Advancing Behavioral Health Equity in Primary Care

Final Technical Evaluation Report

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Acronyms

ABHE-PC	Advancing Behavioral Health Equity in Primary Care Learning Collaborative
ACE	Adverse Childhood Event
AIR	American Institutes for Research
BH	Behavioral Health
BHI	Behavioral Health Integration
CAT	Capability Assessment Tool
CCI	Center for Care Innovations
CHC	Community Health Center
CHCF	California Health Care Foundation
FQHC	Federally Qualified Health Center
MH	Mental Health
NQF	National Quality Forum
PDSA	Plan-Do-Study-Act
PHLN	Population Health Learning Network
PHQ-9	Patient Health Questionnaire-9 Item Depression Module
QCA	Qualitative Comparative Analysis
QI	Quality Improvement
REL	Race, Ethnicity, Language
RQ	Research Question
SDOH	Social Determinants of Health
SME	Subject Matter Expert
SOGI	Sexual Orientation and Gender Identity
SUD	Substance Use Disorder
TIC	Trauma-Informed Care
UDS	Uniform Data System
UMS	Universal Measure Set

Executive Summary

Background on Advancing Behavioral Health Equity in Primary Care

In 2021, the California Health Care Foundation (CHCF) launched the Advancing Behavioral Health Equity in Primary Care (ABHE-PC) learning collaborative. The goal of the collaborative was to help community health centers (CHCs)* in California expand behavioral health services and improve outcomes by focusing on advancing health equity and aligning behavioral health and social needs resources within primary care settings.

The implementation of the ABHE-PC learning collaborative was managed by the Center for Care Innovations (CCI), which provided comprehensive technical assistance to CHC grantees throughout the 20-month program. CCI provided interactive quality improvement and health equity tools, opportunities for collaboration among CHCs through online and in-person learning activities, and one-on-one assistance from coaches with backgrounds in quality improvement and behavioral health integration.

The ABHE-PC Model

The ABHE-PC learning collaborative was developed to help CHCs that had an existing commitment to, and capacity for, integrated care to expand and strengthen their behavioral health services and supports. Participating CHCs sought to make several changes, including offering new services or supports, aligning their behavioral health programs to provide resources around social needs (such as food and housing), and adopting health equity practices (such as humility and trauma-informed care and organizational practices) to improve access, utilization, and outcomes for the following priority populations: Black, Latinx, Asian, Native Hawaiian and Pacific Islander, and American Indian and Alaska Native populations; transitional age youth; and LGBTQ populations.

To guide program development in a way that is consistent with the CHCF framework for health equity, CCI developed collaborative activities that supported three core themes: health equity, patient and family engagement, and a culture of improvement. These themes were then applied to six primary drivers of integrated, equitable behavioral health: Senior Leadership & Organizational Commitment, Data-Driven Systems, Access to Care, Integrated Care Team & Care Delivery, Patient Activation & Self-Management, and Community Partnerships, and related secondary drivers (Figure ES-1).

* In this publication, *CHCs* include Federally Qualified Health Centers (FQHCs), FQHC Look-Alikes, and other health center program grantees, as well as non-FQHC clinics, such as county-based health clinics.

Figure ES-1. ABHE-PC Primary and Secondary Drivers

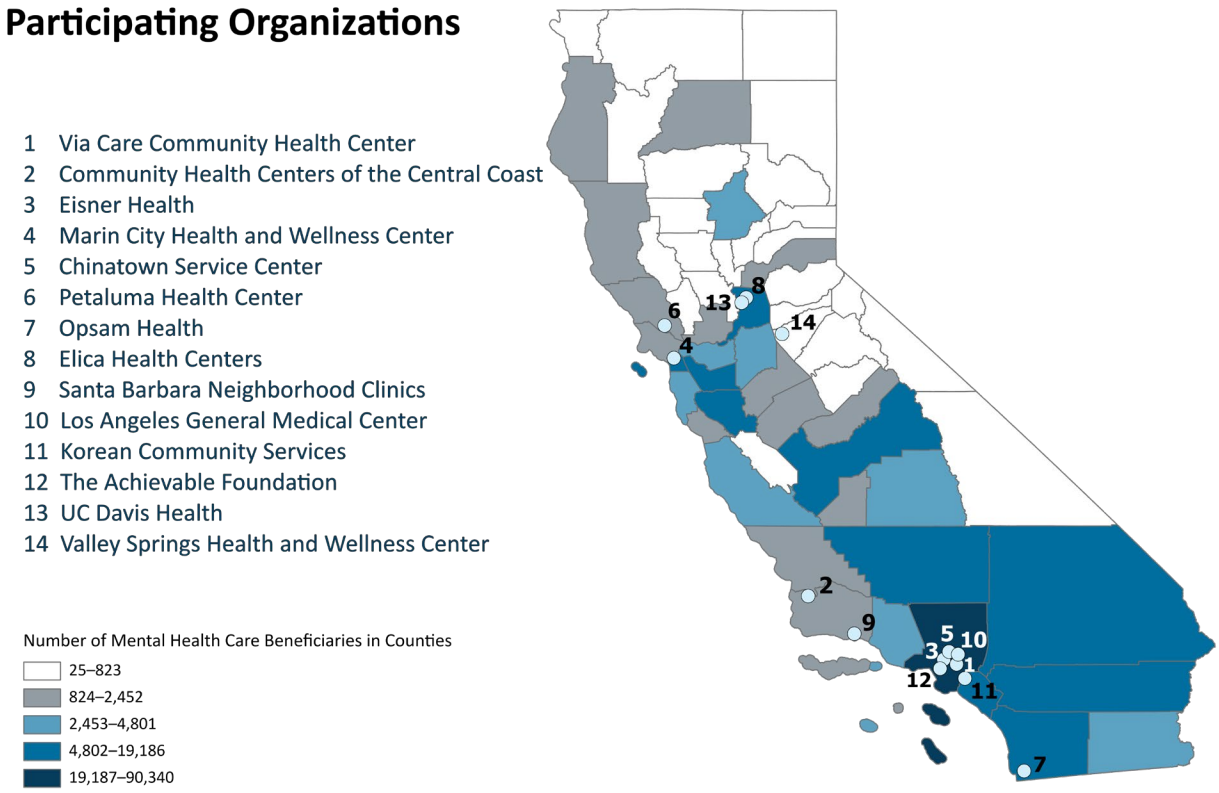
Primary Drivers	Secondary Drivers
Senior Leadership and Organizational Commitment	▪ Leading, planning, and creating an organizational culture that advances health equity ▪ Listening to the voice of all patients ▪ Hiring an equitable, inclusive, and diverse workforce ▪ Developing a culturally intelligent workforce ▪ Adopting trauma-informed care best practices
Data-Driven Systems	▪ Leveraging integrated care registries to support BHE Population Health Management. ▪ Using data analysis and quality measures analysis and reporting to help achieve BHE.
Access to Care	▪ Using appointment scheduling practices aligned with patient needs and preferences. ▪ Using multi-modal visits (in-person, alternative, or virtual) to reduce care barriers.
Integrated Care Team and Care Delivery	▪ Integrating mental health, substance use, and primary care services. ▪ Screening, assessment, and management of BH conditions (mental health and substance use disorders) done in culturally and linguistically competent manner. ▪ Embedding team-based care into integrated BH practices. ▪ Establishing clinical workflows for common BH comorbid conditions. ▪ Training staff for integrated care team roles and responsibilities.
Patient Activation and Self-Management	▪ Implementing care plans that activate patients' voices, providing empowering self-management supports, and leveraging digital tools (web, patient portal engagement tools). ▪ Offering patient and caregiver education that is driven by patient preferences and advances health literacy.
Community Partnerships	▪ Putting agreements in place with community partners and encouraging them to actively engage in planning BHE initiatives. ▪ Sharing data with community partners to facilitate closed-looped referrals that advance BHE.

Through virtual learning sessions, webinars, site visits, regular coaching, a virtual collaboration and resource platform, quarterly reports, and improvement dashboards, CCI supported the efforts of participating CHCs to make equity a central focus of their workflows and care planning. The goal of each learning activity was to further expand principles of culturally responsive, trauma-informed, integrated care to address behavioral health and social needs in the patient populations served within a stepped model of care. Stepped care is a service delivery model where the least intensive and least intrusive treatments are offered to those with less severe needs.[1] The lowest-intensity treatments in a stepped care model (SCM), such as watchful waiting, guided self-help, and bibliotherapy, generally require minimal time and cost for consumers, clinicians, and service providers. Providers will refer patients to higher or lower levels of intervention after evaluating their symptom severity or functional impairment.[2]

Overview of CHCs Participating in the ABHE-PC Learning Collaborative

At the beginning of the learning collaborative, the 14 participating CHCs — most of which were large-practice organizations — included 33 sites with 786 providers (including 164 behavioral health providers) serving 245,251 patients annually. Most participating CHCs were located in the coastal areas of California (Figure ES-2). One CHC was located in a rural county. The remainder of the CHCs were located in suburban (four CHCs) and urban (nine CHCs) counties, which tend to have a greater number of mental health care beneficiaries. They also tend to have higher concentrations of specialist mental health providers than more rural areas of the state.

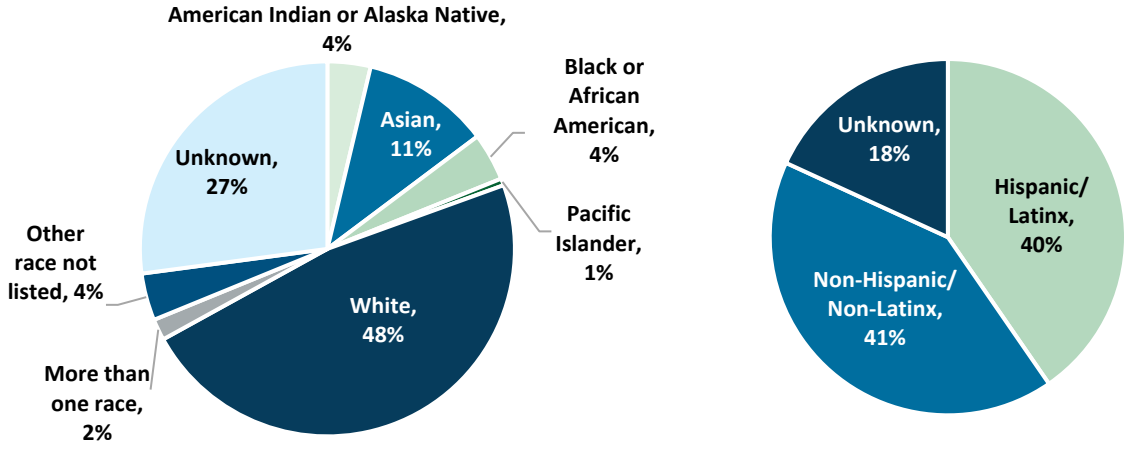
Figure ES-2. ABHE-PC Participating Organizations



Source: Data on number of Medi-Cal Specialty Mental Health Service beneficiaries, by county, 2020, Mental Health Management and Performance Outcomes Reporting Branch of the California Health and Human Services (CHSS) Agency (Adult Population – Performance Dashboard – Datasets – California Health and Human Services Open Data Portal).

The patient populations of the participating CHCs were racially and ethnically diverse. Hispanic or Latinx patients on average made up 40% of patients who received services during the follow-up period, Asian patients made up 11%, and Black or African American patients made up 4% (Figure ES-3). Given their diverse backgrounds, these patients spoke a variety of languages, such as Spanish (the most common language other than English), Chinese, Korean, and Tagalog.

Figure ES-3. Follow-up Patient Population by Race and Ethnicity*



* The Asian category includes people of an Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, or Other Asian race. The Pacific Islander category includes people of a Native Hawaiian, Guamanian or Chamorro, Samoan, or Other Pacific Islanders race.

ABHE-PC Implementation and Outcome Evaluation

In addition to supporting CHCs with equitable behavioral health integration learning activities, the CHCF sought to identify practices, approaches, methods, and tools that facilitate progress toward behavioral health equity. CHCF engaged the American Institutes for Research® (AIR®) to lead an independent evaluation of the impact of the learning collaborative and to identify lessons that could be applied in other CHCs. The mixed-methods evaluation closely aligned with the ABHE-PC driver diagram (Appendix A) and was grounded in principles of equity, harm reduction, and trauma-informed care. The methods and approach are summarized below.

ABHE-PC EVALUATION APPROACH AND METHODS

AIR used a mixed-methods evaluation that was framed by 16 research questions to assess the implementation and outcomes of the ABHE-PC learning collaborative. To answer the research questions, the AIR evaluation team collected and analyzed data using multiple qualitative and quantitative techniques at the site, organization, and program levels. Data collection included the following:

- Observation of ABHE-PC learning sessions and webinars
- An organizational capability assessment tool (CAT) self-assessment, developed and overseen by CCI
- A behavioral health service and screening inventory checklist
- Listening sessions with patients and participating CHC administrators, providers, and staff
- A patient survey on quality of care, access, and experience available in seven languages
- A universal measure set (UMS) and data collection forms that collected staffing, care utilization, access, and mental health and physical health quality metrics, stratified by race, ethnicity, language, sexual orientation, and gender identity

AIR used quantitative and qualitative techniques to analyze data from these sources and triangulate findings to summarize the systems changes and patient outcomes from the ABHE-PC learning collaborative.

This final technical evaluation report describes the ABHC-PC CHCs' organizational characteristics and development of capabilities related to integrated behavioral health, ABHE-PC learning collaborative and coaching support over the 20-month program, ABHE-PCs' plans for systems change over the course of the program, and experience participating in the program. The evaluation also captures the experiences of patients seeking behavioral health care and social needs supports at participating CHCs. Summaries also present changes in patient behavioral health needs and care utilization, care coordination, and physical health management overall and by race, ethnicity, language, sexual orientation, and gender identity, where possible given available data. Finally, the report summarizes the implications of the findings for integrated behavioral health program development for CHCs in California. It also discusses opportunities for organizations that are interested in advancing and sustaining integrated, equitable behavioral health care in primary care settings.

Key Findings on ABHE-PC Implementation and Engagement with CHCs

- CCI provided a variety of events, coaching sessions, tools and learning, and collaboration activities to teams.
- Program supports aligned with principles of integrated behavioral health care.
- Teams reported that their greatest satisfaction came from participating in ABHE-PC peer-learning offerings, which is consistent with CHCF's expectations.
- The collaborative began with activities and trainings for cross-division planning, with primary care and behavioral health staff working together to assess their patient needs and process gaps and learn quality improvement strategies.
- Topics addressing newer service areas like SUD and social needs — specific models of clinical response, universal screening and education workflows to reduce stigma and increase safety and disclosure — occurred in the second half of the collaborative.
- Teams needed trainings in foundational aspects of behavioral health integration (e.g., improving staff dignity, spreading an understanding of the importance of population health or behavioral health). This left limited time for more population health trainings on topics like risk assessment algorithms and closed-loop referral workflows.

Program Implementation and Engagement

CHCF awarded grants to 15 CHCs[†] to participate in the program. Each CHC identified a team (ABHE-PC team) that included leadership and staff roles within the central health center operations, the primary care division and the behavioral health division that would serve in one or more of the following roles: sponsor, champion, project lead, process expert, subject matter expert, quality improvement and analytics support, and health information technology support. Over the 20 months, each ABHE-PC team collaborated with CCI staff and their coaches to develop project road maps (including aims, small tests of change, metrics for success, and staff responsibilities). Then, they implemented Plan-Do-Study-Act (PDSA) quality improvement cycles to test and refine their improvements. Along the way, CCI convened internal and external

[†] CHCF awarded grants to 15 CHCs, however one CHC left the program in the first year due to limitations in staff bandwidth to participate in collaborative activities.

experts to present on relevant topics to reinforce the ABHE-PC primary drivers, as well as peer-learning activities, as described below.

- Topical webinars offered information on listening to and capturing information from patient experiences, supporting patient dignity, creating a data-informed culture, and understanding the social drivers of behavioral health.
- Learning sessions provided space for ABHE-PC teams to break out into groups to discuss key topics that serve improvement in health equity, including fostering belonging and dignity to support diverse staff and patient cultures and experiences and building trauma-informed systems within health care settings.
- Two in-person site visits to Cherokee Health Systems in Morristown, Tennessee, and Neighborhood Healthcare in Escondido, California, provided ABHE-PC teams with opportunities to witness accomplished health centers as they integrated public health and social care into their practices and within their network of community supports.
- Two peer-learning hub meetings (groups of 3-4 teams that focused on similar care process changes) gave teams more time to collaborate with teams in attendance who were also working on similar system and workflow changes in their practices.
- A closing celebration gathered ABHE-PC teams as a cohort to share their successes and next steps for implementation and sustainability within their peer hubs and with CHC leadership.

In addition, ABHE-PC teams received monthly individualized sessions with coaches, an online learning community (the Club), and quality improvement guidance to develop tailored dashboards to track trends in team-selected performance measures over time. AIR external evaluators provided technical assistance to teams on collecting and reporting data on clinical process and clinical outcome measures requested in the UMS. The ABHE-PC learning collaborative promoted participation in learning activities by CHC staff from all levels of the organization and also encouraged teams to initiate discussions and feedback sessions with staff and patients to gain a sense of their experiences providing or receiving behavioral health care at the CHC and their related health needs. These activities were facilitated in ways that made space for people to share their lived experience with the learning concepts.

Although there were variations across teams, overall participation in the ABHE-PC learning collaborative offerings was consistent with the expectations that CHCF communicated to the selected CHCs. At least one member from each team participated in each ABHE-PC event. In addition, at least one member from each team was a registered user of the Club, and, despite

initial delays due to the COVID-19 pandemic, teams submitted requested planning activity documents to the implementation contractor to guide curriculum and coaching activities. Some teams had multiple staff who joined individualized coaching sessions regularly, while others only had one staff member who was regularly in attendance.

Community Health Center Capabilities Prior to ABHE-PC Implementation

CCI developed the CAT to help organizations identify their strengths and areas for improvement across 18 factors associated with the six ABHE-PC primary drivers. Teams scored themselves on these secondary drivers at the start of the program in the fall of 2021. They used their scores to develop a project road map that identified what they would focus on during the program and how they would measure progress toward their aims.

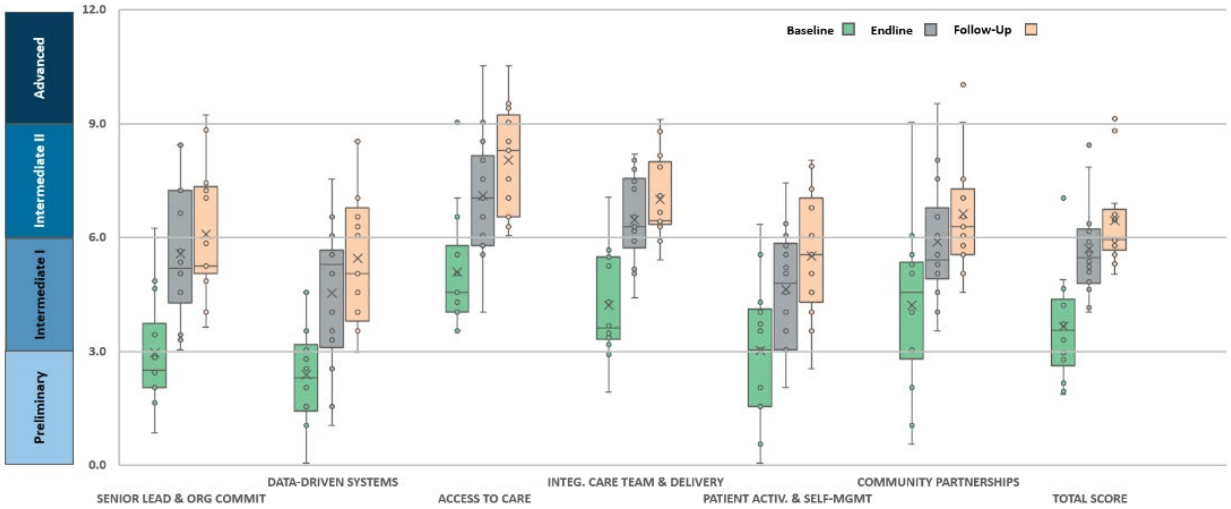
Baseline results for the CAT (Figure ES-4, green bars depicting primary driver scores) provided insight into areas where ABHE-PC CHCs had greater opportunities for improvement. On average, ABHE-PC CHCs had the most room for improvement in the Senior Leadership and Organizational Commitment, Data-Driven Systems, and Patient Activation and Self-Management primary drivers. Teams scored themselves highest, on average, on the Access to Care and Integrated Care Team and Care Delivery primary drivers. Teams consistently gave themselves low scores on these secondary drivers at baseline:

- Listening to the Voice of All Patients
- Developing a Culturally Intelligent Workforce
- Integrated Care Registries Support Equitable Population Health Management
- Adopting Trauma-Informed Care Best Practices
- Data Analysis and Measure Reporting Accelerate Reductions in Health Inequity

Key Findings on ABHE-PC CHCs' Capabilities and Goals

- The most common health areas of focus among teams included depression, substance use disorder, and social determinants of health.
- At baseline, teams had room for improvement in the availability of specialized mental and behavioral health providers and language concordance between providers and staff.
- ABHE-PC CHCs had the most room for improvement in the Senior Leadership and Organizational Commitment, Data-Driven Systems, and Patient Activation and Self-Management primary drivers.
- Teams sought to improve in some areas where they already scored high, which could have limited their ability to address their weaknesses, however progress was still seen in capabilities (e.g., Senior leadership) that were aligned with their broader objectives and the quality improvement organizational engagement.

