1, 3-bed
T2033	U2	BI Residential Habilitation, Tier 1, 4-bed
T2033	U3	BI Residential Habilitation, Tier 1, 5-bed
T2033	U4	BI Residential Habilitation, Tier 2, 3-bed
T2033	U5	BI Residential Habilitation, Tier 2, 4-bed
T2033	U6	BI Residential Habilitation, Tier 2, 5-bed
T2033	U7	BI Residential Habilitation, Tier 3, 3-bed
T2033	U8	BI Residential Habilitation, Tier 3, 4-bed
T2033	U9	BI Residential Habilitation, Tier 3, 5-bed
T2033	UA	BI Residential Habilitation, Adult Therapeutic Living Program

Service/Procedure Code	Modifier Code	Code Short Description
T2033	UB	BI Residential Habilitation, Licensed Homes, Tier 1 (no bed size requirement)
T2033	UC	BI Residential Habilitation, Licensed Homes, Tier 2 (no bed size requirement)
T2033	UD	BI Residential Habilitation, Licensed Homes, Tier 3 (no bed size requirement)
T2034	22	Emergency Respite
T2034	52	Emergency Outreach
T2034	GT	COVID-19 Waiver Emergency Services, Outreach, by telehealth
T2034	U1	BI Waiver Emergency Services, Outreach
T2034	U2	Waiver Emergency Services, Outreach
T2034		Emergency Shelter
T2035		Utility services waiver
T2038		Comm transition waiver, per service
T2039	U1	Vehicular Modifications, Repair
T2039		Vehicular Modifications, Conversion

9.2 HCBS Telehealth Procedure Codes

Appendix Table 2: HCBS Telehealth Procedure Codes

Service/Procedure Code	Modifier Code	Code Short Description
98960	95	COVID-19 Training and Consultation, Behavior Analyst, by telehealth
98960	G0	COVID-19 Training and Consultation, Psychologist, by telehealth
98960	GQ	COVID-19 Training and Consultation, All Other Professionals, by telehealth
98960	GT	COVID-19 Training and Consultation, Registered Nurse, by telehealth
99509	95	COVID-19 BI Personal Assistance/Habilitation, 1:2, by telehealth
99509	G0	COVID-19 BI Personal Assistance/Habilitation, 1:3, by telehealth
99509	GQ	COVID-19 BI Personal Assistance/Habilitation, RBT, 1:1, by telehealth
99509	GT	COVID-19 BI Personal Assistance/Habilitation, 1:1, by telehealth
H2025	GT	COVID-19 Individual Employment Support, Job Coaching, by telehealth
H2025	U3	BI Individual Employment Support, Job Coaching, by telehealth
H2025	U4	Individual Employment Support, Job Coaching, by telehealth
H2032	95	COVID-19 Adult Day Health, RBT, 1:1, by telehealth
H2032	GQ	COVID-19 Adult Day Health, 1:1, by telehealth

Service/Procedure Code	Modifier Code	Code Short Description
H2032	GT	COVID-19 Adult Day Health, Group, by telehealth
S5100	95	COVID-19 BI Adult Day Health, RBT, 1:1, by telehealth
S5100	GQ	COVID-19 BI Adult Day Health, 1:1, by telehealth
S5100	GT	COVID-19 BI Adult Day Health, Group, by telehealth
S5111	95	COVID-19 BI Training and Consultation, Behavior Analyst, by telehealth
S5111	G0	COVID-19 BI Training and Consultation, Psychologist, by telehealth
S5111	GQ	COVID-19 BI Training and Consultation, All Other Professionals, by telehealth
S5111	GT	COVID-19 BI Training and Consultation, Registered Nurse, by telehealth
S5125	95	COVID-19 Personal Assistance/Habilitation, 1:2, by telehealth
S5125	G0	COVID-19 Personal Assistance/Habilitation, 1:3, by telehealth
S5125	GQ	COVID-19 Personal Assistance/Habilitation, RBT, 1:1, by telehealth
S5125	GT	COVID-19 Personal Assistance/Habilitation, 1:1, by telehealth
S9445	GT	COVID-19 Discovery and Career Planning, Benefits Counseling, by telehealth
T2015	GT	COVID-19 Discovery and Career Planning, by telehealth
T2019	GT	COVID-19 Individual Employment Support, Job Development, by telehealth
T2019	U3	BI Individual Employment Support, Job Development, by telehealth
T2019	U4	Individual Employment Support, Job Development, by telehealth
T2034	GT	COVID-19 Waiver Emergency Services, Outreach, by telehealth