Figure ES-4. Box-and-Whisker Plots of CAT Primary drivers from Baseline (October 2021) to Follow-up (May 2024)



Patterns in Priority Populations and Systems Changes Selected in Early Implementation

At baseline, each team identified the priority populations and systems changes on which to focus its equitable behavioral health integration efforts. In the initial planning phases, the teams often identified more than one subpopulation or service need. The priority populations identified by the most teams included Latinx patients, Asian American patients, and transitional age youth (age 16–25). Important subpopulations for a few of teams included populations with queer or non-cisgender groups, and groups with intellectual or developmental disabilities, showing the diversity of priorities across the CHCs. The most common health service areas of focus among teams included depression (10 teams), substance use disorder (4 teams), and social determinants of health (5 teams) including general screening, or screening specifically for food insecurity, adverse childhood experiences, or trauma. Ten teams planned to center their systems change work on drivers related to screening for mental or behavioral health conditions, even though screening, assessment, and management of mental health is the area for which teams gave themselves the highest overall scores on the CAT. Conversely, only four teams planned to focus their systems change work on the lowest scoring primary driver, Senior Leadership and Organizational Commitment, and only two teams planned to focus on Data-Driven Systems, also a low-scoring primary driver. The selection of systems changes at baseline might have been influenced by the areas where teams had experienced early integration wins that they wanted to refine. Alternatively, it may have been influenced by the make-up of each team in that the clinical staff leading ABHE-PC activities may have felt more effective working within care management workflows than within data management and leadership drivers.

As primary care and behavioral health care teams developed their goals, aims, and initial Plan-Do-Study-Act tests of change, they refined the priority populations and goals along with the number and location of the sites where teams intervened. These changes were a result of needs that were identified through the planning process; organizational changes (e.g., clinic openings, mergers, realignment of organizational priorities) outside of teams' authority; and staff time available for project activities. At the end of implementation, the 14 teams conducted interventions at 28 health care sites, with 26 sites present in the program from baseline to follow-up assessment period, one-year post-implementation.

Findings on Clinical Processes and Patient Outcomes

To assess the capacity of CHCs for care delivery and for supporting the outcomes evaluation, AIR developed a UMS that was composed of 11 measures (6 that were common clinical quality measures and 5 measures that were specified for the study). Monitoring the same standardized measures from all ABHE-PC CHCs allowed the evaluation to compare outcomes and data capabilities across teams. AIR also fielded a patient experience survey to gather insights on the degree to which patients' needs were being met and how they may have changed between the baseline and endline periods.[‡] Results from the analysis of data from the UMS and patient survey revealed important findings on the ability of CHCs to report data and on improvements and continuing opportunities in care delivery.

Clinical Process and Outcome Measures

Baseline UMS data indicated that rates of mental and behavioral health conditions were lower in ABHE-PC sites compared to the national average. It may be that these lower rates were due in part to lower rates of screening or to the hesitancy of patients to report these conditions.

[‡] All teams fielded the survey in February–March 2022 and again in February–March 2023, through a variety of dissemination strategies, including posters with QR codes, email blasts from EHR patient management portals, and direct outreach by CHC staff. Those who had experienced mental health, substance use disorder, or social need supports in the last 12 months were screened to participate in the full survey. The final respondent sample is not representative across the participating CHCs, nor is it representative of the population served. The sample is heavily weighted toward one CHC, whose team had 25% of the responses, whereas half of the teams had less than 2% each. Additionally, most of the sample was White, non-Hispanic, cis-female, English speaking, and straight and thus does not represent the program's target population.

Baseline UMS data also suggested that participating CHC patients fared worse than the state average for the physical health measures of controlling high blood pressure and controlling diabetes. Only two teams at baseline had ratios of mental health services staff to physicians that met thresholds set by the study (1.1 mental health services staff to physicians), and only one CHC reported substance use disorder services staff.

Ability of Teams to Report and Use Data to Assess Inequity

Variations in the reporting of stratifications for each measure and low numbers within several of the stratifications that teams did report made it difficult to assess trends in disparities in mental and behavioral health diagnoses by race, ethnicity, preferred language, gender identity, and sexual orientation. All 13 of the teams that reported at baseline were able to provide stratified data for at least one measure. However, no team was able to provide every type of stratification for each measure. ABHE-PC teams increased their data management and reporting capacity over time (both in the number of measures they could report and the number of stratifications).

Key Findings on ABHE-PC Clinical Outcomes and Impact

- Improvements to population health management strategies occurred, but remain a challenge for more rural, smaller practices and county-based health systems.
- All teams faced challenges with reporting race, ethnicity, sexual orientation, and gender identity data for patients consistently across all measures, which could hinder efforts to advance equity.
- A nonrepresentative sample of patients who completed a survey on care experience reported mostly positive care experiences and noted that they were able to get the care they needed.
- There is high demand for counseling for behavioral health issues.
- A little more than half of patients reported that they felt comfortable reporting their mental or physical health needs to providers. These trust issues can be addressed through more equitable care, universal screening, reinforcing discussions of confidentiality in care,

The diverse race, ethnicity, and preferred language of the patients of participating CHCs reinforced the value of improving stratifications of care process and clinical outcome measures by patient characteristics. It continued to be challenging to improve and meaningfully use stratifications for gender identity, as only about 2% of patients identified as having a gender or sexual orientation other than male, female, straight, or heterosexual. While it is important to assess and address the needs of these patients through measure stratification strategies, reporting stratifications based on gender or sexual orientation can pose confidentiality issues, and the low numbers of patients in the strata make it difficult to assess trends.

The number of staff available to support mental health care services and care coordination and scheduling increased over time, reducing patient-to-provider ratios, with a large increase in the number of teams reporting any staff certified to provide SUD services and supports. That said, over time and at one-year post-implementation, there remained a sustained discrepancy in the number of patients diagnosed with any mental illness and the number of those patients who

receive mental or behavioral health services at the CHC. That said, the number of services received per patient increased at endline and follow-up, indicating that screening and awareness of patient service needs are improving within the current CHC staffing and training approaches. Proportion of patients with depression who were screened for depression symptoms using the PHQ-9 improved over time, as did depression remission overall with mixed improvements across demographic groups. Days waiting for care did not improve for BH patients seeking care, with modest improvements in physical health outcomes (hypertension and diabetes control) across all adults who received care in each six-month assessment window.

Patient Needs, Access to Care, Care Experiences, and Self-Reported Health

Baseline survey data on patient experiences suggested that the most prevalent need among the patients of participating CHCs was for counseling or treatment for personal problems or emotional and mental health (70.9%). Social health needs were moderate among survey respondents (44.4%). Of note, 19% of survey respondents reported that they needed counseling or treatment for a traumatic event, which is a particular area of emphasis for the ABHE-PC learning collaborative. Half of survey respondents reported that they were able to get all the counseling, treatment, or medicine they felt they needed. They also reported that they always or usually receive their behavioral health and physical health services at the same location.

Survey respondents reported relatively positive care experiences. Most indicated that their providers explained things in a way that was understandable (78%) and spent enough time with them (75%). However, the data suggest that some survey respondents perceived these services to have only a moderate influence on their well-being. Almost 20% of respondents at baseline and 16% at endline indicated that the care they received over the last 12 months only helped them “A little” or “Not at all”. Fifty-one to fifty-nine percent were helped “A lot”.

Contextual, Staff, and Organizational Contexts that Drove Improvement

In endline listening sessions with each CHC team, staff noted that engagement of leadership was a key factor in their success implementing change ideas and gaining buy in from staff. Similarly, qualitative comparative analyses (QCA) that compared CHC characteristics, team engagement, and key change activities selected and their relationships with CAT and patient outcomes also showed that senior leadership engagement was consistently present for CHCs that showed improvement in capabilities, and patient outcomes, as well as improvements in equity.

The QCA also showed that key baseline and CAT baseline and change scores were related to greater improvement in process and patient outcomes, including:

- Increasing enabling staff (e.g., medical assistant, and others supporting case management, outreach, and eligibility) is a key driver of positive Access to Care and care process outcomes, including for minoritized patient subpopulations, both as an individual strategy and in concert with multiple program activities.
- Baseline capacity is more strongly associated with positive outcomes related to Access to Care than improved capacity over time, although in general it does not often explain positive outcomes.
- Learning system engagement in coaching sessions is a key driver of positive outcomes for Access to Care and care process outcomes.
- Increased Integrated Care Team and Care Delivery and increased Community Partnerships are particularly important for positive depression screening rates for Black patients.

Implications for Program Development and Sustainability

Findings from the ABHE-PC learning collaborative provide several insights to improve program implementation and takeaways regarding the scalability and sustainability of the program going forward.

First, the timeline for ABHE-PC supports was slightly delayed given the competing demands made on the CHCs. The implementation partners and coaches used the materials that CHCs share about their capabilities and plans to address selected aims to design learning collaborative activities. Delays in sharing these materials caused delays in the customization of learning and coaching opportunities.

> ***Takeaway:*** *Allowing a slightly longer start-up period for future cohorts could help coaches develop customized tools and approaches for CHCs. Collecting feedback periodically through implementation (similar to the quarterly narrative reports used in ABHE-PC), learning collaboratives can learn more about CHC needs and course correct, reorder content timelines, or further tailor content to the pain points for ABHE-PC CHCs.*

Second, CHCs have required a fair amount of individualized support from ABHE-PC implementation and evaluation staff. Such individualized supports would require a considerable level of effort to scale. Lessons learned from these individualized supports will be included in the ABHE-PC guidebook, which may reduce the need for future individualized support for CHCs that are interested in implementing team and capacity building around the primary drivers

defined in the ABHE-PC learning collaborative. Expanding teams working on equitable behavioral health workflows to include staff from external care providers that accept referrals for specialty mental health care would be helpful in the future, especially when there is interest in improving the frequency and tracking of closed-referral loops.

> ***Takeaway:*** Limiting future cohorts to approximately 15 participating health centers (as in the current program) could help to ensure that appropriate resources are allocated to support the participating health centers. Conducting pre-implementation technical assistance and checks on readiness for data-informed monitoring during the grant review phase will help funders refine selection criteria and funding awards.

Third, at baseline, it was expected to be difficult to track the improvements that CHCs made while participating in the ABHE-PC learning collaborative. Teams scored relatively low on the Integrated Care Registries and Data Analysis and Measures Reporting to Reduce Health Inequities secondary drivers, both of which are related to Data-Driven Systems. Staff experiences with distilling data for UMS reporting indicates that extracting stratified data for the tracking of patient needs and utilization faces a number of barriers. Thus, tracking enhanced screening, referral, and patient access to care — priority areas of focus for participating CHCs — was difficult and some teams ultimately chose to commit PDSA tests and resources toward improving assessment frequency and capturing assessment data in EHRs.

> ***Takeaway:*** If teams focus on areas in which they already consider themselves to be higher performing, they may continue to suffer gaps in other capabilities. Without an intentional focus on lower scoring areas, teams might struggle to see measurable improvement. Having teams first meet data reporting, overall for each measure, verifying completeness and accuracy, may benefit teams before moving on to track stratified patient outcomes.

Fourth, it may be worthwhile to further explore patient experience survey findings to identify opportunities for learning from or improving equitable care within each visit. According to 80% of baseline survey respondents and over 90% of endline respondents that noted that their language, race, religion, ethnic background, or culture made a difference in the kind of counseling they needed (roughly 20% of respondents in both waves), CHCs provide care that is responsive to the language, race, religion, ethnic background, and culture of patients.

In reviewing experiences with discrimination, it should be noted that the majority of respondents were White, cisgender females. That said, within this pool of respondents, only 9% reported that they had been discriminated against, hassled, or made to feel inferior while getting care at baseline (and this did decrease to 5% at endline). Qualitative data from patients and subgroup analyses show that continuing to educate providers on the needs and experiences of patients with different sexual orientation and gender identities and experiences

will provide additional supports requested by patients. Generally increasing trust and rapport could be improved. While there were a number of anecdotes and descriptions of supportive care from listening sessions with patients, notably, only 53% of baseline respondents and 50% of endline respondents indicated that they "Always" felt comfortable reporting all of their physical health, mental health, or drug or alcohol treatment needs to providers. At endline, there were key differences in these outcomes by race and ethnicity, with non-White and Latinx/Hispanic patients less likely to note that they were receiving all of these services and information from providers that they needed. When asked how behavioral health services could be improved, many commented on the lack of available appointments, citing long wait times as a barrier to receiving services; others noted that appointments were too short, and that time was not always managed effectively.

> ***Takeaway:*** Patients may experience mistrust of providers or social stigma in health care settings when disclosing the need for behavioral health supports. This issue could be addressed with more trauma-informed, equitable practices such as universal screening and education that normalizes the reporting of adverse experiences and mental health needs. Teams that focused on improving appointment scheduling and visit time management strategies (e.g., shorter appointments) or staffing strategies (e.g., more medical assistant support) showed mixed improvement reducing wait times, and this indicator was difficult to assess for these teams as many could not report estimates at baseline.

Finally, at baseline less than two-thirds of patients at ABHE-PC sites were screened for depression using the PHQ-9 tool as recommended, with some sites screening less than 20% of patients. After teams reassessed and reduced the number of implementation sites, the screening estimates from the remaining sites — aggregated to the organizational level — show that a slightly higher proportion of patients were screened for depression in the follow-up period (69%), with the greatest increase seen within the Unknown race category and within the collapsed group that captured all gender identities that were not male or female. Depression remission increased from 16% to 22%, with the greatest increases within non-Latinx, or white and unknown race.

In addition, diabetes and hypertension outcomes were lower than national averages within the participating sites at baseline, with some improvement in rates at follow-up, either indicating improvement in patient outcomes, or an improvement in monitoring.

Regular screening is needed to assess the severity of patients' depression symptoms, to support adjustments to treatment plans if symptoms persist, and to track remission and ultimately to ensure resources are used by those who are most in need of services.

Takeaway: Prioritizing improvements in population health management strategies should be a goal of participating CHCs as these improvements may lead to improvements in physical and mental health care and their outcomes.

Introduction

This final technical evaluation report presents results from the Advancing Behavioral Health Equity in Primary Care (ABHE-PC) learning collaborative from September 2021 through June 2024. The report discusses the following:

- Background information on mental health needs and access to care in California
- The goals of the program and details on its development, which provides context for the evaluation
- The evaluation design, data sources, and methods
- The characteristics of participant organization and teams
- Synthesized baseline, endline, and follow-up findings and results

Background

People with behavioral health conditions often experience poor health overall, and those with a diagnosis of serious mental illness or substance use disorder (SUD) die 20 years earlier than others on average, often from preventable physical illnesses.[3] Only one-third of people with any type of mental illness receive treatment, and just 10% of people with SUD are treated.[4] In California and nationally, there are dramatic racial and ethnic disparities in access to and utilization of care. Within Medi-Cal, for example, Black, Latinx, and Asian American enrollees receive needed care at lower rates than their White counterparts. These unmet behavioral health care needs constitute a health and health equity crisis in California.[5]

The United States has a fragmented and under-resourced health care system that has left gaps in access[6] and disparities in outcomes for people with mental illness or SUDs. Without seamless and individualized integrated services, engaging with medical care is challenging[7] for many patients who have serious mental illness and SUD (conditions which often co-occur[8]) due to their behavioral health and mental health symptomology along with unmet social health needs. These multilevel factors contribute to untreated or undertreated chronic and other health conditions, disproportionate comorbid chronic disease[9], and earlier mortality[10] than the general population, as well as high rates of engagement with costly emergency-care settings.[11] Further, among all with SMI and SUD, historically underserved groups with SMI and SUD have worse health and health care utilization outcomes.[12] CMS has rolled out several initiatives to integrate behavioral health and physical health care (e.g., via Medicaid Health Homes and Certified Community Behavioral Health Centers, through the child-focused Integrated Care for Kids [InCK] Model, and most recently through the Integrated Behavioral Health Model).

Although county-level behavioral health plans have primary responsibility for providing services to Medi-Cal enrollees with serious mental illness or SUD in California, enrollees with all levels of behavioral health and social needs present to primary care settings in health care networks established within the state's managed care plans.[13] In response, community health centers (CHCs) have greatly expanded their behavioral health capacity. Today, most CHCs routinely screen for behavioral and mental health needs using validated screening instruments, such as the Patient Health Questionnaire-9 (PHQ-9), and provide needed health care services to people with mild to moderate mental illness or refer people with more severe mental illness for treatment.[14] However, only a fraction of CHCs provide a full suite of behavioral health services (e.g., medication-assisted treatment for addiction) or proactively manage behavioral health conditions in the same way they manage physical illnesses such as diabetes and hypertension (e.g., use a registry to track symptom reduction).[15] Additionally, the California Health Care Foundation (CHCF) has noted that the lack of alignment between behavioral health integration efforts and social needs care is commonly cited as a pain point for patients, families, and providers alike.[16]

Given the growing mental health crisis in California, continuing to expand access to integrated care is a priority for CHCs, policymakers, and other stakeholders in the state. The ABHE-PC learning collaborative was developed to help CHCs that had an existing commitment to and capability for integrated care. The goal of the collaborative was to expand and strengthen these CHC's existing behavioral health programs (i.e., offer new services or supports), and align these programs with social needs care (e.g., food security). These systems changes would be complemented with trainings on how to adopt health equity practices that can improve access, utilization, and outcomes related to behavioral health needs for the following priority populations: Black, Latinx, Asian, Native Hawaiian and Pacific Islander, and American Indian and Alaska Native people; transitional age youth; and LGBTQ populations.

About the Program

In 2021, the CHCF initiated the development and execution of a funding stream to improve equitable, integrated behavioral health care in Federally Qualified Health Centers (FQHCs) and FQHC Look-Alikes across the state of California. This initiative, named the Advancing Behavioral Health Equity in Primary Care (ABHE-PC) learning collaborative, builds on years of work funding care improvement and behavioral health and population health improvement initiatives.

In partnership with the CHCF, the Center for Care Innovations (CCI) launched the ABHE-PC learning collaborative to help California CHCs expand and improve behavioral health outcomes, in part by focusing on advancing health equity and aligning behavioral health and social needs resources. To guide integration, the ABHE-PC learning collaborative uses an evidence-based

stepped model for care[17] that is structured for mental health assessment and treatment in primary care. The model emphasizes the provision of simple yet effective patient-centered access to behavioral health care (including virtual and in-person care). It also emphasizes ways to efficiently support patients within a primary care system that typically has a limited supply of support from mental health specialists. The model and CCI's planned activities sought to identify and test new approaches for reducing health inequities. By the end of the program, CHCF anticipated that ABHE-PC CHCs would be able to do the following more effectively:

- Identify, manage, and treat mental health conditions and SUD
- Identify and address patients' unmet social needs (e.g., food insecurity) through consistent screening, tracking, and robust referral processes
- Stratify data to identify and understand where inequities are greatest
- Use those data to reduce barriers to care — specifically, racism, discrimination, stigma, and trauma — by actively embracing health equity practices
- Sustain and spread their successes

CCI provided comprehensive technical assistance to CHC grantees throughout the program. This assistance included virtual learning sessions and webinars, monthly coaching support from quality improvement professionals, an online learning collaborative platform (the ABHE-PC Program Club), and in-person site visits to witness effective integration programs inside and outside of California. Additionally, CCI conducted a baseline capability assessment to help ABHE-PC CHCs set improvement goals. CCI also conducted midline, endline, and follow-up assessments one year after completion of the program to monitor progress over time. CCI also helped organizations to define the metrics to be measured through a quarterly improvement dashboard and hired coaches to help teams evaluate progress and collect and use data for improvement.