9.3 Interview Protocol for MCOs

1) Could you describe your general experiences with the PHE Demonstration? How did the policy changes impact your organization, positively or negatively?

a) Probes

- i) Retainer Payments
- ii) HCBS Visitor Requirements
- iii) 1915(i)-like Initial Evaluations and Assessments, and Revaluations and Reassessment
- iv) 1915(c) and 1915(c)-like HCBS Waiver Level of Care Determination and Redetermination Timeline

2) Impact on Services:

a) How has the public health emergency (PHE) influenced the delivery of healthcare services in your practice?

- i) Positive, negative impact

- b) Have there been specific challenges or successes in maintaining service quality during the PHE?

3) Flexibility and Adaptability:

- a) In what ways have PHE policies provided flexibility for you to adapt to the evolving circumstances during the Covid?
- b) Are there aspects of the current policies that have been particularly helpful or hindering in responding to the emergency?

4) Patient Care Considerations:

- a) How have the policies related to the PHE impacted patient care and outcomes in your experience?
- b) Are there specific patient populations or conditions that have been particularly affected by these policies?

5) Resource Allocation:

- a) Have the PHE demonstration changes improved resource allocation (provider retainment)?
- b) Are there areas where additional resources or policy changes could enhance your ability to provide care? Is there a desire to continue certain PHE Demonstration policies?

6) Provider Well-being:

- a) How has the PHE demonstration impacted your providers?
 - i) Has this PHE policy improved the well-being of providers?
 - ii) Other positive or negative impacts?

7) Communication and Collaboration:

- a) Have communication channels been efficient enough to maintain effective coordination between providers, MCOs, and relevant authorities during the PHE? Between MQD and the MCOs?
- b) Was there any time when communication was poor?

(1) Describe the situation

- c) Have there been collaborative efforts that stood out in addressing challenges during the emergency?

8) Did this PHE policy support or align with policy already in place?

- a) Internal policies

9.4 CCMA Survey Questions

- 1) Please describe your overall experience in serving HCBS members during the COVID-19 pandemic. Please feel free to share any challenges or successes you experienced in a few sentences
- 2) This question is about the following PHE HCBS allowance: "Allowance of a delay up to one year in conducting initial and previously qualifying 1147 evaluations for eligibility for HCBS services."

Do you feel that this enhanced members ability to access timely care?

- Yes
- No
- Not Sure

If you would like to explain further, please use the text box below.

- 3) This question is about the following PHE HCBS allowance: "Suspension of the rule that individuals were able to have visitors of their choosing at any time."

Do you feel this helped minimize the spread of COVID-19 infection in residential HCBS settings?

Do you feel that this enhanced members ability to access timely care?

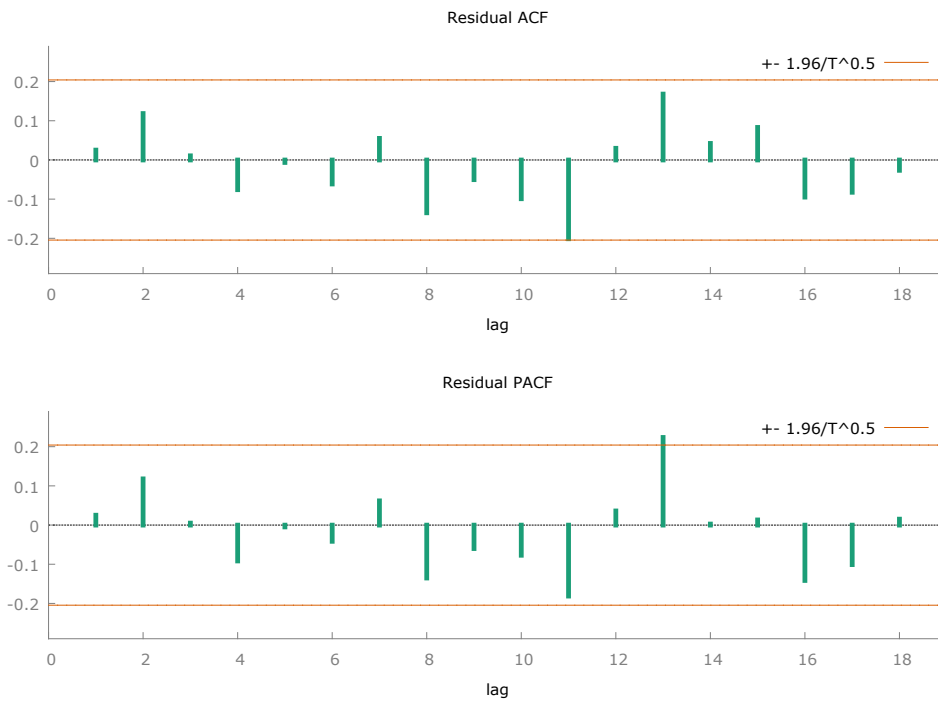
- Yes
- No
- Not Sure

If you would like to explain further, please use the text box below.

- 4) The experiences during the COVID-19 pandemic, while challenging, also provide an opportunity to learn from the experiences and be better prepared to apply these learnings to future pandemics, disasters, or emergencies. In addition to your earlier responses, please share any additional learnings from the pandemic that might be relevant for future response.
- 5) Is there anything we didn't ask that you'd like to share at this time? Please feel free to share anything else that you feel is important.

9.5 Autocorrelation and Partial Autocorrelation Functions of the Residuals

Appendix Figure 1: Autocorrelation and Partial Autocorrelation Functions of the Residuals



9.6 Residual Autocorrelation Function

Appendix Table 3: Residual Autocorrelation Function

LAG	ACF	PACF	Box-Ljung Q-stat. [p-value]
1	0.0253	0.0253	
2	0.1186	0.1180	
3	0.0107	0.0051	1.4228 [0.233]
4	-0.0759	-0.0915	1.9882 [0.370]
5	-0.0063	-0.0047	1.9922 [0.574]
6	-0.0613	-0.0414	2.3698 [0.668]
7	0.0552	0.0619	2.6803 [0.749]
8	-0.1348	-0.1351	4.5499 [0.603]
9	-0.0503	-0.0599	4.8132 [0.683]
10	-0.0989	-0.0770	5.8450 [0.665]
11	-0.2010 *	-0.1812 *	10.1585 [0.338]

12	0.0299	0.0361	10.2553 [0.418]
13	0.1683	0.2237 **	13.3566 [0.271]
14	0.0424	0.0027	13.5557 [0.330]
15	0.0831	0.0132	14.3319 [0.351]
16	-0.0948	-0.1413	15.3544 [0.354]
17	-0.0824	-0.1009	16.1379 [0.373]
18	-0.0264	0.0153	16.2192 [0.438]

***, **, * indicate significance at the 1%, 5%, 10% levels.

9.7 Sample of Documents Reviewed

Appendix Table 4: Sample of Documents Reviewed

Document Type	Document Title
Waiver Authority	Approved Hawai'i Appendix K: Emergency Preparedness and Response and COVID-19 Addendum, Centers for Medicare & Medicaid Services
Waiver Authority	Approved Hawai'i Appendix K: Section 1135 Inventory, Centers for Medicare & Medicaid Services
Waiver Authority	Approved Hawai'i COVID-19 Public Health Emergency Demonstration, Centers for Medicare & Medicaid Services Expenditure Authority Number: 11-W-00351/9
Evaluation Design	Approved Hawai'i COVID-19 Section 1115 Demonstration Final Evaluation Design
Provider Memo	QI 2010: Telehealth Guidance during Public Health Emergency Related to COVID-19
Provider Memo	Qi-2015: COVID-19 Pandemic Action Plan for QI Health Plans – Part III
Provider Memo	Qi-2037A: COVID-19 Pandemic Action Plan for QI Health Plans – Part V
Provider Memo	Qi-2123: COVID-19 Pandemic Action Plan for QI Health Plans – Part VII
Provider Memo	Qi-2317: COVID-19 Pandemic Action Plan for QI Health Plans – Part VIII