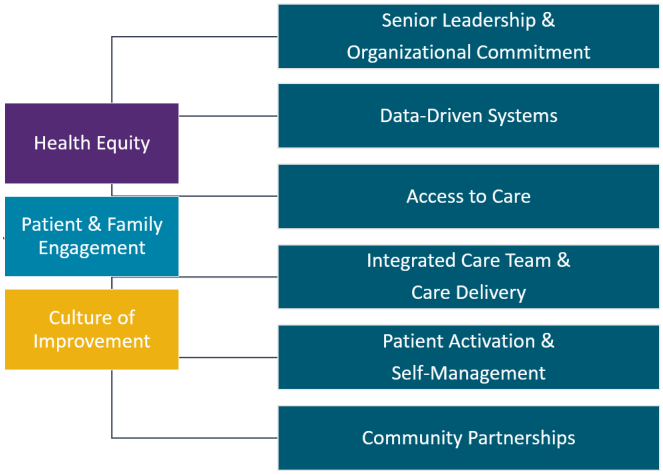
Organizations in California that provide comprehensive primary care services to historically underserved populations were eligible to apply. These applicants had to qualify as nonprofit and tax-exempt organizations under 501(c)(3) of the Internal Revenue Service Code or be a government, tribal, or public entity. Eligible organizations included FQHCs and FQHC Look-Alikes, such as community clinics, rural health clinics, and free clinics; ambulatory care clinics owned and operated by county health systems or public hospitals; and Indian Health Service health centers.

CHC grantees were selected with the goal of achieving diversity in terms of geographic location, CHC size, and patient mix (specifically, Black, Latinx, Asian, Native Hawaiian and Pacific Islander,

American Indian and Alaska Native people; people who identify as LGBTQ; those who are seriously and persistently mentally ill; and adolescents and transitional age youth).

Twenty-two CHCs from across California submitted applications. Fifteen organizations were selected to participate. In April 2022, one grantee organization withdrew from the program, leaving 14 participating organizations at the time of baseline reporting.

Figure 1. ABHE-PC Primary Drivers



Health centers accepted into the program received a base grant of $50,000 and a supplemental grant that ranged from $25,000 to $75,000 (for a total of $75,000 [four organizations], $100,000 [seven organizations], or $125,000 [three organizations]). Funding was based on the number of sites enrolled, the size of the CHC, and the number of priority populations identified. Grant dollars could be used to offset staff time dedicated to participating in activities or to deliver new services or workflows developed by the team, travel costs (when appropriate and safe), and other program-associated costs. Organizations were offered an additional $10,000 towards the end of the grant period to support follow-up data submission. Two organizations applied and received this supplement. Additionally, two organizations asked for and received no-cost extensions, allowing them to spend down their funds through December 2023; the original grant period concluded in May 2023.

Program Structure and Core Content

The ABHE-PC learning collaborative targeted aspects of the grantee's organization, practice and care management, information and partner management, and patient engagement that are distilled as primary drivers (Figure 1) with an eye toward advancing health equity, patient and family engagement, and a culture of improvement. See Appendix A for the detailed driver diagram developed in collaboration between CCI and CHCF program staff.

- **Senior Leadership and Organizational Commitment.** With dedicated leadership and support for organizational strategic planning, CHCs prioritize health equity in their efforts to integrate behavioral health, modeling this commitment by taking specific actions that include the following:

- Investing time in transparent hiring practices so that leadership and staff reflect the communities they serve
- Integrating knowledge about trauma into policies, procedures, and practices
- Inviting patients and those with lived experience to guide strategy development

- **Data-Driven Systems and Decisions.** CHCs build and strengthen their ability to (a) deploy accurate and illustrative data to identify and manage patients with behavioral health needs (e.g., through registries), (b) implement performance reporting, and (c) locate decision making at the point of care. CHCs invest in collecting and stratifying data that can drive equitable outcomes for patients seeking behavioral health, substance use, and social needs services.
- **Access to Care.** CHCs expand access to behavioral health by ensuring that all patients have access to timely, coordinated, and culturally competent care.
- **Care Team and Care Delivery.** CHCs create an integrated care team with clear roles. They support the care team by providing evidence-based, trauma-informed, data-driven screening, assessment, and management of behavioral health conditions. They establish levels of care, clearly defining when and where patients will be referred to specialty care or to a higher level of care.
- **Patient Activation and Self-Management.** CHCs create environments where patients and caregivers are engaged, informed, and empowered to participate in the patients' care.
- **Community Partnerships.** In partnership with community-based organizations and specialty care providers, CHCs set up clear agreements on roles, services provided, workflows and referrals, shared data, and referral platforms.

Supporting Activities

In order to support organizations in moving the needle on the key drivers listed earlier, CCI actively engaged program teams using the following means:

- **Learning sessions** to support learning about best practices and peer sharing. CCI offered a total of eleven learning sessions.
- **Site visits** to allow ABHE-PC teams to visit an exemplar organization and make connections with peers. Teams were expected to attend at least one site visit and send at least one core team member. Given COVID-19-related restrictions, the two site visits occurred in the second half of the collaborative implementation period.

- **Quarterly webinars** to provide foundational content and spotlight best practices while fostering peer sharing and consultation. Webinars were between 90 and 120 minutes in length and took place during months without other program offerings. CCI facilitated four webinars over the course of the implementation period.
- **Monthly coaching sessions** to enable teams to apply program resources and lessons and insights from learning sessions to their own projects, clearly outlining (a) what they are trying to accomplish, (b) which population they are focusing on, (c) what changes they will test or implement, and (d) how they are using data to measure their success. Coaches jointly problem-solved challenges and connected teams to resources to advance their goals.
- **Participant portal and virtual peer-networking platform.** CCI Academy (an online learning platform) hosted the ABHE-PC Program Club (the Club), which was used to post program content, tools, and resources; and was designed and integrated to enable peer connection and sharing between learning sessions and webinars.
- **Quarterly narrative reports.** ABHE-PC teams were expected to report their progress in quarterly progress reports, outlining promising practices and challenges and identifying where additional support from the ABHE-PC team would be helpful.
- **Improvement dashboards.** CCI helped teams develop their own internal measures and data collection strategies to evaluate progress toward their self-identified goals, including a customized template and training on how to report data on internal measures.
- **ABHE-PC Guidebook.** CCI used materials and learnings from the implementation period to develop an online toolkit of relevant tools and resources created during the program (See Advancing Behavioral Health Equity in Primary Care Guidebook).

Minimum Expectations for Behavioral Health Integration

ABHE-PC learning collaborative recruitment and the request for application materials sought CHCs for the learning collaborative that had core behavioral health integration capabilities already in place. This program implementation framework was not intended for health centers that did not already have some degree of integrated care.

To be eligible, applicants were required to demonstrate the following in their applications:

- They offered colocated or fully integrated care. At a minimum, their behavioral health, primary care, and other health care providers worked in the same facility or office space and communicated regularly about shared patients (by phone, email, or in person); their providers collaborated by furnishing each other with services and reliable referrals, by

consulting on and developing coordinated plans for patients, or by working as colleagues on the same care team; and their providers met to discuss cases (occasionally or regularly) and to feel like part of a larger formal or informal team.

- They were able to identify populations and subpopulations via a registry, an electronic health record (EHR), or population management software. Applicants were also required to have the capability to report data at the population level for common behavioral health measures such as number of patients screened, number of patients with behavioral health conditions, and number of completed referrals (e.g., to social services or specialty care).

The expectation was that by having these foundational care and monitoring capabilities, ABHE-PC CHCs could focus on centering equity in their practices and on further expanding principles of trauma-informed, integrated care to address behavioral health and social needs in the patient populations they serve.

About the Evaluation

An additional goal of the ABHE-PC learning collaborative was to identify the practices, approaches, methods, and tools that facilitate progress, particularly with regard to health equity. CHCF engaged the American Institutes for Research® (AIR®) to lead an independent evaluation of the learning collaborative's impact and to identify lessons of use to the field. ABHE-PC teams were required to submit data on a universal measure set (UMS), to complete surveys, to participate in interviews or focus groups, and to engage in other activities to understand and document change in the following domains: practice capabilities (e.g., delivery of trauma-informed care), patient impact (access, experience, and outcomes), equity, and staff experience.

For the ABHE-PC learning collaborative, AIR conducted a mixed-methods evaluation that closely aligned with the ABHE-PC driver diagram (see Appendix A) and that was grounded in principles of equity, harm reduction, and trauma-informed care. The goal of the evaluation was to assess the implementation activities and CHC- and patient-level outcomes experienced over and one year after the ABHE-PC implementation period.

Research Questions

The guiding research questions concerned implementation, outcomes, and sustainability. Table 1 outlines the data collection methods and analytic techniques used to answer each question.

Table 1. Overview of ABHE-PC Evaluation Research Questions, Measures, and Data Collection and Analysis Methods

Measure	Data collection method	Data collection frequency	Unit of analysis	Analytic technique
RQ1. What information, tools, and supports did the ABHE-PC learning collaborative provide to participating CHCs?				
ABHE-PC curriculum	Observation of ABHE-PC learning sessions and webinars	Quarterly	Program	Synthesis of observation protocols
RQ2. To what extent did the information, tools, and supports provided by the ABHE-PC learning collaborative provide model strategies for how to advance trauma-informed, equitable, and integrated behavioral health care?				
ABHE-PC curriculum	Observation of ABHE-PC learning sessions and webinars	Quarterly	Program	Synthesis of observation protocols
RQ3. What ABHE-PC learning collaborative information, tools, and supports did participants use to advance trauma-informed, equitable, and integrated behavioral health care in their organization?				
Participants' use of ABHE-PC resources	Listening sessions	Once (endline)	Program	Thematic analysis
RQ4. What ABHE-PC learning collaborative information, tools, and supports did participants find most valuable for supporting their progress toward trauma-informed, equitable, and integrated behavioral health care in their organization?				
Participants' perceptions of relative value of ABHE-PC resources	Listening sessions	Once (endline)	Program	Thematic analysis
RQ5. What changes across the health system (including centralized organizational changes, leadership and staff training activities, data systems, community engagement initiatives, and practice-level clinical care changes) did participants make as a result of their participation in the ABHE-PC learning collaborative?				
Total capability score	Capability assessment tool	Three times (baseline, endline, and follow-up).	Site, participant, program	Descriptive statistics of change over time
Domain-level and item-level capability score	Capability assessment tool	Three times (baseline, endline, and follow-up).	Site, participant, program	Descriptive statistics of change over time
Item-level system change implementation	Capability assessment tool	Three times (baseline, endline, and follow-up).	Site, participant	Thematic analyses
Competency trainings include CLAS Standards (cultural humility and recognition and addressing of implicit bias), SUD stigma education, and others	Capability assessment tool	Three times (baseline, endline, and follow-up)	Site, participant, program	Descriptive statistics of change over time

Measure	Data collection method	Data collection frequency	Unit of analysis	Analytic technique
Care team's perception of trainings as culturally competent and informative for care delivery	Listening sessions	Once (endline)	Program	Thematic analyses
Demographic composition of administrators, providers, and staff relative to demographic composition of patient population	Participant measure extraction forms	Three times (baseline, endline, and follow-up)	Site, participant, program	Descriptive statistics of change over time
RQ6. What is the relationship between participants' engagement in the ABHE-PC learning collaborative and the systems changes they made to progress toward trauma-informed, equitable, and integrated behavioral health care?				
Total number of attendees at ABHE-PC events	CCI engagement data	Once (endline)	Participant	Descriptive statistics Qualitative Comparative Analysis
Total capability score	Capability assessment tool	Three times (baseline, endline, and follow-up).	Participant	Descriptive statistics of change over time Qualitative Comparative Analysis
RQ7. What challenges did participants face while implementing systems changes that advance trauma-informed, equitable, and integrated behavioral health care? Which challenges could and could not be overcome? How did they overcome surmountable challenges?				
Challenges of practice change	Observations of ABHE-PC learning sessions	Quarterly	Program	Synthesis of observation protocols
	Observations of ABHE-PC webinars	Quarterly	Program	Synthesis of observation protocols
	Listening sessions	Once (endline)	Program	Thematic analysis
RQ8. What lessons learned did participants identify while implementing systems changes that advanced equitable behavioral health integration (BHI)?				
Systems change lessons learned	Observations of ABHE-PC learning sessions	Quarterly	Program	Synthesis of observation protocols
	Observations of ABHE-PC webinars	Quarterly	Program	Synthesis of observation protocols
	Listening sessions	Once (endline)	Program	Thematic analysis

Measure	Data collection method	Data collection frequency	Unit of analysis	Analytic technique
RQ9. What does it take to successfully implement systems changes that advance trauma-informed, equitable, and integrated behavioral health care in community health centers?				
Systems change success factors	Observations of ABHE-PC learning sessions	Quarterly	Program	Synthesis of observation protocols
	Observations of ABHE-PC webinars	Quarterly	Program	Synthesis of observation protocols
	Listening sessions	Once (endline)	Program	Thematic analysis
RQ10. How did the systems changes that participants made as a result of the ABHE-PC learning collaborative influence provider and staff experience?				
Provider and staff experience	Listening sessions	Once (endline)	Program	Thematic analysis
RQ11. How did patient experiences change during the implementation of the ABHE-PC learning collaborative?				
CAHPS ECHO — Get appointment as soon as wanted	Patient survey	Twice (baseline and endline)	Program	Descriptive statistics of change over time
CAHPS ECHO — Clinicians explain things	Patient survey	Twice (baseline and endline)	Program	Descriptive statistics of change over time
CAHPS ECHO — Clinicians spend enough time	Patient survey	Twice (baseline and endline)	Program	Descriptive statistics of change over time
CAHPS ECHO — Involved as much as you wanted in treatment	Patient survey	Twice (baseline and endline)	Program	Descriptive statistics of change over time
CAHPS ECHO — Talk about including family and friends in treatment	Patient survey	Twice (baseline and endline)	Program	Descriptive statistics of change over time
CAHPS ECHO — Told about different treatments that are available for condition	Patient survey	Twice (baseline and endline)	Program	Descriptive statistics of change over time
CAHPS ECHO — Care responsive to cultural needs	Patient survey	Twice (baseline and endline)	Program	Descriptive statistics of change over time
Perceptions of health, care quality, discrimination, integration, access	Patient survey	Twice (baseline and endline)	Program	Descriptive statistics of change over time
	Patient listening sessions	Once (endline)	Program	Thematic analysis

Measure	Data collection method	Data collection frequency	Unit of analysis	Analytic technique
RQ12. How have key patient outcomes changed during the implementation of the ABHE-PC learning collaborative?*				
• Mental health and SUD diagnoses • Behavioral health care utilization and access • Number or percentage of patients who are referred to treatment by health need or diagnosis of mental health or SUD • Depression utilization of the PHQ-9 tool (NQF 0712e) • Depression response at 12 months: progress toward remission (NQF 0710e) • Initiation and engagement of alcohol and other drug dependence treatment (NQF 0004) • Closing the referral loop: receipt of specialist report • Controlling high blood pressure (NQF 018) • Comprehensive diabetes care: hemoglobin A1c (HbA1c) poor control (>9.0%) (NQF 0059)	Participant measure extraction forms	Three times (baseline, endline, and follow-up)	Site, participant, program	Descriptive statistics of change over time; total population and within REL, SOGI subgroups
Social needs screening tool utilization	Service inventory	Three times (baseline, endline, and follow-up)	Site, participant, program	Descriptive statistics of change over time
RQ13. What are the most impactful systems changes that advance equitable and integrated behavioral health care generally and for participants' priority populations specifically?				
Total capability score	Capability assessment tool	Three times (baseline, endline, and follow-up)	Site, participant	Qualitative comparative analysis‡
Domain-level capability score	Capability assessment tool	Three times (baseline, endline, and follow-up)	Site, participant	Qualitative comparative analysis‡
Item-level capability score	Capability assessment tool	Three times (baseline, endline, and follow-up)	Site, participant	Qualitative comparative analysis‡
Depression utilization of the PHQ-9 tool (NQF 0712e)	Participant data extraction tool	Three times (baseline, endline, and follow-up)	Site, participant	Qualitative comparative analysis‡

Measure	Data collection method	Data collection frequency	Unit of analysis	Analytic technique
Depression response at 12 months: progress toward remission (NQF 0710e)	Participant data extraction tool	Three times (baseline, endline, and follow-up)	Site, participant	Qualitative comparative analysis‡
Initiation and engagement of alcohol and other drug dependence treatment (NQF 0004)	Participant data extraction tool	Three times (baseline, endline, and follow-up)	Site, participant	Qualitative comparative analysis‡
Closing the referral loop: receipt of specialist report	Participant data extraction tool	Three times (baseline, endline, and follow-up)	Site, participant	Qualitative comparative analysis‡
Number or percentage of patients who are referred to treatment by health need or diagnosis of mental health or substance use disorder	Participant data extraction tool	Three times (baseline, endline, and follow-up)	Site, participant	Qualitative comparative analysis‡
Social needs screening tool utilization	Service inventory	Three times (baseline, endline, and follow-up)	Site, participant	Qualitative comparative analysis‡
Mental health and SUD diagnoses	Participant data extraction tool	Three times (baseline, endline, and follow-up)	Site, participant	Qualitative comparative analysis‡
Behavioral health care utilization and access	Participant data extraction tool	Three times (baseline, endline, and follow-up)	Site, participant	Qualitative comparative analysis‡
Controlling high blood pressure (NQF 018)	Participant data extraction tool	Three times (baseline, endline, and follow-up)	Site, participant	Qualitative comparative analysis‡
Comprehensive diabetes care: hemoglobin A1c (HbA1c) poor control (>9.0%) (NQF 0059)	Participant data extraction tool	Three times (baseline, endline, and follow-up)	Site, participant	Qualitative comparative analysis‡
RQ14. To what extent does the structure and operations of the ABHE-PC learning collaborative lend itself to scalability and sustainability? Which features of the program need to be strengthened to support scaling or sustaining of the program?* **RQ15. To what extent do participants plan to scale the systems changes made as a result of the ABHE-PC learning collaborative?** **RQ16. To what extent do participants plan to sustain the systems changes made as a result of the ABHE-PC learning collaborative?**				
Perceptions of program feasibility	Listening sessions	Once (endline)	Program	Thematic analysis

*Research questions that will be explored in the baseline report.

‡Qualitative comparative analysis (QCA) is an analytic technique that uses Boolean logic to identify the conditions or set of conditions that are necessary or sufficient to produce a given outcome. The evaluation team intends to use the capability assessment results, which are substantively qualitative assessments that are numerically scored, as the conditions in the QCA and the patient measures as outcomes in the QCA.

Data Collection Methods

This section describes methodologies used to collect data on program implementation and outcomes.

Data Sources

To answer the research questions, the evaluation team collected and analyzed data using multiple qualitative and quantitative techniques at the site, organization, and program levels. The team collected data via the following:

- Observation of ABHE-PC learning sessions and webinars. (See Appendix B for the ABHE-PC Event Observation Protocol.)
- Results of the capability assessment tool (CAT) administered by CCI. (See Appendix C.)
- A behavioral health services and screenings inventory checklist fielded by CCI. (See Appendix D for the tool and results.)
- A patient survey. (See Appendix E for the protocol and Appendix J for detailed results.)
- Listening sessions with patients. (See Appendix F.)
- Listening sessions with participating CHC administrators, providers, and staff. (See Appendix G.)
- A UMS protocol (see Appendix H) and data collection forms. (See Appendix I for descriptions and views of the data collection manager and extract forms; see Appendix J for detailed UMS results.)

The timing of data collection depended on the data source. The timelines for implementation activities and monitoring and evaluation activities are presented in Figures 2 and 3. Figure 3 includes the timeline for AIR evaluation team data collection activities, including the following:

- Implementation data and information collected throughout the implementation period
- Data collected using the CAT at three time points: at the start, endline, and one year after the end of the program
- Behavioral health services and screenings and patient outcome data for three measure assessment periods: prior to the start of the program (reference period, January–June 2021), at the end of the program (assessment period, January–June 2023), and one year after the end of the program (January–June 2024);
- Patient survey data at two time points: at the start and end of the program
- CHC and patient experience listening sessions data collected at the end of program implementation

Figure 2. ABHE-PC Learning Collaborative Timeline

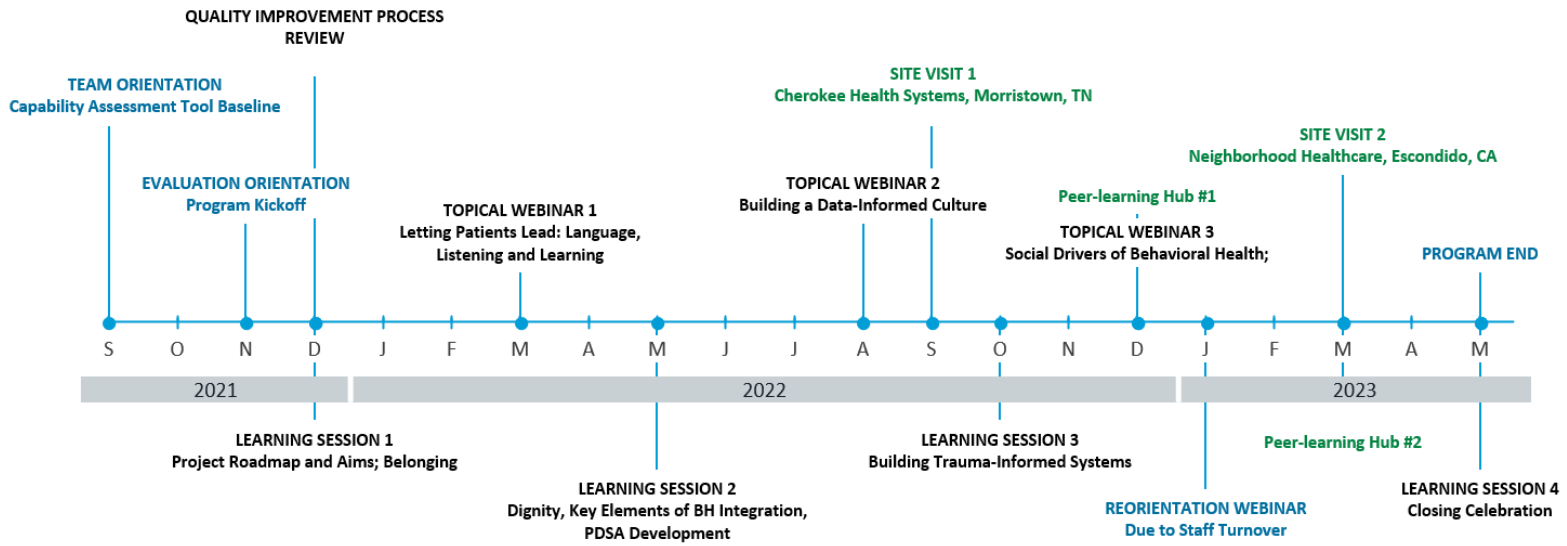
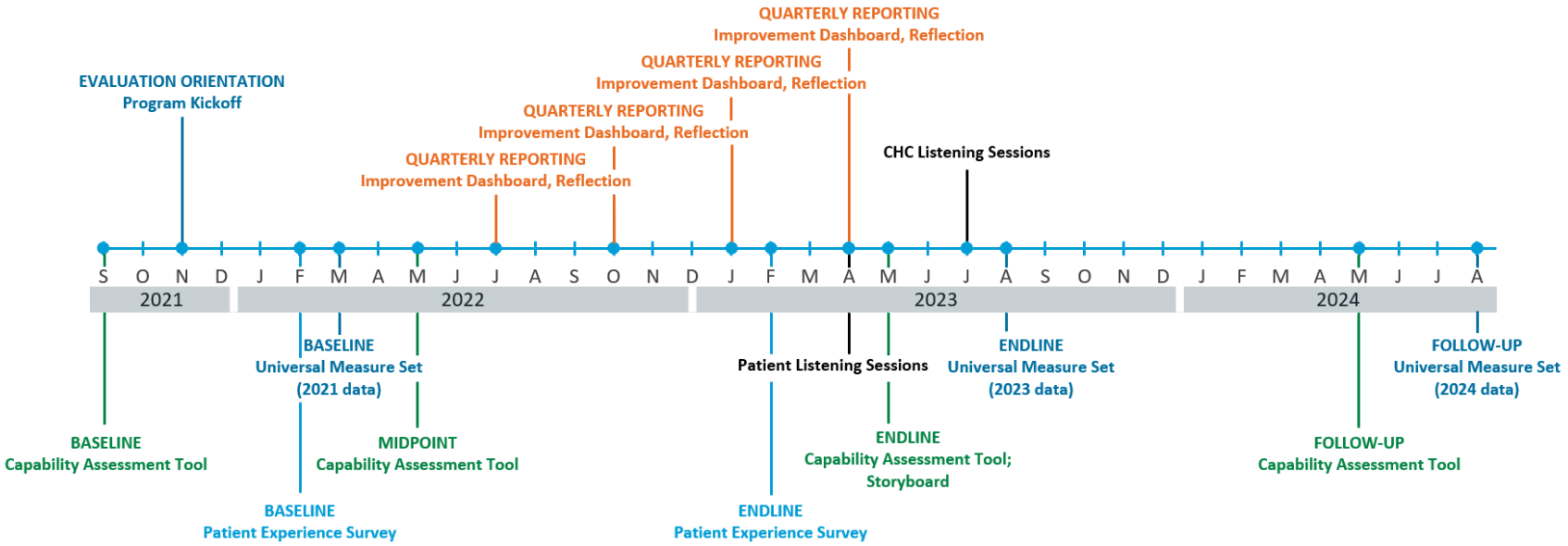


Figure 3. ABHE-PC Monitoring (CCI) and Evaluation (AIR) Timeline



Capability Assessment Tool

CCI developed the CAT specifically for the ABHE-PC learning collaborative to help assess organizational capabilities and progress across specific systemic domains of influence or drivers of equitable behavioral health integration. Sources referenced to create the CAT include the Center for Integrated Healthcare Solutions' Six Levels of Collaboration/Integration[18], the New York Community Trust's Advancing Integration of General Health in Behavioral Health Settings: A Continuum-Based Framework[19], the Purchaser Business Group on Health's Accelerating Integrated Care Series Align Payment webinar[20], the California Health Care Foundation's Weaving Together Mental and Physical Health Care Outside the Safety Net[21], the American Medical Association's Behavioral Health Integration Compendium[22], and the BHI Collaborative's Sustaining Behavioral Health Care in Your Practice webinar[23]. The six primary drivers (see Figure 1 and Appendix A) are system-level drivers that can help an organization achieve equitable behavioral health integration in the primary care setting.

Purpose. As a self-assessment tool, the CAT (Appendix C) can help organizations identify strengths and areas needing improvement across a total of 18 factors, or secondary drivers, within the 6 primary drivers. Teams used the CAT at the start of the program in the fall of 2021 to score themselves on the 18 secondary drivers. These baseline scores helped ABHE-PC teams and organizations assess their capabilities in specific domains, highlight areas of strength (on which they might build), and uncover areas of opportunity where they might further strengthen capabilities over the duration of the ABHE-PC learning collaborative. Sites also used the baseline CAT assessment to work with coaches to develop a project road map identifying their aims and change ideas. The road map also outlined a measurement strategy that would allow the sites to measure progress toward the achievement of their aims.

After the baseline assessment, sites measured their progress and improvements on their factors of interest through periodic reassessments by completing the CAT at the midpoint and endpoint (after 20 months) of the program. A fourth assessment occurred one year after the endpoint assessment. This was called the follow-up assessment. The four CAT scores were important data points that guided sites on their progress in the program. They were also important measures for evaluating the program. Baseline, endline, and follow-up assessments are analyzed in the final technical evaluation report.

Description. Figure 4 shows the secondary drivers, or factors, in each domain. Each secondary driver, described in detail in the tool, is rated by CAT users on a 12-point scoring scale. Staff

rated their organization as achieving one of three levels of consistency in implementation within 4 developmental levels for each secondary driver.[§]

Scores between 0 and 2.9 demonstrated a Preliminary organizational capability level on that factor; scores between 3 and 5.9 demonstrated an Intermediate I level of capability; scores between 6 and 8.9 demonstrated an Intermediate II level of capability; scores between 9 and 11 demonstrated an Advanced level of capability. Scores on all the factors were averaged at each CAT assessment to provide an overall CAT score for the organization. The CAT is completed at the site level for two domains: Domain 3, Access to Care; and Domain 4, Integrated Care Team, which together include 7 of the 18 factors. The site-level scores were averaged for each organization at both the factor and domain levels. The CAT assessment was completed at the organizational level for the remainder of the factors and domains, as these domains capture broader organization-level systems and policies that are anticipated to be similar across sites. To develop an overall CAT score, the six domain scores were also averaged.

Figure 4. ABHE-PC CAT Primary and Secondary Drivers

(1) Senior Leadership & Organizational Commitment

1. Leading, planning, and creating an organizational culture that prioritizes BH Equity (BHE)
2. Listening to the voice of all patients
3. Hiring an equitable, inclusive, and diverse workforce
4. Developing a culturally intelligent workforce
5. Adopting trauma-informed care best practices

(2) Data-Driven Systems

1. Leveraging integrated care registries to support BHE Population Health Management
2. Using data analysis and quality measures analysis and reporting to support BHE

(3) Access to Care

1. Using appointment scheduling practices aligned with patient and family needs and preferences
2. Using multi-modal visits (e.g., in-person, alternative, virtual) to reduce barriers to care

(4) Integrated Care Team & Care Delivery

1. Integrating mental health, substance use disorder, and primary care services
2. Embedding team-based care into integrated BH practices
3. Screening, assessment, and management is culturally and linguistically competent
4. Setting up clinical workflows for common BH comorbid conditions
5. Staff are trained appropriately for BH roles

(5) Patient Activation & Self-Management

1. Designing and implementing care plans that activate patients' voices, providing self-management support to empower patients, and leveraging digital tools to engage patients
1. Offering patient and caregiver education that is driven by patient preferences and advances health literacy

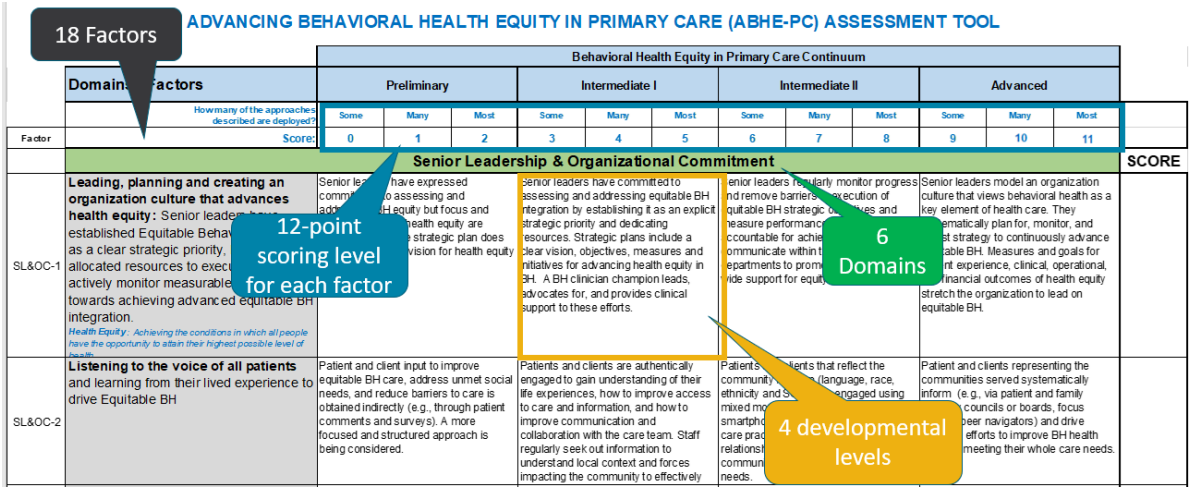
(6) Community Partnerships

1. Putting agreements in place with community partners and encouraging them to actively engage in planning BHE initiatives
2. Sharing data with community partners to facilitate closed-loop referrals that advance BHE

[§] For example, within the preliminary level of the Senior Leadership and Organizational Commitment domain, staff could give their organization a score of 0 (some), 1 (many), or 2 (most) on the "hiring an equitable, inclusive, and diverse workforce" secondary driver (SL&OC-3) after determining how many of the approaches described in the rubric for that factor and developmental level had already been deployed. The description for the preliminary level of the "hiring an equitable, inclusive, and diverse workforce" secondary driver (SL&OC-3) is as follows: *Staff recruitment is responsive to individual position needs as requested by the hiring manager and abides by minimum requirements of anti-racist and anti-discrimination laws at the state and federal levels. Leaders are beginning to assess how to align recruitment practices with strategic health equity goals."*

Process of Completing the CAT to Score an Organization. The CAT was structured to collect multiple waves of data in one Excel workbook (see Figure 5) that teams completed through a process of individual review and consensus scoring. Each ABHE-PC team member (for a site) individually reviewed the domain and factor descriptors in the CAT to identify the ones that most closely resembled their organization and determine whether the organization was at the Preliminary, Intermediate I, Intermediate II, or Advanced level, and filled out their own PDF of the tool. Within the level identified for each factor, the team member referred to the factor descriptors to assess whether "some, many, or most" features of a factor were currently deployed and then assigned the appropriate score for that feature on the 12-point (points labeled 0–11) scale. After team members individually scored the CAT in the PDF file, they convened to discuss the individual scores and agree on a final consensus score. The ABHE-PC team lead entered the consensus scores into the CAT. The team met with its coach to review and refine the scores as needed before submitting them to the ABHE-PC implementation team.

Figure 5. Using the CAT to Score an Organization



Behavioral Health Services and Screening Data

AIR developed the Behavioral Health Services and Screenings form (see Appendix D) to collect qualitative and quantitative data on (1) the types of behavioral health services offered; (2) the mental health, SUD, and SDOH screening tools and protocols used; and (3) the SDOH screening factors assessed across the participating teams, as well as to examine changes in these variables after sites began implementing systems changes. Teams submitted these data for three points in time:

- Baseline: Snapshot as of June 2021, Submitted July 27, 2022
- Endline: Snapshot as of April 2023, Submitted May 15, 2023
- Follow-Up: Snapshot as of May 2024, Submitted May 31, 2024

In the first section of the form, teams indicated whether each of the listed behavioral health services were offered by their organization at the specified time point. In the last three sections of the form, teams reported the number of participating sites using each of the listed mental health, SUD, and SDOH screening tools or assessment factors, as well as the languages in which those tools were available, as of the appropriate measurement date. Finally, teams provided written descriptions of their mental health, SUD, and SDOH protocols, noting which staff conducted the screening and when it was completed, what was done with the information collected, including when a referral would be triggered. For the endline and follow-up measurement waves, teams were also asked to document any changes made to their screening protocols since the last reporting period.

Patient Experience Survey and Listening Sessions

AIR tracked patients' experiences receiving behavioral health and social support services over the course of the ABHE-PC evaluation through an **online survey** fielded by ABHE-PC teams to their patients in the ABHE-PC-participating facilities. AIR conducted the survey twice, near baseline (February 2022, *n* = 469) and endline (February 2023, *n* = 452). They conducted the survey in English, Spanish, Mandarin, Vietnamese, Korean, Farsi, and Tagalog. Patients that self-reported having behavioral health or social support needs were eligible to complete the survey.

Most of the survey measures were from validated survey instruments, including the CAHPS Experience of Care and Health Outcomes Survey, the Research and Development Survey (RANDS) Measuring Patient Experience with Satisfaction With Telemedicine Survey, the District of Columbia Department of Behavioral Health Satisfaction Survey, and the Everyday Discrimination Scale. A few questions were implemented based on suggestions from ABHE-PC participants, and several questions were developed by AIR. The survey instrument can be found in Appendix E.

The approach for administering the survey was designed to be broad and flexible. At baseline, AIR provided each ABHE-PC participant with both a link and a QR code to the survey on half-page fliers that health center staff could distribute to their patients in-clinic. ABHE-PC participants were also encouraged to disseminate the survey to their eligible patient populations through any other means that had proven to be effective for their health centers, including email or text blasts through their EHR systems or by having staff administer the survey to patients in person. At endline, ABHE-PC participants were given unique passcodes to distribute to interested patients as an additional safeguard. Eligible patients who completed the survey received a $20 Amazon gift card code via text or email.

At endline, AIR also captured patient feedback through **listening sessions** that AIR staff conducted in English and Spanish with patients who had completed the endline survey. AIR

facilitated five listening sessions in April 2023 that gathered feedback from seven English-speaking patients and six Spanish-speaking patients receiving care at six to seven of the CHCs.[**] Listening sessions were held virtually using Zoom and generally lasted an hour. Patients received a $100 Amazon gift code via text or email for participating.

CHC Listening Sessions

CHC listening sessions were held at the end of the implementation period in July and August of 2023. All CHC team members were invited to participate. Recognizing bandwidth and scheduling limitations, CHCs were asked to prioritize attendance from the team lead, representatives from both primary care and behavioral health care teams, staff supporting EHR data management and data submission, and an organizational senior leader.

These listening sessions were held virtually over Zoom and lasted around 90 minutes. Each health center received a $100 gift card after the session to be used at their team's discretion. AIR held listening sessions with all 14 teams. Each session had between 1 and 4 CHC staff participating, for a total of 31 staff across all listening sessions.

Universal Measure Set

Through consultations with subject matter experts (SMEs) and learning collaborative members, AIR developed a UMS, comprising 11 measures, against which all participating teams were asked to report data for their patient population for three periods of time: baseline (3–9 months prior to implementation), endline (during the last 6 months of the implementation period), and a follow-up period (1-year post-implementation). Protocols for collecting and analyzing measure data were designed to facilitate a rigorous quantitative evaluation of how key patient outcomes changed during the implementation period for each participating site, both across the overall patient population and within specific sociodemographic groups.

Data reported for these 11 measures were used to track how participation in the ABHE-PC learning collaborative further integrated behavioral health into primary care; mental or behavioral health and health care access, utilization, and engagement; and physical health outcomes. Six of the 11 measures are standard measures[††] that are used in quality reporting programs for Medicare and Medicaid, while the other 5 measures were specified for the study. AIR clearly defined the numerator and denominator for new measures using 2021 Uniform Data System (UDS) guidelines and terminology where available. The final measures were as follows:

- ABHE_1: Clinical Providers, Enabling Staff, and Adult Patient Demographics

[**] One participant's CHC was unknown.

[††] Specifically, five of the final measures (ABHE_4, ABHE_5, ABHE_6, ABHE_7, and ABHE_8) were validated by the National Quality Forum, and one other measure (ABHE_9) was widely considered valid and is used by the Centers for Medicare & Medicaid Services (CMS) in the Quality Payment Program (QPP) model.

- ABHE_2: Mental Health and Substance Use Disorder Diagnoses
- ABHE_3: Behavioral Health Care Utilization
- ABHE_4: Depression Utilization of the PHQ-9 Tool (NQF 0712e)
- ABHE_5: Depression Remission at 12 Months (NQF 0710e)
- ABHE_6: Controlling High Blood Pressure (NQF 0018)
- ABHE_7: Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%) (NQF 0059)
- ABHE_8: Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (NQF 0004)
- ABHE_9: Closing the Referral Loop: Receipt of Specialist Report
- ABHE_10: Engagement — Behavioral Health Appointment Encounter Status
- ABHE_11: Access to Care — Days Waiting for Mental or Behavioral Health or Substance Use Appointment

The measure assessment periods and submission deadlines for each of the three UMS data collection waves were as follows:

- Baseline measurement period: January 1–June 30, 2021, Submitted March 31, 2022[‡‡]
- Endline measurement period: January 1–June 30, 2023, Submitted August 31, 2023
- Follow-up measurement period: January 1–June 30, 2024, Submitted August 30, 2024

AIR developed three resources to guide UMS data collection activities:

- ABHE-PC UMS Protocol and Measure Information Forms (a Word file)
- The ABHE-PC UMS Data Collection Manager (an Excel file)
- The ABHE-PC Measure Extraction Tool (an Excel file)

The ABHE-PC UMS Protocol and Measure Information Forms (see Appendix H) provide an overview of key components of the UMS data collection process, including the objectives and timeline; an overview of the requested data; recommended staffing and system requirements; definitions of key terms and other recommended resources; and information forms for each measure.