9.8 Key Themes from Document Review

Appendix Table 5: Key Themes from Document Review

Key Themes	Reference Quotes and Sources
<p>Instruments provided by the flexibilities provided multiple mechanisms to navigate safety of health care beneficiaries and providers during the pandemic.</p>	<p>“The goal of the pandemic action plan is to maintain the health and safety of the QI members and health plan personnel, and the continued access to necessary services during and through the Public Health Emergency (PHE) that was declared by the Secretary of the Department of Health and Human Services on January 31, 2020.”</p> <p><i>QI 2015: COVID-19 PANDEMIC ACTION PLAN FOR QI HEALTH PLANS– PART III</i></p>
<p>Another set of instruments were used to enhance access to healthcare during COVID. This included rules against disenrolling members and notifying members of their coverage.</p>	<p>“The health plan shall not disenroll a member from HCBS and shall maintain current authorization levels.”</p> <p><i>Q1-2015: COVID-19 PANDEMIC ACTION PLAN FOR QI HEALTH PLANS– PART III</i></p>
<p>Strong focus on the prioritization of telehealth as one means of managing safety and allowing coverage for telehealth visits regardless of vaccination status.</p>	<p>“Service coordinators may use telehealth that meets privacy requirements to conduct Health and Functional Assessments (HFA) to develop or update service plans. MQD has expanded settings where services may be provided for Adult Day Care and Adult Day Health and Personal Assistance Level I and Level II and Private Duty Nursing.”</p> <p>“Use of appropriate video interface, given the member has appropriate internet access and device. Also knowledge on how to use device”.</p> <p><i>Q1-2015: COVID-19 PANDEMIC ACTION PLAN FOR QI HEALTH PLANS– PART III</i></p> <p>“All Health Coordination visits, regardless of the vaccinated or unvaccinated status of the health coordinator or the member shall be prioritized as telehealth visits over in-person visits”.</p> <p><i>QI-2123 / CCS-2109: COVID-19 PANDEMIC ACTION PLAN FOR QI HEALTH PLANS – PART VII</i></p>
<p>Laying out conditions for the retainer payments.</p>	<p>“Retainer payments shall be made at a reduced rate of 75% of the per unit of service and shall be made for specific CPT/HCPCS codes.”</p>

Key Themes	Reference Quotes and Sources
	<p>“Providers must submit a written attestation agreeing to specific requirements for retainer payments, including not laying off staff, maintaining wages at existing levels, and not receiving aggregate funding from any other sources that would exceed their revenue for the last full quarter prior to the PHE.”</p> <p><i>Q1-2037A: COVID-19 PANDEMIC ACTION PLAN FOR QI HEALTH PLANS – PART V</i></p>
<p>Setting up processes to ensure safety for transporting patients.</p>	<p>“The health plan shall obtain the transportation vendor’s written agreement that services are delivered using safe practices in accordance with Centers for Disease Control (CDC) recommendations.”</p> <p>“Ridesharing is not allowed except in certain circumstances.”</p> <p>“In-vehicle fresh air ventilation should be practiced.”</p> <p><i>QI-2123 / CCS-2109: COVID-19 PANDEMIC ACTION PLAN FOR QI HEALTH PLANS – PART VII</i></p>
<p>Expanded coverage for different kinds of facilities.</p>	<p>“Expanded coverage for members to cover different types of facility care.”</p> <p><i>Q1-2037A: COVID-19 PANDEMIC ACTION PLAN FOR QI HEALTH PLANS – PART V</i></p>
<p>Plan for transitioning away from the HCBS-related flexibilities and planning for the ending of the flexibilities.</p>	<p>“The Medicaid Provider Enrollment Compendium (MPEC), State Plan Requirements for Provider Screening and Enrollment and Provider Revalidation of Enrollment will end on November 11, 2023.”</p> <p>“Having a secure plan in place to take on the revalidation of enrollment process for all members who are identified as potentially losing eligibility and finding community support for ongoing care.”</p> <p>“Health and Functional Assessment (HFA) interactions with members for assessments and reassessments should resume with appropriate safety precautions and face-to-face interaction with members upon the end of the flexibility. The timeframes for completion of the initial, annual, and re-assessment HFA should continue in accordance with the current contract terms.”</p>

Key Themes	Reference Quotes and Sources
	<p><i>Q1-2317A COVID-19 PANDEMIC ACTION PLAN FOR QI HEALTH PLANS – PART VIII</i></p>

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