Teams prepared and submitted one Measure Extraction Tool (see Appendix I) for each participating site during each of the three data collection waves. AIR requested that teams

[‡‡] The deadline for the sites' submission of baseline data sets was March 31, 2022; however, due to a COVID-19 surge, staff turnover, and delays in implementation and staff coordination, final baseline data were collected in mid-May 2022.

stratify the measure data reported in this Excel file by race, ethnicity, language, sexual orientation, gender identity, and sex assigned at birth in order to facilitate the analysis of disparities in care access and health outcomes across sociodemographic subgroups over time. Although teams were asked to submit data stratified by zip code at baseline, AIR did not require teams to do so at endline or follow-up in an effort to reduce reporting burden. During each data collection wave, teams also submitted a Data Collection Manager tool, to document the barriers that prevented them from reporting on any of the requested measures and to enumerate any deviations from UMS specifications that were reflected in the submitted data. A few months prior to the end of each measure assessment period, AIR hosted one or more virtual office hour sessions to review instructions for completing the UMS files and to give teams an opportunity to ask questions about the data extraction and reporting process. Prior to the submission deadline for the first wave of data collection, most teams received one-on-one technical assistance to help them prepare their data. Finally, AIR provided one-on-one technical assistance to three teams that had experienced high staff turnover and required additional support during the endline data collection wave.

During each data collection wave, the AIR team conducted quality control checks and followed up with each ABHE-PC team to resolve data inconsistencies. The data were then extracted and aggregated across sites using the Python data management language. Multiple teams submitted data for all participating teams in one data extract file (versus submitting data for each participating site individually) at endline and follow-up. Due to this participant-imposed change to the protocol, AIR ultimately evaluated change in UMS measures at the organizational level, rolling up all site-level data to the team level for ease of interpretation across teams.

ABHE-PC Materials Review

Grantee engagement was captured through various components of the program. For the baseline evaluation, the evaluation team reviewed metrics abstracted from attendance at program events, the online Club, and the Excel document the coaches used to track their interactions with the teams. The evaluation team also performed a desk review of grant applications and regular email communications sent to teams by CCI.

From the event data, the following information was abstracted for each event:

- The date of the event
- The number of teams in attendance
- The total number of attendees
- The main topics covered
- End-of-event poll results

To assess coaching engagement, AIR reviewed the "Team Progress Tracker," an Excel document that CCI developed for coaches to chart teams' progress over the course of the program. Indicators used to assess how team engagement by coaches was facilitated included the following:

- The quarterly status (score from 1 to 5, where 1 is the lowest, Forming Team, and 5 is the highest, Outstanding Sustainable Results)
- The number and name of attendees at each monthly meeting
- A summary of topics discussed (narrative)
- Challenges and successes (narrative)
- Questions and next steps (narrative).

Teams also submitted documentation on their implementation activities, primarily through their road maps, which included the following:

- Opportunities for change
- The aim statement
- Strengths to leverage
- Change ideas
- Insights from patients
- Project measures
- Project team roles and responsibilities

CCI aggregated this information into a tracker, which AIR then reviewed and qualitatively coded. Aims statements were coded to identify whether they were addressing behavioral health, physical health, or social determinants of health, as well as the process mechanism embedded within. The change ideas were also coded by primary driver and area of focus. Staff conducted a cluster analysis to identify categories of secondary drivers that were scored similarly or in similar combinations of scores across the sites. The goal was to provide insight into the alignment of practice processes, environments, and workflows related to behavioral health integration.

ABHE-PC Learning Session and Webinar Observations

AIR developed an event observation protocol (see Appendix B) and a note-taking template to guide the collection of qualitative data on the information, tools, and supports that CCI provided to participating teams during quarterly learning sessions and webinars.

Observers were instructed (a) to select check boxes to signify which primary and secondary drivers had been addressed during the event and (b) to enter in the last column a brief

description of how that topic was presented or taught by CCI, discussed by collaborative members in a facilitated session, or addressed in a breakout room discussion. AIR's intention was for the notes included in this last column to serve as a post-event summary of the most salient details captured by observers in the third part of the form, the Detailed Activity Notes section, during the event.

Analysis of completed event observation forms supported AIR's efforts to identify the extent to which the information, tools, and supports provided by the ABHE-PC learning collaborative offered model strategies for how to advance trauma-informed, equitable, and integrated behavioral health care and identify successes and challenges teams experienced throughout, and key lessons learned while participants implement systems changes. The form was also used to observe initial coaching sessions in March 2022.[§§]

Data Analysis

The overarching analytic framework that AIR used to integrate these multiple data sources was data triangulation. That is, AIR began with the assumption that each data point was one piece of evidence as it related to the assessments described earlier. However, AIR recognized that this information may be complementary, contradictory, or confirmatory when compared with other data sources. AIR synthesized the data provided across data sources to develop the most comprehensive and accurate description and analyses of the ABHE-PC learning collaborative possible.

AIR developed baseline and endline reports to share findings with CHCF, ABHE-PC participants, and other stakeholders. These reports are intended to do the following:

- Describe the ABHE-PC learning collaborative and participating CHCs
- Inform changes to or tailoring of implementation activities
- Share findings related to the evaluation research questions

These reports were cumulative: as AIR collected and analyzed data, the reports were updated to include new data and insights.

The final technical evaluation report summarizes the findings across these two reports, incorporating additional data (CAT and UMS collected one year post implementation) and analyses, including a qualitative comparative analysis, to understand how CHC characteristics

[§§] AIR anticipated using these coaching observations to ask additional questions about each team's goals, aims, change ideas, and progress. Due to delays in finalizing these aspects of team road maps by March 2022, AIR was unable to probe deeply into these additional aspects of team progress.

and changes in organizational capacity and practices are associated with changes in organizational capacity and patient outcomes.

Universal Measure Set Final Analysis Approach

For each wave of the universal measure set, AIR reviewed the aggregated data for logical inconsistencies in each sheet of data, followed up with the team on any anomalies for correction, and then compiled the data using Python, aggregating all measures from each site into one data file, including overall and stratified estimates. While AIR initially explored running analysis at the site level, a number of teams over the course of the collaborative only submitted at the organization-level, rolling up the estimates for all sites participating in the study into one workbook. To have a consistent description of the derived estimates, all site-level numerator and denominator data were rolled up to the organizational level. Not all sites or facilities in a larger health system were involved in the ABHE-PC learning collaborative. Because each team chose a subset of its facilities for implementation of change ideas, estimates should be interpreted as the organizational estimate for all sites that participated in the ABHE-PC learning collaborative rather than an estimate for the entire health system.

Final analysis inclusion criteria. The researchers only included those sites with data submissions in baseline, endline, and follow-up waves in the final analysis. Two teams removed a total of five sites following the baseline period after reassessing the scope of work and their capacity to test changes across multiple settings over the finite implementation period. One team that discontinued a site's participation in the ABHE-PC learning collaborative following baseline added a separate site for which staff reported UMS data at endline and follow-up. Another team was only able to provide UMS data for its one participating site at endline and follow-up, and a third team did not have the capacity to report data for one of two sites at follow-up. For each of these sites, data is not included in program-level estimates of change over baseline to follow-up.

AIR summarized staffing and diagnoses count measures and developed proportions and utilization rates (BH visits per patient) and ratios (patient to provider ratios) using the numerator, denominator, and population statistics captured across the data set. Difference scores were also calculated between each wave for most estimates, at the organization level. These estimates were then averaged across the participation organizations with data across all three waves for the measure. Estimates were then compared against internal ABHE-PC learning collaborative averages, baseline rates, state or national historical levels, or state or national targets, as available and applicable for the ABHE-PC learning collaborative context. Equity was assessed through reviewing absolute differences in rates at each wave, and through assessment of relative improvement against comparison groups within each demographic stratification. Readers should note that some priority populations and stratifications have relatively small populations (e.g., sexual orientation and gender identity) leading to variable rates over the time points. In some cases, strata were collapsed

to generate more stable estimates for comparison (e.g., Other Gender Identities – collapsing male-to-female, female-to-male, transgender, queer, and self-reported other gender identity), though this was avoided where possible to ensure assessment of as many priority populations as possible.

Qualitative Comparative Analysis Approach

Qualitative comparative analysis (QCA) conceptualizes the relationship between social phenomena in terms of set relations. It assesses patterns of co-occurrence between causal conditions and outcomes of interest using Boolean logic. The primary advantage of using QCA for this analysis is that it allows the complexity of the multiple and varied evaluation data sources about the ABHE-PC learning collaborative to be captured in a systematic and substantively meaningful way, while providing an avenue for the type of empirical testing important to identifying evidence-based best practices for successful programs. An added benefit of using QCA for this analysis is that it accommodates small sample sizes well and allows for the identification of combinations of factors, that is multiple pathways, that influence positive outcomes.

Our analysis followed the procedures for QCA outlined by Ragin (2008) and involved four main steps. First, we identified causal conditions that were likely to be related to the outcomes of interest. This process was iterative in that both theoretical or empirical knowledge and themes emerging from the ABHE-PC evaluation data informed the identification of plausible causal conditions. Second, we assessed each case (community health center) to determine the extent to which it displayed the causal condition. This process is called calibration. In this analysis, dichotomous calibration ("crisp set" QCA) was used for each condition. A value of one indicates that the case displays the causal condition; a value of zero indicates that the case does not display the causal condition. Table 2 lists the calibration metrics for all causal conditions and outcomes.

After calibration, we analyzed the relationship between individual and combinations of causal conditions and the outcomes of interest using tests of consistency and coverage in fsQCA software.[24] If a particular combination of conditions is present when the outcome of interest is also present in the vast majority of cases displaying this set of conditions, consistency is high and a meaningful empirical relationship between the causal conditions and the outcome is indicated. If a particular condition or combination of conditions is one of a few, versus one of many individual or combinations of conditions that are present when the outcome is also present, coverage is high and empirical relevance is indicated. Consistency and coverage are somewhat analogous to the concepts of significance and explained variation (e.g., r^2) in multivariate regression analyses.

A threshold of 0.75 is commonly used to assess whether a consistency result is meaningful. There is not a commonly used threshold to assess whether a coverage result is meaningful. For

ease of interpretation, we have characterized results with a consistency of greater than 0.75 and a coverage greater than 0.50 as a strong relationship (highlighted in green font) and results with a consistency of greater than 0.75 and a coverage greater than 0.25 as a moderate relationship (highlighted in blue font).

Table 2. Calibration Results for Causal Conditions and Outcomes Analyzed Using QCA

Condition	Calibration indicator	Description	Data source(s)
Baseline Conditions			
Organizational Size	1 = Large Patient Population	Organization is in the 75th percentile of participating ABHE-PC health centers (>43,774 patients)	Grant Applications
Proportion of care team licensed behavioral health	1 = Percentage of behavioral health staff is greater than 11%	The 11% threshold is based on the average percentage of behavioral health staff reported by all community health centers with available data in UDS in 2022 (Source: https://www.nachc.org/wp-content/uploads/2023/07/Community-Health-Center-Chartbook-2023-2021UDS.pdf). Behavioral health staff include psychiatrists and licensed mental health staff (e.g., clinical psychologists, social workers, counselors).	Universal Measure Set (UMS)
Senior Leadership and Organizational Commitment — Baseline	1 = High	Baseline score on the primary driver senior leadership & organizational commitment was greater than or equal to 4 ("intermediate").	Capability Assessment Tool (CAT)
Data-Driven Systems — Baseline	1 = High	Baseline score on the primary driver data driven systems was greater than or equal to 4 ("intermediate").	CAT
Access to Care — Baseline	1 = High	Baseline score on the primary driver access to care was greater than or equal to 4 ("intermediate").	CAT
Integrated Care Team and Care Delivery Systems — Baseline	1 = High	Baseline score on the primary driver integrated care team and care delivery was greater than or equal to 4 ("intermediate").	CAT
Patient Activation and Self-Management — Baseline	1 = High	Baseline score on the primary driver patient activation and self-management was greater than or equal to 4 ("intermediate").	CAT
Community partnerships — Baseline	1 = High	Baseline score on the primary driver community partnerships was greater than or equal to 4 ("intermediate").	CAT
Total — Baseline	1 = High	Baseline total score on the was greater than or equal to 4 ("intermediate").	CAT
Program Activity Conditions			

Condition	Calibration indicator	Description	Data source(s)
Leadership Consistency	1 = Active Leader	There is not an "inactive" lead in the contact information document for the health center.	Learning Collaborative Attendance Rosters and Engagement Tracking (ET)
Improve screening and care delivery	1 = PDSA focused on improving screening and care delivery	Organization is in the change idea group group focused on improving their model or processes for screening, tracking, care delivery, or follow-up.	Quarterly Reporting; Learning Collaborative Summaries
Focus on a priority population	1 = PDSA focused on tailoring training and care for supporting a priority population	Organization is in the change idea group that placed emphasis on using patient-centered language or cultural adaptations, focusing on their priority patient populations.	Quarterly Reporting; Learning Collaborative Summaries
Prioritize teamwork	1 = PDSA focused on strengthening coordination between primary care and behavioral health	Organization is in the change idea group that attempted to strengthen coordination across provider teams using workflows that supported primary care and behavioral health.	Quarterly Reporting; Learning Collaborative Summaries
Increase in enabling staff	1 = Increased	1 = Any increase in number of enabling staff between baseline and follow-up data collection.	
Increase in proportion of care team licensed behavioral health	1 = Increased	1 = Any increase in the percentage of behavioral health staff between baseline and follow-up data collection.	UMS
Coaching Attendance	1= High	Organization missed less than four coaching sessions.	ET
Leadership attendance at learning Sessions	1 = High	Team-designated staff member serving in grant role of "Leadership Oversight" attended three or more webinars.	ET
Outcomes			
Senior leadership & organizational commitment — Increased	1= Increased	Primary driver score for senior leadership and organizational commitment increased by 3 or more points between baseline and follow-up data collection.	CAT
Data-Driven Systems — Increased	1= Increased	Primary driver score for data-driven systems increased by 3 or more points between baseline and follow-up data collection.	CAT

Condition	Calibration indicator	Description	Data source(s)
Access to Care — Increased	1= Increased	Primary driver score for access to care increased by 3 or more points between baseline and follow-up data collection.	CAT
Integrated Care Team Care Delivery — Increased	1= Increased	Primary driver score for integrated care team and care delivery increased by 3 or more points between baseline and follow-up data collection.	CAT
Patient Activation & Self-Management — Increased	1= Increased	Primary driver score for patient activation and self-management increased by 3 or more points between baseline and follow-up data collection.	CAT
Community Partnerships — Increased	1= Increased	Primary driver score for community partnerships increased by 3 or more points between baseline and follow-up data collection.	CAT
Total — Increased	1= Increased	Total CAT score increased by 3 or more points between baseline and follow-up data collection.	CAT
Decreased days waiting for care	1 = Decreased	Organization reported at least a 10% reduction in days waiting for care between baseline and follow-up data collection.	UMS
Less than goal days waiting for care	1 = Less than goal	Organization reported less than 10 days waiting for care at follow-up data collection. Ten days waiting for care is the goal set by CA DHS.	UMS
Depression screening — All	1 = Increased	Organization improved depression screening rate by 5 or more percentage points between baseline and follow-up data collection.	UMS
Depression screening — Latinx	1 = At or above average	Depression screening rate for Latinx patients at the organization is at or above the average for all organizations at follow-up data collection.	UMS
Depression screening — Spanish	1 = At or above average	Depression screening rate for Spanish speakers at the organization is at or above the average for all organizations at follow-up data collection.	UMS
Depression screening – Lesbian or Gay	1 = At or above average	Depression screening rate for lesbian or gay patients at the organization is at or above the average for all organizations at follow-up data collection.	UMS
Depression screening — Black	1 = At or above average	Depression screening rate for Black patients at the organization is at or above the average for all organizations at follow-up data collection.	UMS

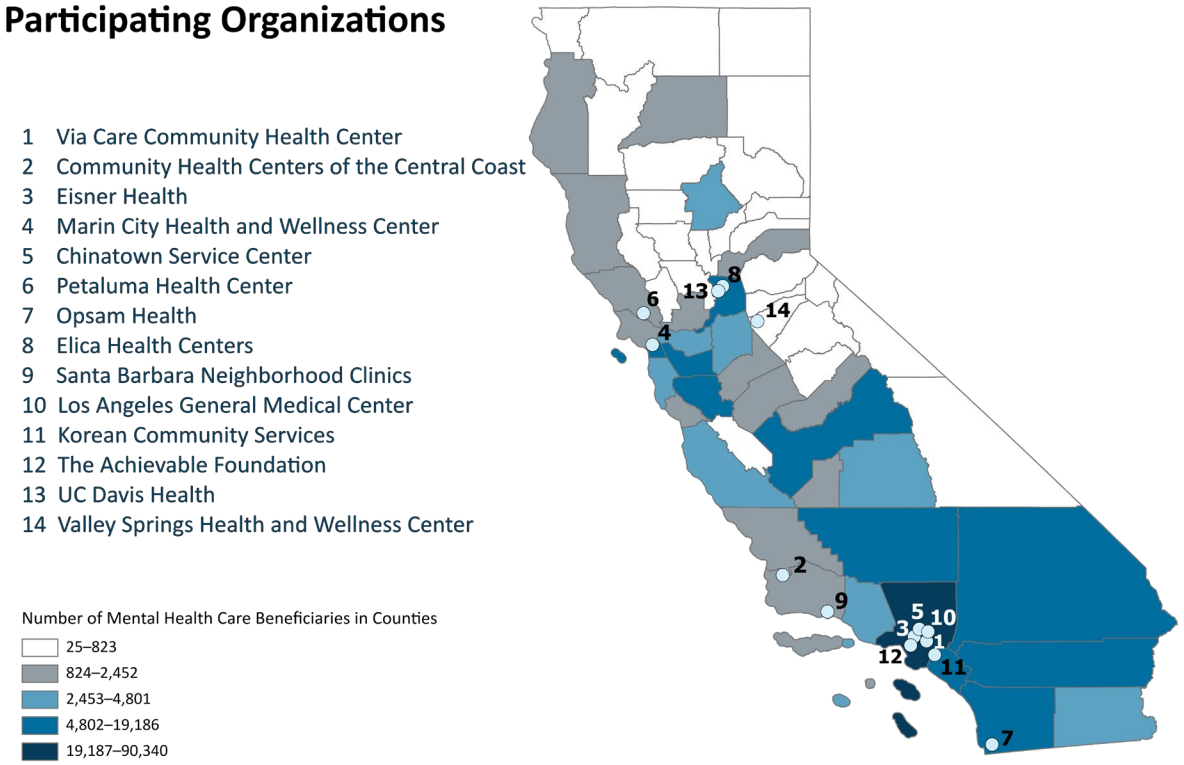
Our fourth and final step was to assess the minimum combinations of causal conditions that were necessary and sufficient to produce the outcome. This test identified the simplest causal combinations that produced the outcome.

Team and Site Characteristics

Characteristics of Participating Teams and Sites

Teams invited to join the ABHE-PC learning collaborative came from CHCs from across California. Five of the CHCs are located in northern California, and nine are in southern California (Figure 6).

Figure 6. Map of Participating Teams and Number of Adults Receiving Mental Health Care Beneficiaries, by County*,†



* Data on the number of mental health care beneficiaries by county are from 2020 and were obtained from the Mental Health Management and Performance Outcomes Reporting Branch of the California Health and Human Services (CHSS) Agency (Adult Population – Performance Dashboard – Datasets – California Health and Human Services Open Data Portal).

† Please note that Open Door Community Health Centers (not shown on the map) decided to disenroll from the program in Quarter 2 (Q2) 2022.

Eleven are FQHCs, and their organizations serve 36,576 patients annually on average (range of 2,156–145,000 patients). Across the organizations, teams applied to implement the ABHE-PC learning collaborative in 33 sites (e.g., facility locations), with a range of 1 to 6 sites per organization. Table 3 shows the number of providers overall and behavioral health–specific providers on average and the range across organizations based on information received in CHC grant applications. Standard primary care categorizations of practice size consider organizations with 2–5 full-time providers on staff to be small practices, those with 6–20 providers to be medium practices, and those with 21 or more providers to be large practices. Under this classification scheme, three ABHE-PC organizations are small practices (Marin City Health and Wellness, Valley Springs Health and Wellness Center, and the Achievable Foundation), two teams represent medium-size practices (Santa Barbara Neighborhood Clinics and Korean Community Services), and the remaining nine teams are from organizations that are large practices (Petaluma Health Center, Elica Health Centers, UC Davis Health, Community Health Centers of the Central Coast, Chinatown Service Center, Eisner Health, , Via Care Community Health Center, and Samahan Health Centers).

Table 3. Provider FTEs and Number of Behavioral Health Staff Across Organizations at Initiation of the ABHE-PC learning collaborative

Summary statistics	Number of FTE providers on staff (range)	Number of behavioral health providers on staff (range)
Average (range)	56.1 (3–206)	11.7 (2–40)

Table 4 presents the characteristics of each team by region, including the number of participating sites at the initiation of the learning collaborative, whether it is an FQHC, the number of patients served annually, the number of FTE providers on staff, and the number of behavioral health providers on staff. Together, participants had 33 sites at initiation with 786 providers (including 164 behavioral health providers) serving 245,251 patients annually throughout California. Twenty-nine sites ultimately participated in the implementation past the baseline period.

Table 4. Team Characteristics, by Region

Organization	Number of participating sites	Federally Qualified Health Center?	Patients served annually (*n*)	FTE providers on staff (*n*)	Behavioral health providers on staff (*n*)	Psychiatrists per 100,000 county residents
NORTHERN CALIFORNIA	***8***	***3***	***96,834***	***353***	**67**	
North Coast	**2**		**32,885**	**73**	**14**	
Petaluma Health Center	2	Yes	32,285	73	14	102
Sacramento	**4**		**55,859**	**272**	**46**	
Elica Health Centers*	2	Yes	11,359	66	6	301
UC Davis Health	2	No	44,500	206	40	301
San Francisco Bay Area	**1**		**3,690**	**3**	**4**	
Marin City Health and Wellness Center	1	Yes	3,690	3	4	179
Northern San Joaquin Valley	**1**		**5,000**	**5**	**3**	
Valley Springs Health and Wellness Center	1	No	5,000	5	3	3
SOUTHERN CALIFORNIA	***25***	***8***	***148,417***	***433***	***97***	
Central Coast	**8**		**55,030**	**107**	**24**	
Community Health Centers of the Central Coast	3	Yes	35,449	87	16	82
Santa Barbara Neighborhood Clinics	5	Yes	19,581	20	8	82
Los Angeles	**8**		**76,079**	**205**	**61**	
Chinatown Service Center	1	Yes	10,352	49	23	1946
Eisner Health	2	Yes	17,834	81	16	1946
Los Angeles General Medical Center	2	No	34,800	43	12	1946
The Achievable Foundation	1	Yes	2,093	4	2	1946
Via Care Community Health Center‡	2	Yes	11,000	28	8	1946
Orange County	**3**		**5,207**	**11**	**4**	
Korean Community Services	3	Yes	5,207	11	4	495
San Diego	**6**		**12,101**	**110**	**8**	
Samahan Health Centers‡‡	6	Yes	12,101	110	8	715

* One Elica site that participated at baseline was dropped thereafter and replaced with a separate implementation site. The dropped and new sites are not included in UMS summary statistics.

‡ While staff from Via Care Community Health Center's Cesar Chavez site participated in implementation activities and provided CAT data for this site following baseline, they did not have capacity to report follow-up UMS data for the Cesar Chavez site.

‡‡ Four Samahan sites dropped from the ABHE-PC learning collaborative following baseline; two of this team's original sites were ultimately included in subsequent UMS and CAT reporting.

In their initial applications, teams identified the priority populations among their patient base on whom they endeavored to focus their ABHE-PC learning collaborative efforts. These included subpopulations by age (transitional age youth, middle aged people, and people age 65 and older); ethnicity (Latinx); and race (African American people, Asian American people, Pacific Islander people, and indigenous people); immigrant populations; undocumented populations; migrant farmworkers; people who identify as LGBTQ; and those with persistent mental illness, post-traumatic stress disorder (PTSD), or intellectual and developmental disabilities (IDDs). These priority populations were ultimately refined further during implementation activities and are discussed in more detail in the Results section.

Health Centers' Change Ideas for Systemic Change

Although teams started with a broader set of change ideas and populations of focus, through implementation, they narrowed their approaches, and, in the end, teams' primary change ideas naturally fell into three groups:

- **Group 1: Improve screening and care delivery.** Five teams focused on improving their model or processes for screening, tracking, care delivery, and follow-up.
- **Group 2: Focus on a priority population.** Five teams placed emphasis on using patient-centered language and cultural adaptations focusing on their priority patient populations.
- **Group 3: Prioritize teamwork.** Four teams attempted to strengthen coordination across provider teams using workflows that supported primary care and behavioral health collaboration.

Within each of these groups, teams deployed a variety of change ideas relevant to their staff and clinics' overall goals for enhancing integration, scaled changes based on feasibility, and adapted as they engaged in a continuous quality improvement process. AIR captured details on the teams' final change ideas and tests through listening sessions with each team at endline, and from storyboard presentations shared at the final celebration event.

Group 1: Improve Screening and Care Delivery

Teams in group 1 primarily focused on increasing their PHQ-9 screening and making changes to their referral workflows.

Increase PHQ-9 Screening

Teams engaged in improving their integration model and the processes focused on making changes to increase their PHQ-9 administration (both in the mode and frequency of administration). They also implemented streamlined workflows to send referrals from primary care to behavioral health.

As a result of changes in screening processes across group 1 teams, patients received screeners with more frequency at their appointments. Two teams noted that patients complained about having to respond to the PHQ-9 questions at each appointment, but most patients generally acclimated to the new practice. One team commented that they were motivated to continue the practice because it improved the accuracy of their results.

- **Example 1.** One team moved from administering the PHQ-9 orally to administering the written version. This team used Plan-Do-Study-Act cycles to create and refine the process for implementing the workflow for the written administration. This involved eliciting feedback from patients, staff, and providers. The team started implementing the written version first at one clinic site, and after initial success, they expanded across clinics, while still receiving process feedback from staff at the original site.

- **Example 2.** Another team also moved to a written format, hoping to get more accurate responses. Under this change, patients were provided the PHQ-4 at reception, where they had privacy to complete the form in the waiting room. If the PHQ-4 score prompted either the PHQ-9 or the GAD-7, the medical assistant then administered these surveys on paper or orally in the exam room. If patients scored high on either, then the medical assistant informed the patients about a referral to behavioral health prior to the patient meeting with the primary care physician. This team also tested implementation with a small pilot group, using one physician's patients before rolling out the written format to all providers. The Plan-Do-Study-Act cycles helped them iterate the process of administering the written format and defined responsibilities, and they collected feedback from front office staff, medical assistants, and physicians along the way, tweaking where necessary.

- **Example 3.** One team reported that its telehealth patients were not getting screened for depression and implemented a process to screen patients prior to their behavioral telehealth appointment. In this case, the PHQ-9 was administered by the care coordinators orally before the behavioral health clinician joined the call. Although this took time away from the care coordinators who were also answering phones, connecting other patients to appointments, and checking in in-person patients, this CHC found that this was preferable to administering the screening at the top of the behavioral health appointment because it took time away from the appointment. At the end of the ABHE-PC learning collaborative implementation, patients at this CHC then received a PHQ-9 at every medical (in-person) or behavioral health (telehealth or in-person) appointment, though the clinic did not re-administer the survey if the patient had more than one appointment in a week. This clinic acknowledged that, although behavioral telehealth patients were now getting screened at increasing rates,

the process was still cumbersome, and they were hoping that the implementation of a patient intake platform would improve this process by sending a link to patients two hours prior to their appointment.

- **Example 4.** One team overhauled its behavioral health care plan. The team moved from an unlimited, 50-minute session structure to a fixed, 13-session, 30-minute structure, and added in PHQ-9 screening at designated points throughout these 13 sessions. As a result, their patients were screened when they came in to see their physician, once they were referred to behavioral health (intake), at the 6th session, at the 12th session, and every 6 sessions thereafter (if applicable), and at closing. This change in care plan had both positive and negative impacts. It resulted in an elimination of their behavioral health wait list, and all patients were seen. On the other hand, for those behavioral health patients who were used to the prior system, the transition to the new model was difficult as they were used to longer appointments that did not have a specific end date.

Changes in Referral Workflows

Teams that refined their referral workflows from primary care to behavioral health used both specific staff positions (e.g., behavioral health consultant or navigator) and electronic tools to streamline and enhance this process.

- **Example 1.** One team used a new behavioral health navigator position to accept warm handoffs and bring patients into a private room to provide psychoeducational resources.
- **Example 2.** Another team created a behavioral health consultant position to be colocated in primary care and receive warm handoffs or full appointments directly from the primary care physicians. The team developed this position after learning about Cherokee Health Center's behavioral health consultant role at the site visit. Unfortunately, after approximately one year, this team discovered that same-day appointments for primary care and behavioral health were not reimbursable under California law, and so had to eliminate this position because they could not fund it adequately. However, in cases where a physician still needs to do a warm handoff, they can often find a behavioral health clinician who is not in session, and the clinician can meet with the patient. They try to get the patient scheduled for a full behavioral health appointment on another day so that they can then bill for the work. The colocation of providers reduced silos, and both the behavioral health and primary care teams still found ways to collaborate even without the behavioral health consultant role.
- **Example 3.** One team streamlined its referral workflow by creating referral groups within its EHR, rather than referring to individuals, where the team previously could not track the direct message tasking to the behavioral health provider. Additionally, the

team added to the workflow a mechanism for communicating back to the primary care providers that the referral was received and its status, such as scheduled, not scheduled, or how many attempts were made before closing. This shifted responsibilities away from case managers and to the schedulers to make the appointments, freeing up the case managers to do more than referral management. Implementing this workflow made the referral process more personal for patients and increased the level of collaboration and open communication between the behavioral health and primary care staff.

Group 2: Focus on a Priority Population

To focus on systemic changes in support of a priority patient population, group 2 teams enhanced their approaches to patient-centered language and making cultural adaptations to priority populations. They implemented a variety of changes including staff training on collecting patient demographic data, creating cross-departmental workgroups, streamlining referrals, and developing patient support groups.

Staff Training on Collecting Data on Patient Demographic Information

Most group 2 teams held staff trainings to help staff across the clinics familiarize themselves with the workflow and with the language of sexual orientation and gender identify (SOGI) and to help them feel more comfortable when engaging with patients.

- **Example 1.** One team implemented staff training across departments including the front office, call center, back office, and providers to create a shared understanding and common language around SOGI data. Then they engaged in retraining staff. They found success leveraging existing resources to hold these trainings by using the behavioral health standing meetings for trainings instead of finding an additional time to meet.
- **Example 2.** Another team wanted to focus on SOGI data collection after reviewing its patient demographic data and found that the data showed a small population of LGBTQ patients. The team discovered that this was a result of staff not entering this information into the EHR. This team created trainings for staff to enhance their understanding of what SOGI data are, why these data are important, and where to capture these data in the EHR. As part of its continuous quality improvement processes, this team conducted pre/post-survey for the trainings to understand the knowledge gained by staff.
- **Example 3.** A third team discussed using a continuous quality improvement process to improve the capture rate of SOGI data by first recognizing that the team needed to establish a standardized workflow. Once the team had done that, it examined the data and determined that there were still gaps, with a lot of staff entering “unknown” to the

SOGI questions. The team determined that the underlying reason may have been related to staff discomfort in collecting this information from patients. To address this issue, the team brought in an expert to facilitate trainings for staff that were focused on creating comfort around using gender- and sexual orientation-affirming language and engaging patients in conversations. This team also collected pre/post-surveys of the trainings, and in analyzing that survey data, found that staff responded well and had experienced improved interactions with patients around SOGI.

Cross-Departmental Workgroups

Another common approach was implementing an ABHE-PC workgroup to enhance integration across primary care and behavioral health departments within the clinics. Two teams discussed how creating an ABHE-PC workgroup helped to enhance integration across their clinics and to create buy-in for implementing their change ideas.

- **Example 1.** In one instance, the team held one-hour biweekly meetings with clinical and administrative staff to discuss project updates and upcoming trainings and review the materials developed as part of the program. The team also engaged a patient colead for its ABHE-PC learning collaborative work. The colead came on-site to attend the biweekly meetings and staff trainings and was available for virtual conversations with staff who had questions. The patient colead discussed their experience as a patient in these forums, providing valuable insight into the patient perspective. This team funded the patient colead through the team's ABHE-PC grant funds. The team also discussed how the grant itself provided the space for the primary care and behavioral health care teams to come together to talk about care for their gender-expansive patient communities, and in doing this, communication improved both across these teams and with the patients seen by both teams.
- **Example 2.** Another team created a workgroup that included the team's Quality Assurance/Quality Improvement director, the COO, and the LGBTQ, SUD, behavioral health, and enhanced care management departments. This workgroup met monthly to work through the integration across all patient services. The team provided feedback on how to implement the proposed changes and communicate changes and information to staff. In creating this workgroup, the team was trying to implement a "one team" approach that it had observed at the Cherokee site visit to ensure that patients felt supported across the agency.

Streamlining Referrals

Other teams worked to create and refine screening and referral workflows for specific patient populations (e.g., patients with IDDs, gender-expansive patients). The work across teams in

group 2 centered less around technological improvements in workflows and more around communicating and connecting with staff to ensure all staff received the same information and training, thereby increasing their comfort levels in working with particular patient populations. Group 2 teams also worked to refine workflows to streamline referrals to behavioral health, especially for specific patient populations.

- **Example 1.** One team worked with patients with IDDs and tested a process modeled after Cherokee's behavioral health consultant role where there were designated time slots for the behavioral health providers to be on-call during which time a physician could pull them into medical appointments as needed. The team was still testing this approach at the close of the implementation period.
- **Example 2.** Another team strengthened the workflow for its gender-expansive patients who came to the clinic for their medical care and were looking to receive gender-affirming care. This team used the grant to improve the workflow to engage the behavioral health providers who had historically been uncomfortable providing letters of support for these patients to receive surgical services. The team created a template letter supporting the need for gender affirming surgical services for patients and conducted trainings to engage the behavioral health providers in this process and increase their comfort and familiarity with the process.
- **Example 3.** A third team focused on identifying and providing supports to patients experiencing traumatic stress or post-traumatic stress disorder in its predominately Black or African American patient population. The team developed a referral system where the physician created a trackable referral, which was sent to the behavioral health scheduler, and then the scheduler communicated back to the physician about whether the patient was scheduled. In this new process, the team could track call attempts, whether contact was made, and how many referrals were coming into behavioral health. The team was previously not able to track any of this. The team engaged both physicians and behavioral health clinicians in this workflow, and near the end of ABHE-PC learning collaborative implementation, it was followed exclusively. Additionally, after experiencing a high no-show rate, the team changed the policy around no-shows and no longer rescheduled patients for the same day. Patients were encouraged to cancel 24 hours in advance, and if they did not, they were rescheduled for another day. If a patient had two no-shows in a month, then the patient was rescheduled for the next available intake appointment slot, which was usually further out than a follow-up appointment opening. In implementing this scheduling structure, the team saw a reduction in no-shows.

Developing Patient Support Groups

- **Example 1.** Taking a unique approach among ABHE-PC teams, one team focused a large part of its ABHE-PC work on implementing a patient support group for their patient population with IDDs. After conducting patient surveys, the team learned that its patients were more interested in social-emotional supports than long-term therapy and wanted to receive this support from the same place they receive their medical care. In response, the team created a psychoeducational group to address some components of behavioral health with this population. Additionally, the team engaged all staff — including the call center, data analytics, front desk, and the medical team — in education about working with patients with IDDs and in understanding how behavioral health conditions co-occur in this population.

Group 3: Prioritize Teamwork

In tandem with improving systems in their CHC's, Group 3 CHCs placed an emphasis on building stronger networks and relationships between their staff. They did this through enhancing the time spent together in interdisciplinary planning meetings as well as creating intentional workflows for warm handoffs.

Interdisciplinary Team Meetings

Teams involved in strengthening behavioral health integration through teamwork relied on implementing cross-disciplinary team meetings and huddles with staff to coordinate on care management, educate on workflows, and enhance knowledge on behavioral health patient needs and services.

- **Example 1.** For one team, while it implemented change ideas that resulted in changes to processes, the team felt that it achieved the most success with its monthly interdisciplinary team meetings and the behavioral health care team was able to obtain points of contact in the medical department, including management, leadership, and direct staff.
- **Example 2.** Another team reported a similar outcome from its morning huddles. Once the medical and behavioral health care teams knew each other better, they were able to standardize their warm handoff process, and the behavioral health care team was able to educate the medical team about the criteria for the warm handoff. The behavioral health care team also worked with the clinic director and supervisors to obtain time on the agenda at the monthly all-clinic meetings to present to the clinical staff on the changes they were implementing based on their work in the ABHE-PC learning collaborative. This was a guaranteed time available to them at the meetings and

provided a space for the ABHE-PC team to receive feedback on the changes they were testing and implementing.

- **Example 3.** One team reported that having joint behavioral health and primary care meetings allowed the teams to identify the high need patients so that all departments could be on the same page and could coordinate care in a team environment. This team did not previously have multidisciplinary team meetings and found the joint meetings essential to enhance its care coordination. At one site, the team held meetings weekly with the medical director and Medication-Assisted Treatment director. At another site, the team held biweekly meetings with the community service center that was also on-site, which facilitated further improvement in care coordination for patients with social needs.
- **Example 4.** Finally, one ABHE-PC team, which was itself multidisciplinary, integrated its work into a number of different meeting contexts across the organization. Before testing and implementing its change ideas at the clinic sites, the team spoke with its executive and family and internal medicine leadership and the physicians that run the clinic to get their buy-in and requests for other changes to improve health equity. The team wanted to be intentional in creating changes that were relevant to the providers in the clinic. Once the change (developing SUD screening workflows) was identified, the population health specialist worked with behavioral health clinicians to develop, refine, and implement the workflows. The team then held meetings with teams to introduce the new workflow and conducted check-in meetings with the physicians in the clinic to understand how it was being operationalized. The clinicians who worked alongside the physicians in the clinic could also check in on the process. This team estimated that the initial workgroup met in May 2022, presented the new workflow to the clinic in September 2022, and had fully implemented the workflow within the clinic by November 2022. The ABHE-PC team also attended clinic meetings to increase engagement and provide education about the changes implemented. They were strategic about which meetings they went to and were cognizant of other priorities at the clinic. They also supplemented their in-person meeting presentations with follow-up written materials.

Workflows for Warm Handoffs

Group 3 teams also created or strengthened workflows around warm handoffs, further strengthening integration across teams.

- **Example 1.** In one instance, a team enhanced its SUD screening workflow by creating a best practice pop-up in its EHR for physicians when a patient's SUD screening triggers further follow-up. This was meant to aid in the referral process and to mimic the process

already in place for depression screening. The EHR originally had a button providers needed to click to generate a referral to behavioral health. During testing, they switched the process so that providers now had to uncheck the box if a referral was not necessary. The team was surprised that this did not substantially change the referral rates.

- **Example 2.** In another instance, while the team had had a warm handoff process for a long time, it had never been standardized. The ABHE-PC learning collaborative gave the team the space it needed to focus on that process and standardize it across their clinics. To do so, the team developed a warm handoff checklist for its medical assistants. The team tested the form to ensure that it was not too long. Similar to other teams, the team also implemented a process to add time slots into clinicians' schedules to allow for quicker access to appointments and follow-ups. Now the team has a workflow to schedule urgent patients for same-day appointments.
- **Example 3.** As part of its efforts to fully integrate across teams, one team created a policy that all incoming behavioral health patients had to also be primary care patients in order to enhance the care services provided to them. The team called this "enhanced care management" (prior to the introduction of CalAIM's enhanced care management). As part of this strategy, the team also implemented a staff role to do care management with patients across behavioral health and primary care.
- **Example 4.** Similarly, another team developed an integrated services coordinator role to which it reallocated case managers. This role went from the behavioral health offices to the medical clinic daily during peak hours to be available for immediate in-person consultation. They were available to meet with patients if there was an identified behavioral health or emotional supported need or a social services need. The creation of this role reduced the workload for administrative staff as they were previously the default staff for triaging crises or referrals. As a result of the changes in one clinic, patients were more aware of the behavioral health services available to them and were thankful to have this increased awareness.
- **Example 5.** In another instance, the team found that when implementing warm handoffs, the medical team was not always adequately notifying the patient that a behavioral health clinician was going to come in and see them. Patients were not being given the opportunity to consent to the warm handoff, and therefore were not receptive when behavioral health staff approached them. The behavioral health staff used these instances as training opportunities for the medical providers to remind them to inform patients about the warm handoff.

KEY TAKEAWAYS: SYSTEMIC CHANGES

- Change ideas fell under three groups:
  - Group 1: Improved screening and care delivery
  - Group 2: Focused on a priority population
  - Group 3: Prioritized teamwork
- Most group 1 teams optimized depression screening administration.
- Most group 2 teams held staff trainings on patient SOGI identification and accurate data entry.
- All group 3 teams implemented cross-disciplinary team meetings.

All groups worked to improve workflows for referrals from primary care to behavioral health.

Results

This section of the report provides additional information about participation in the ABHE-PC learning collaboration. It also describes the implementation of organizational capabilities and care coordination related to behavioral and social health integration. Finally, this section presents trends in patient outcomes and care experiences from baseline through follow-up, and team experiences participating in the learning collaborative and coaching structure and activities.

Implementation and Participation

In this section, the authors describe the implementation of the ABHE-PC learning collaborative and participating health centers' engagement with the ABHE-PC learning collaborative in order to further understand what resources and supports were provided to ABHE-PC CHCs and to what extent those supports model strategies for how to advance equitable, integrated behavioral health care; what resources and supports were most used by teams; and what resources and supports ABHE-PC teams found to be most valuable in their work for advancing equitable, integrated behavioral health care (RQs 1–3).

Program Events

This section provides an overview of the program events and CHC's participation in ABHE-PC learning sessions and topical webinars offered during the course of the learning collaborative. During the initial launch of the ABHE-PC learning collaborative, CCI facilitated a few events to orient and onboard participant teams. These included a program kickoff event and orientation sessions for both the CAT and the evaluation. CCI developed the content for the subsequent listening sessions based on team needs, as identified by the CAT. Content was also informed by

feedback collected from coaches on monthly planning calls. On these calls, coaches shared what they noticed on their initial one-on-one interactions with each team, and their perspectives of ABHE-PC team's understanding of equitable, integrated behavioral health frameworks. CCI also developed content in consultation with Parinda Khatri, Medical Director for Cherokee Health Systems and CCI subject matter expert, when developing the original learning collaborative proposal.

All ABHE-PC teams were required to attend program events. In addition, all members of the core team were encouraged to participate, along with others from their organizations who could benefit from the information. Table 5 provides a summary of each event that was held, the number of teams that attended, the total number of attendees for each event, and the topics covered. Each team was present at almost all events; the number of attendees varied by event.

Table 5. Program Event Details

Program event	Date	Number of teams, attendees present	Topics covered
CAT Orientation for Teams	9/28/2021	15, 42	• CAT Purpose & Background • CAT Domains & Factors • Steps for Completing CAT • Live Demonstration
Program Kickoff	11/03/2021	15, 52	• Vision for ABHE-PC learning collaborative • Meet the Teams • Program Overview • Review CAT Results • Evaluation Overview
AIR Evaluation Orientation	11/17/2021	15, 47	• Introduction to AIR Team • Program Evaluation Design and Timeline • Review and Provide Feedback on UMS • Patient Survey
Learning Session 1: Mapping your ABHE-PC Journey: Determining Your Route & Packing Tools for Success	12/02/2021	15, 50	• Networking: Get to Know Your Cohort • Belonging in Action • Behavioral Health Equity: A Starting Point for Change • Developing your Road Map

Program event	Date	Number of teams, attendees present	Topics covered
Topical Webinar 1: Letting Patients Lead: Language, Listening and Learning	03/03/2022	15, 50	• Team Share-Outs: Letting Patients Lead • Embodying the "Aloha" Spirit Through Language, Listening, & Learning • Learning Game • Team Breakout: Partnering With Patients
Learning Session 2: Strengthening Your Foundation of Integration	05/18/2022	14, 36	• Reflecting on Your ABHE-PC Journey • Belonging, Dignity, & Justice in Action: Dignity • Back to Basics: Why Behavioral Health Integration Matters • Best Practices: Key Elements for Behavioral Health Integration • Developing a PDSA to Drive Change
Topical Webinar 2: Building a Data-Informed Culture	08/31/2022	13, 36	• Leveraging Your Data Sources • Best Practices: Using Data to Improve Outcomes • Breakouts: Reflecting on Today's Lessons • Storyboards: Sharing your ABHE-PC Journey
Cherokee Health Systems Site Visit	09/19/2022 – 09/20/2022	6, 8	• Overview of Clinical Model • Tour of Facility • Integrated Health Care Equity • Leveraging Community Partners, Stakeholders, and Patient Voice in Improvement • Integrated Care Planning & Implementation • Clinical Role Differentiation: Therapists vs. Behavioral Health Consultants • Clinical Roles: Getting Everyone on the Same Page • Adopting & Implementing Learnings
Learning Session 3: Building Trauma-Informed Systems	10/26/2022	14, 38	• Cultivating Justice • Building Trauma-Informed Systems • Identify Strengths and Gaps in your Trauma-Informed System • Site Visit Spotlight
Topical Webinar 3: Social Drivers of Behavioral Health	12/14/2022	13, 18	• Social Drivers of Behavioral Health • Panel Discussion: Collaborating with Community Partners • Individual Reflection: Selecting a Social Driver to Prioritize

Program event	Date	Number of teams, attendees present	Topics covered
Neighborhood Healthcare Site Visit	02/08/2023 – 02/09/2023 & 03/01/2023 – 03/02/2023	4, 5 (February) 5, 9 (March)	• Introduction to Neighborhood Healthcare • Model of Integration Panel Discussion • Clinic Tour • Partnering with Patients • Community Partnerships Panel Discussion • Clinic Tour • Strategic Planning
Topical Webinar 4: Promoting Continuity of Care through Patient Engagement	02/22/2023	14, 31	• Promoting Continuity of Care • Reflections & Group Discussion • From Testing & Implementation to Sustainability
Final Learning Session	05/17/2023	14, 47	• Spotlighting Major ABHE-PC Successes • Storyboard Pitches with Executive Sponsors • Group Reflective Exercise to Celebrate Successes to Date • Sharing the Future of Equitable Behavioral Health Integration

Program Club

All grantees and their staff teams were invited to participate in CCI's online Club, where CCI centralized the sharing of resources and information. The Club includes the program calendar, a list of assignments, agendas and recordings of past convenings, evaluation information, a curated resource library, program resources, a program roster, and an area in which coaches, teams, and the ABHE-PC learning collaborative can collaborate to ask questions and share ideas. Club members (i.e., ABHE-PC teams, coaches, and CCI staff) were able to view all posts, comment on posts, and create their own posts.

AIR reviewed a snapshot of participation in the Club in April 2022, six months into the 20-month implementation, and gathered that 55 (44.5%) of the original 128 staff associated with the ABHE-PC learning collaborative across the 14 initial organizations had joined the Club as of that time. This means that less than half of the staff who were participating in the ABHE-PC learning collaborative at each organization were current members of the Club. The average number of Club log-ins per team at that time was 31.5, with one team logging in as few as 5 times and another logging in as many as 75 times through the end of April 2022.

The Club housed "The ABC's of QI," a CCI-produced online course that staff in all participating ABHE-PC teams were encouraged to review. As of the end of April 2022, 16 staff members representing 10 ABHE-PC teams had started the online course. This number was not updated at

endline given that all CQI coaching had ended by April 2022, and the progress for gathering the data from CCI's IT staff was burdensome.

Communications

To further engage ABHE-PC teams, the CCI team sent out routine communications bimonthly. These communications were intended to capture all information on program activities, including the evaluation. Where possible, the email communications from CCI directed ABHE-PC teams to content that was stored centrally on the Club. The ABHE-PC newsletter was sent out via email on the second Thursday of each month and provided the following:

- Information on important dates, including the dates for program events and participant deliverables
- Registration information for upcoming events, including a link to the agenda and objectives and notes about any pre-work required
- Notices of other CCI non-ABHE-PC events that teams may have been interested in attending
- Updates on program activities that participant teams should have been engaging in
- a Coach's Corner, with tips or teaching from an ABHE-PC coach
- Evaluation updates focusing on upcoming and in-process data collection
- Information about additional resources external to CCI that may have been of interest to the ABHE-PC teams

The ABHE-PC *Buzz*, a shortened version of the full newsletter, was distributed via email on the fourth Tuesday of each month. It included updates on upcoming events and assignments as well as any other informational resources that CCI found to be relevant (e.g., funding opportunities, workshops and webinars, and written resources).

Quarterly Dashboards, Reflections, and Artifacts

To capture ABHE-PC Team progress and activities over the course of intervention, each team submitted quarterly process and outcome Improvement Dashboards, narrative Quarterly Reflections (e.g., successes, challenges, anecdotes of impact on patients and care processes, and resource needs), and example artifacts demonstrating the outcomes from their work.

Dashboards highlighted five or more measures teams selected across behavioral health process, outcomes, and social need measures of interest. The resulting run charts included a mix of UMS measures reported at greater frequency, specified for a limited population (e.g., patients 65 and older), or chosen from measures developed by the team in coordination with their coach. CCI reviewed and thematically summarized reflections for internal planning and discussions with coaches, funders, and the broader ABHE-PC teams.

Teams were asked to submit artifacts demonstrating their implementation of their integration efforts via their quarterly reflections submissions. The types of artifacts submitted over time included the following:

- **Patient-specific outreach,** such as brochures or flyers on mindfulness and available health services; scripts for patient screening and behavioral health introduction; behavioral health or social needs community resources list
- **Documents with data to further understand patients**, such as a patient interview protocol, patient survey results, and chart review summaries
- **Population health management planning**, such as a call tracker for behavioral health referrals, run charts, and PDSA trackers
- **Workflows**, such as, behavioral health referral or screening workflows and tracking protocols, front desk process guides, and a no-show scheduling process
- **Documents demonstrating staff engagement efforts**, such as PDSA pre- and post-assessments, a cultural awareness training flyer, a training tracker and schedule, and SOGI and SUD training slides and materials

Teams varied in the quantity of artifacts they submitted, with the number of submissions ranging from 2 to 23 per team across four submission time points. The average number of artifact submissions per team was 8.4, with about two submissions per team per quarter.

Coaching

The ABHE-PC learning collaborative employed four coaches who have backgrounds in quality improvement and behavioral health integration. One coach is a leader in health care performance improvement in California, and another is a medical site director at an FQHC in California, where he also oversees the substance use treatment program. The two other coaches have mental health credentials. One is the director of clinical and community collaboration and the lead behavioral health consultant at an FQHC, and the other is a practice coach and was the director of behavioral health at an FQHC.

Each grantee was assigned to one coach. The coach met with the team monthly to check on progress and guide the development of program deliverables. Each month, CCI provided the coaches with agenda topics for the check-in meetings (Table 6).

Table 6. Coaching Activities

Month/year	Topics covered
October 2021	**Status of deliverables** • Review assessment of CAT; answer questions and provide support

Month/year	Topics covered
November 2021	**Program implementation** • Gather feedback on program kickoff, including how the team thought it went, their impressions, and outstanding questions **Status of deliverables** • Review CAT results, including discussion of desired areas of focus, surprises, opportunities for impact, alignment with the organization's strategic goals, and options for measures of impact **Team progress updates** • Discussion around team accomplishments since the last meeting, new barriers experienced, and plans for next month
December 2021	**Program implementation** • Gather feedback on Learning Session 1, including what worked well and what could have worked better **Status of deliverables** • Review draft aim statements to identify areas for improvement; begin filling in road map **Team progress updates** • Discussion about team accomplishments since the last meeting, new barriers experienced, and plans for next month
January 2022	**Status of deliverables** • Review assignments due by 2/1/22, including refining aim statements, completing five patient interviews, completing an outline of the improvement dashboard, and finalizing the project road map **Team progress updates** • Discussion about team accomplishments since the last meeting, new barriers experienced, and plans for next month
February 2022	**Team progress updates** • Discussion about team accomplishments since the last meeting, new barriers experienced, and plans for next month **Quality improvement coaching** • Discussion of feedback on the patient interviews, including what the experience was like, how to strengthen communication with patients, and whether program goals have shifted based on improvement dashboard data
March 2022	**Program implementation** • Gather feedback on Webinar 1, including what worked well and what could have worked better **Status of deliverables** • Check on UMS, due 3/30/22, and populate improvement dashboard, due 4/27/22 **Quality improvement coaching** • Discussion about progress on road map, feedback provided on improvement dashboard, and where the team wants to start the work

Month/year	Topics covered
April 2022	**Status of deliverables**[***] • Address questions about improvement dashboard submission and remind the team to reach out for support as necessary **Quality improvement coaching** • Identify opportunity areas for Learning Session 2, including prioritizing change areas of focus; identify where the team wants to start; provide reminder to bring at least one change concept to Learning Session 2
May 2022	**Program implementation** • Identify change idea for Learning Session 2, explore if change idea is in service of supporting population of focus and in alignment with equity goals **Quality improvement coaching** • Continue to review improvement dashboard data and reflect on surprises and opportunity areas to focus on next • Review test and iteration phase defined in PDSA plan
June 2022	**Program implementation** • Encourage teams to invite leadership to join an upcoming meeting with the coach to go over teams' plans for the ABHE-PC learning collaborative **Quality improvement coaching** • Support teams with completing their first PDSAs tests and populating their PDSA cycle tracker
July 2022	**Status of deliverables** • Check on quarterly reflections and improvement dashboards, due 7/27/22 **Quality improvement coaching** • Support teams with revising their PDSAs. Discuss changes tested, barriers, learnings, successes, any pivots in project goals
August 2022	**Status of deliverables** • Check on midpoint CAT, due 9/2/22 **Quality improvement coaching** • Continue to support teams with revising their PDSA plans. Discuss changes tested, barriers, learnings, successes, any pivots in project goals
September 2022	**Program implementation** • Ask teams what topics, departments, or content they would like to see during the next site visit in January/February 2023 **Status of deliverables** • Check on midpoint CAT, due 9/2/22 **Quality improvement coaching** • Continue to support teams with revising their PDSAs. Discuss changes tested, barriers, learnings, successes, any pivots in project goals

[***] The deadline for the Q1 improvement dashboard was removed due to bandwidth issues for program teams. CCI revised the request to deliver improvement dashboards for both Q1 and Q2 on July 27, 2022.

Month/year	Topics covered
October 2022	**Program implementation** • For teams that attended, discuss highlights from first site visit, including the best practices they want to adopt **Quality improvement coaching** • Continue to support teams with revising their PDSAs. Discuss changes tested, barriers, learnings, successes, any pivots in project goals
November 2022	**Status of deliverables** • Discuss whether teams learned anything new from the midpoint CAT **Quality improvement coaching** • Continue to support teams with revising their PDSAs. Discuss changes tested, barriers, learnings, successes, any pivots in project goals
December 2022	**Status of deliverables** • Discuss what teams are learning from data, what measures of focus they are seeing progress on, and for measures where they are not seeing progress, discuss what teams think is happening **Quality improvement coaching** • Continue to support teams with revising their PDSAs. Discuss changes tested, barriers, learnings, successes, any pivots in project goals
January 2023	**Status of deliverables** • Check on quarterly reflections and improvement dashboards, due 1/25/23 **Quality improvement coaching** • Continue to support teams with revising their PDSAs. Discuss changes tested, barriers, learnings, successes, any pivots in project goals
February 2023	**Program implementation** • Plan for remainder of program by reviewing aim statements and dashboards and by checking on measurement strategy
March 2023	**Program implementation** • Confirm whether teams are working with and reporting on the same sites as at baseline **Quality Improvement coaching** • Discuss moving from testing and implementation to sustainability
April 2023	**Program implementation** • Support teams in drafting pitches and storyboards
May 2023	May meetings were encouraged but not required; no agenda was provided; coordinated with coach and teammates on storyboards and final presentations

After the meetings, coaches provided progress notes in an Excel tracker, including a list of attendees, overall summary notes, specific successes and challenges noted during the meeting, questions, and next steps for the team.

On average, 3.0 team members per organization attended each coaching session. The minimum number in attendance across coaching sessions was zero (the meeting did not take place that month) and the maximum was 13.

Table 7 summarizes coaches' quarterly numerical ratings of how well the teams progressed through the program curriculum and execution. Most teams were either scored the same or moved up to the next level from Q4 2021 to Q1 2022; however, two teams moved down one level, from 2 to 1.5, over this period. In 2023, at the end of program activities, the highest level met as rated by the coaches was *4: Significant Improvement*. No teams were deemed at a sustainable level in any quarter.

Table 7. Counts of Coaches' Quarterly Status Assessments (number of teams)

Rating: Description	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4	2023 Q1	2023 Q2
No rating				3			9
1: Forming Team	1	1		1	1		
1.5: Planning for Project	7	4					
2: Activity but No Changes	7	9	8	2	3	2	1
2.5: Changes Tested but No Improvement			4	7	8	3	2
3: Modest Improvement			2	1	2	7	
3.5: Improvement/Implementation							1
4: Significant Improvement						2	1
4.5: Sustainable Improvement							
5: Outstanding Sustainable Results							

Team Capabilities and Change across a Standardized Measure

To assess the systems changes that ABHE-PC CHCs made as a result of their participation in the learning collaborative (RQ5), AIR reviewed the CAT data collected by CCI at baseline (capturing the status of the CHC capabilities for a period prior to the initiation of the program), endline, and follow-up.

Team self-ratings, or CAT scores for each of the 6 primary drivers and the 18 secondary drivers, were grouped into four levels of integration capability: Preliminary (0–2.9), Intermediate I (3–5.9), Intermediate II (6–8.9), and Advanced (9–11). CAT scores on secondary drivers were averaged across all sites at baseline to develop a team-level score for each secondary driver. Then the secondary drivers were averaged to develop a score for the primary driver (see Figures 13 and 14 for a review of scores and levels across all primary drivers and assessment timepoints).

In this section, AIR first describes where teams were in terms of capacity at the beginning of the program. The authors highlight details on the secondary drivers underlying primary driver summary scores, and identify the types of changes that would need to occur to develop stronger organizational capabilities that support equity. The discussion is organized in a way that aligns with the order of the primary drivers in the CAT tool. First, the authors describe

where the teams fell on each primary driver and the related secondary drivers at baseline and then describe the capability elements that would need improvement within each primary driver over the implementation period. The section concludes with a discussion of how capabilities changed over the course of the intervention and into the one-year follow-up period.

Senior Leadership and Organizational Commitment

Overall, organizations scored low on *Senior Leadership and Organizational Commitment* (see Figure 7), however, their scores were slightly higher than their scores on *Data-Driven Systems* (see Figure 8). Although most organizations rated themselves as Preliminary for both primary drivers (10 teams), this result is primarily a product of low scores in the *Listening to the Voice of All Patients* and *Developing a Culturally Intelligent Workforce* secondary drivers. The highest scored secondary driver was *Hiring an Equitable, Inclusive, and Diverse Workforce*; only three teams scored in the Preliminary category, and three teams scored in the Intermediate II category. Three teams also scored in the Intermediate II category for *Leading, Planning, and Creating a Culture That Advances Health Equity*.

Figure 7. Self-Ratings on the Senior Leadership and Organizational Commitment Primary Driver and Related Secondary Drivers

The secondary driver details provide a nuanced picture of the state of the teams at baseline in terms of integration capability as well as what improvements would need to be included to score higher on the CAT. Table 8 describes the average baseline state and areas for improvement for *Senior Leadership and Organizational Commitment*.

Table 8. Baseline State and Improvement Areas for Senior Leadership and Organizational Commitment

Secondary driver	Status assessment
Leading, planning, and creating an organization culture that advances health equity	Baseline State: Intermediate I (CAT score: 3.00) • Senior leaders are committed to assessing and addressing behavioral health equity integration by establishing it as an explicit strategic priority and dedicating resources. • Strategic plans include a clear vision, objectives, measures, and initiatives for advancing behavioral health equity. A behavioral health clinician champion leads, advocates for, and provides clinical support to these efforts. Improvement would include the following: • Leaders are held *accountable* for achieving goals. • Leaders *communicate* within their departments to promote organization-wide support for behavioral health equity. • Senior leaders view behavioral health as a key element of care, *systematically* plan, and *monitor* and *adjust* strategy. • Measures and goals across continuum of care establish organization as a *leader* in BHE.
Listening to the voice of all patients	Baseline State: Preliminary (CAT score: 2.14) • Patient input to improve behavioral health care and address social needs is obtained *indirectly* through comments and surveys. Improvement would include the following: • Patients and clients *representing* the patient population *systematically* inform and drive strategic efforts to improve behavioral health equity through patient and family advisory boards, focus groups, and peer navigators.
Hiring an equitable, inclusive, and diverse workforce	Baseline State: Intermediate I (CAT score: 3.82) • Staff recruitment is responsive to individual needs of each position and abides by *minimum requirements* of anti-racist and anti-discrimination laws at the state and federal levels. • Leaders are *beginning to assess* how to align recruitment practices with strategic health equity goals. Improvement would include the following: • Equitable workforce goals are included in department plans. • Recruitment practices are *fully transparent* and drive the achievement of equitable workforce goals at all levels and across all departments. The organization strategically "seeds" the recruiting pipeline with diverse talent that reflects the patients and communities served.
Developing a culturally intelligent workforce	Baseline State: Preliminary (CAT score: 2.46) • The staff are *aware* that behavioral health patients often have urgent social needs, but there is *no training or minimal training* at all staff levels on behavioral health equity and the social determinants of health (SDOH). Improvement would include the following: • *Systematic* training and collaborative decision processes advance behavioral health equity and address social needs across all units and levels. Individual staff goals *link* to CHC's health equity goals. • Staff are *encouraged* and *offered time* to participate in community and health equity work.

Secondary driver	Status assessment
Adopting trauma-informed care best practices	Baseline State: Intermediate I (CAT score: 3.11) • Leaders have *committed* to adopting trauma-informed care (TIC) best practices, including providing training for all staff (clinical and nonclinical), integrating TIC into policies and procedures, and creating a safe physical environment for patients and staff. • There is *limited* use of validated screening measures for trauma when indicated. Improvement would include the following: • Staff (clinical and nonclinical) are *trained on and adopt* TIC best practices at all levels, and protocols are implemented to promote resilience and address re-traumatizing and de-escalation procedures. • *Validated* trauma assessment tools (e.g., ACES, PCL-C) are routinely used when indicated. • Referral sources and partner organizations are routinely engaged.

Data-Driven Systems

Overall, at baseline, teams scored themselves lower on the *Data-Driven Systems* primary driver (see Figure 8) than on any other driver. Nine of the 14 sites (64.3%) scored themselves within the Preliminary capability level overall. This pattern was maintained for both underlying secondary drivers (*Integrated Care Registries* and *Data Analysis and Measures Reporting*). Only one team scored themselves as Intermediate II. Table 9 shows the average baseline state and areas for improvement for the *Data-Driven Systems* driver that could be targets for improvement over the course of the ABHE-PC learning collaborative.

Figure 8. Self-Ratings on Data-Driven Systems and Secondary Drivers at Baseline

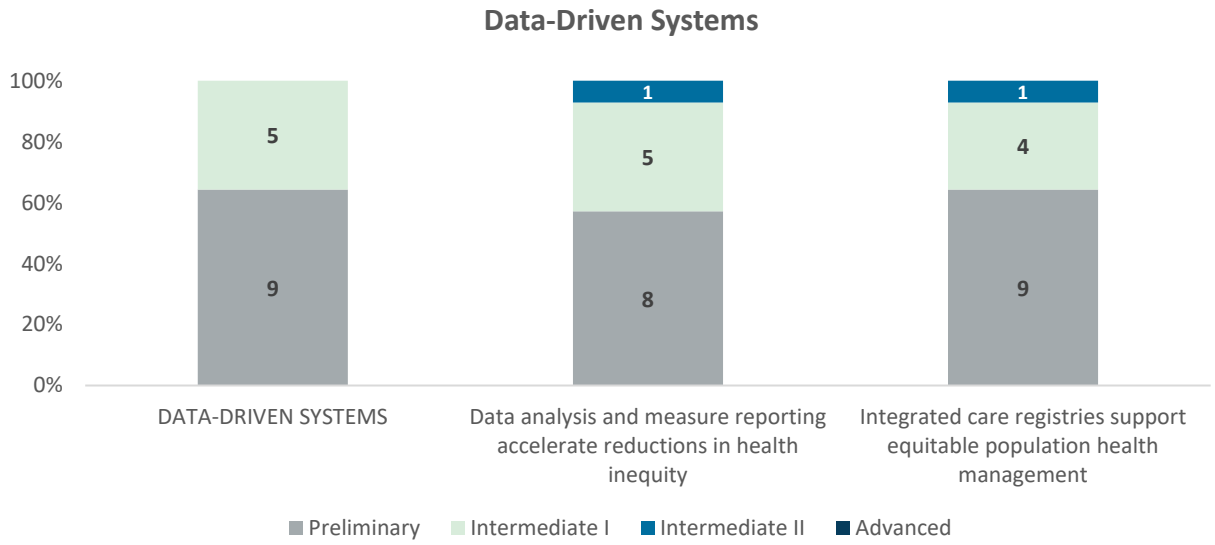


Table 9. Current State and Improvement Areas for Data-Driven Systems

Secondary driver	Status assessment
Integrated care registries support behavioral health equitable population health management.	Baseline State: Preliminary (CAT score: 2.25) • Patients are *not assigned* to specific practice panels, and registry or panel-level data are used minimally to assess or manage care for pre-visit planning or patient outreach. • Social needs data are *not systematically* used to inform patient care. Improvement would include the following: • Behavioral health patients are *consistently assigned* to specific practice panels that are *routinely* used for scheduling purposes and continuously monitored to balance the caseload across therapists or providers. • Registry or panel-level data, stratified by risk, including social needs data, are *available* to care teams and *routinely* used for pre-visit planning and patient outreach across a comprehensive set of diseases and risk states.
Data analysis and quality measures analysis and reporting help the health center achieve behavioral health equity.	Baseline State: Preliminary (CAT score: 2.42) • Behavioral health care teams are *not systematically* using social needs data to inform patient care. • Required reporting (UDS) brings together data from multiple domains, but the information is *not widely accessible,* and it is *difficult* to draw conclusions from the presentation of data (e.g., no dashboards or scorecards are produced). Improvement would include the following: • Social needs data are *reviewed internally* as part of behavioral health quality improvement meetings to identify areas where there are gaps in patient needs and additional resources are required. • Performance measures are *stratified* by race, ethnicity, ancestry and language, or sexual orientation and gender identity (REL/SOGI), or social determinants of health (SDOH) factors. • Leadership *consistently* uses social needs data internally and externally to monitor and improve behavioral health equity. • Data are *transparent* and discussed or shared with health system partners. • *All* behavioral health care teams report on equity performance, and information is used to manage and drive equitable care improvement at all levels, with *timely* dashboards or scorecards *available* across the organization.

Access to Care

Overall, at baseline, teams scored themselves higher on the Access to Care primary driver than on the other primary drivers. While most teams still rated themselves as Intermediate I for both the primary driver (11 teams) and the secondary drivers (Appointment Scheduling and Multimodal Visits), only two teams marked Appointment Scheduling as Preliminary. Several teams scored themselves as either Intermediate II or Advanced on both secondary drivers (Figure 9). Table 10 shows the average baseline state for Access to Care for teams overall, and what improvement could look like for this cohort of CHCs.

Figure 9. Self-Ratings on Access to Care and Secondary Drivers at Baseline

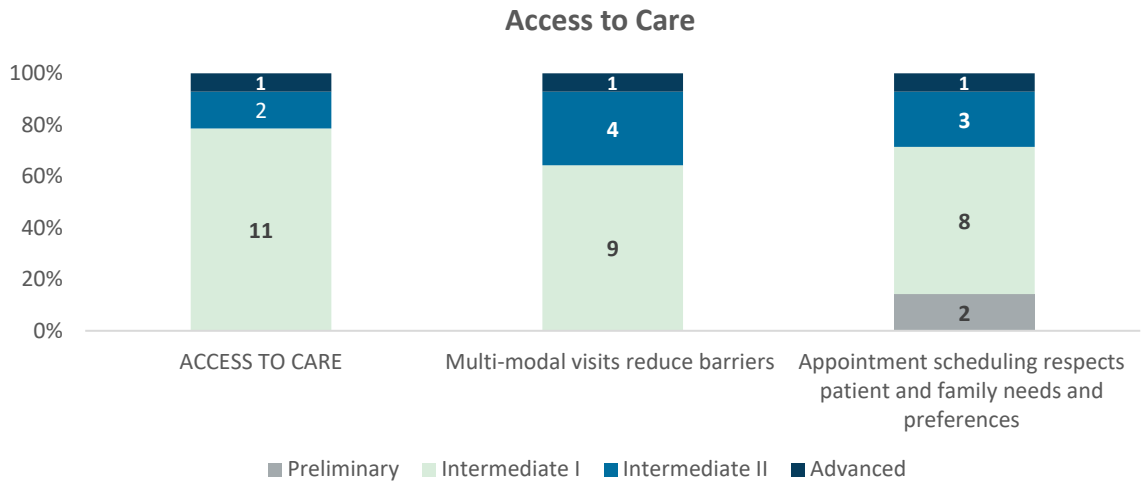


Table 10. Current State and Improvement Areas for Access to Care

Secondary driver	Status assessment
Multimodal visits (in-person, alternative, or virtual) reduce barriers.	Baseline State: Intermediate II (CAT score: 5.55) • The organization has a strategy for multimodal visits for *some* behavioral health patients and visit types. • The organization is *planning* for implementation on a larger scale. Improvement would include the following: • A multimodal visit strategy is fully implemented for *all* behavioral health patient groups and visit types. • The multimodal visit strategy is aligned with the organization's equity goals.
Appointment scheduling respects patient and family needs and preferences.	Baseline State: Intermediate I (CAT score: 4.55) • The staff accommodate *some* scheduling needs and preferences of behavioral health patients and families. • The staff collect *selective* feedback to identify gaps and preferences. Improvement would include the following: • The staff accommodate *most* scheduling needs of behavioral health patients and families. Accommodations are based on feedback that is systematically gathered from this community.

Integrated Care Team and Care Delivery

Overall, organizations scored themselves higher on the Integrated Care Team and Care Delivery primary driver than on other primary drivers at baseline. The vast majority (12 teams, 85.7%) rated this driver as either Intermediate I or Intermediate II (Figure 10). Organizations scored themselves highest on the Screening for Mental Health secondary driver, with seven teams (50.0%) rating themselves as Intermediate II and six teams (42.9%) rating themselves as

Advanced. The secondary drivers Integrated Services and Screening for Cultural Differences had the next highest scores, with nine teams (64%) scoring themselves as Intermediate I and 12 teams (85.7%) scoring themselves as either Intermediate I or Intermediate II. Behavioral Health Clinical Workflows leaves the most room for improvement, with half of organizations (seven teams) rating themselves as Preliminary at baseline. Table 11 shows the average baseline state and areas for potential improvement for Integrated Care Team and Care Delivery over the implementation period.

Figure 2. Baseline Ratings on Integrated Care Team and Care Delivery and Secondary Drivers

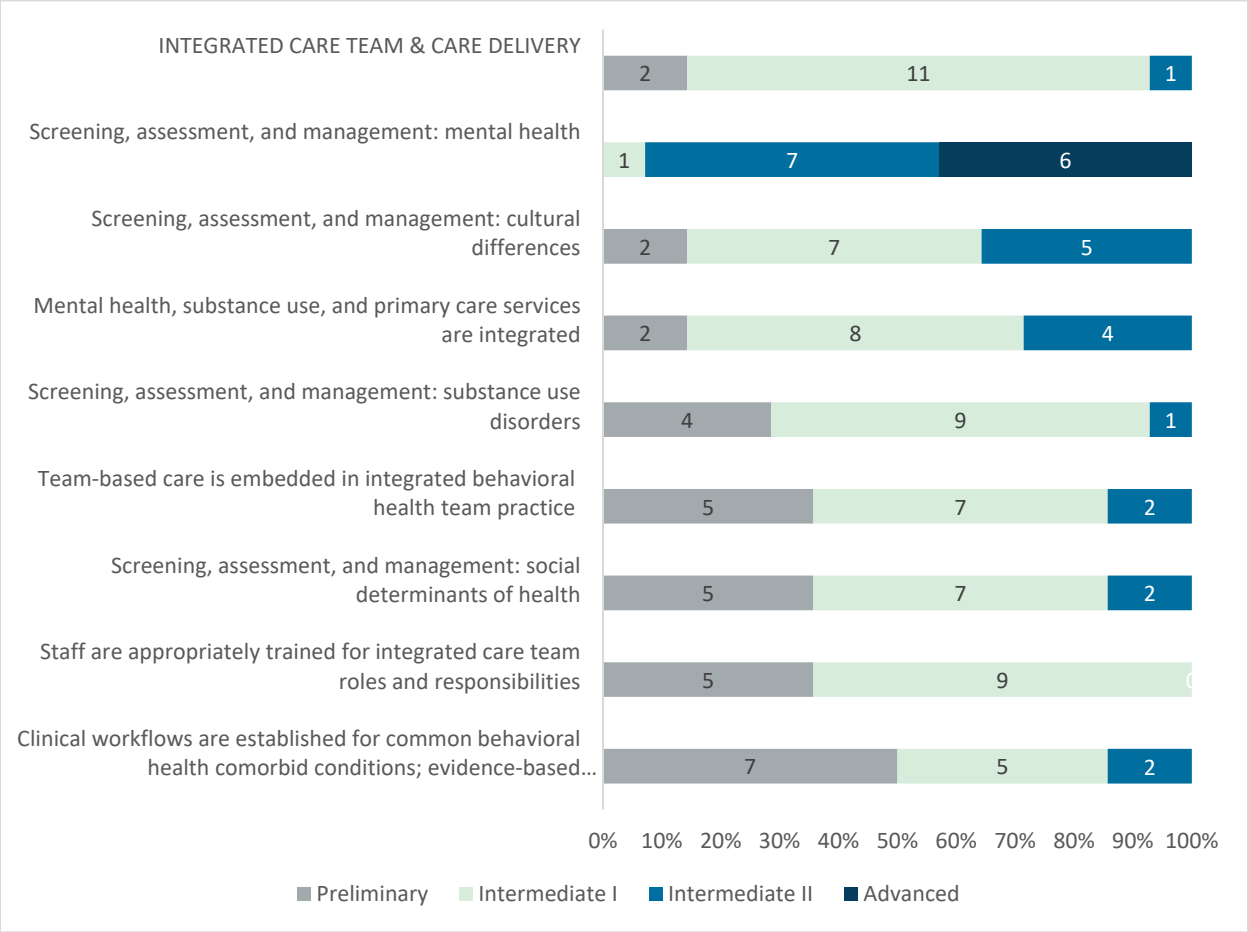


Table 3. Baseline State and Improvement Areas for Integrated Care Team and Care Delivery

Secondary driver	Status assessment
Mental health, substance use, and primary care services are integrated.	Baseline State: Intermediate I (CAT score: 4.06) • Integrated behavioral health care team has little *cohesiveness*, and relationships between behavioral health care team members are not regularly reinforced. • Information is exchanged on changes of patient health status between PCP and BH provider, but chart documentation is *not regular.* • *A few* referrals for social needs are made, but there is no routine assessment or tracking of social needs. Improvement would include the following: • There is a clear definition of an integrated behavioral health care team. Each member's roles and responsibilities are defined, and members are cross-trained and have complementary skills. • Patients have *unified* treatment plans across providers, and case conferences and team meetings are scheduled regularly. • *Regular* consultation on complex cases occurs through open communication channels. • A *routine* assessment of social needs is conducted at every visit, and social needs are tracked *systematically.*
Team-based care is embedded in integrated behavioral health team practice.	Baseline State: Intermediate I (CAT score: 3.76) • Each behavioral health care team consists of behavioral health provider(s), a patient, a nurse, and a family caregiver. • Nonphysician team members are *primarily* tasked with managing patient flow and triage. • The work required for patient visits and the skills and credentials needed have been *identified*. • Team communication occurs, but *without structure.* Improvement would include the following: • Each behavioral health care team consists of behavioral health provider(s), a patient, a nurse, a peer specialist, a primary care provider(s), a consulting psychiatrist, a care manager focused on integrated care, and a family caregiver. • Nonphysician team members perform key clinical service roles aligned with their abilities and credentials. • Each team member's role is clearly defined and documented, and all members are encouraged to work at the top of their credentials. • Team communication is regular and structured.
Screening, assessment, and management for mental health	Baseline State: Intermediate II (CAT score 7.34) • Evidence-based screening tools (e.g., PHQ-2, GAD-7, ACES-Q) are used but *not consistently* and primarily when a disease or condition is suspected. Improvement would include the following: • Evidence-based screening tools (e.g., PHQ-2, GAD-7, ACES-Q) are used *consistently.* • Annual screening for behavioral health is *widely* accepted by staff. • Staff have the skills and knowledge necessary to conduct mental health screening.

Secondary driver	Status assessment
Screening, assessment, and management for substance use disorder	Baseline State: Intermediate I (CAT score: 3.62) • Evidence-based screening tools relevant for the substance use disorder patient population have been *identified.* • *Identification* of training needs and workflow changes are underway. Improvement would include the following: • Evidence-based screening tools (e.g., NIDA Quick Screen-NMASSIST, TAPS) are used *consistently.* • Annual screening for behavioral health is *widely accepted.* • Staff have the skills and knowledge necessary to conduct behavioral health screening.
Screening, assessment, and management for social determinants of health	Baseline State: Intermediate I (CAT score: 3.46) • A process has been developed to assess a patient's needs in *one* area (e.g., homelessness) or to assess patients in *one* target group. Improvement would include the following: • A standard social needs assessment tool and workflow are in place to record social needs in the electronic health record. • Social needs data are collected and documented *systematically* and routinely across *multiple* social needs for *multiple* target groups.
Screening, assessment, and management for cultural differences	Baseline State: Intermediate I (CAT score: 4.49) • At *staff meetings and webinars*, behavioral health staff learn about cultural differences in how patients express behavioral health needs. Improvement would include the following: • Behavioral health staff implement a *tailored* approach to address the cultural differences in how patients express behavioral health needs. • *Formal training sessions* are held on cultural humility and the importance of treating all patients with dignity and respect.
Clinical workflows are established for common behavioral health comorbid conditions	Baseline State: Intermediate I (CAT score: 3.25) • Visits are organized around acute problems, but attention is given to ongoing illness and prevention needs if *time permits.* • Standing orders that can be acted on by nonphysicians under protocol have been developed for behavioral health comorbid conditions, but these are not *regularly* used. • Evidence-based brief interventions to treat behavioral health conditions in workflow are *not consistent* across all staff. • Behavioral health providers and embedded primary care providers monitor treatment measures and link or navigate to medical services *when appropriate.* Improvement would include the following: • Visits are organized to address *both* acute and planned care needs. • *Tailored* guideline-based information is used in team huddles to ensure all outstanding patient needs are met at each encounter. • Standing orders for behavioral health comorbid conditions are used *extensively.* • Evidence-based brief interventions are *systematically used by all staff* to treat behavioral health conditions. • Clinical decision support tools with point-of-service guidance on active clinical management are *widely used* by behavioral health providers and embedded primary care providers.

Secondary driver	Status assessment
Staff are appropriately trained for integrated care team roles and responsibilities.	Baseline State: Preliminary (CAT score: 2.99) • Providers are familiar with behavioral health care but have *minimal* training on integrated care and the incorporation of whole health concepts. • There is *no organized approach* used by providers and other staff to identify or meet behavioral health training needs. Improvement would include the following: • *Systematic* training is provided for all staff levels with learning materials that target areas for improvement within the integrated clinic. • Job descriptions include defined responsibilities for integrated care team members. • Leaders *routinely* assess and address behavioral health training needs to ensure patient needs are consistently met.

Patient Activation and Self-Management

At baseline, organizations were more split on their scores for Patient Activation and Self-Management (see Figure 11). Regarding Care Plans, Self-Management Support, and Digital Tools, half of the organizations rated themselves as Preliminary (seven teams) and the other half rated themselves as Intermediate I or II at baseline. Slightly more (57.1%) organizations scored themselves as Intermediate I or II on Patient and Caregiver Education. Table 12 indicates the average baseline state and areas for improvement for Patient Activation and Self-Management.

Figure 11. Self-Ratings on Patient Activation and Self-Management and Its Secondary Drivers

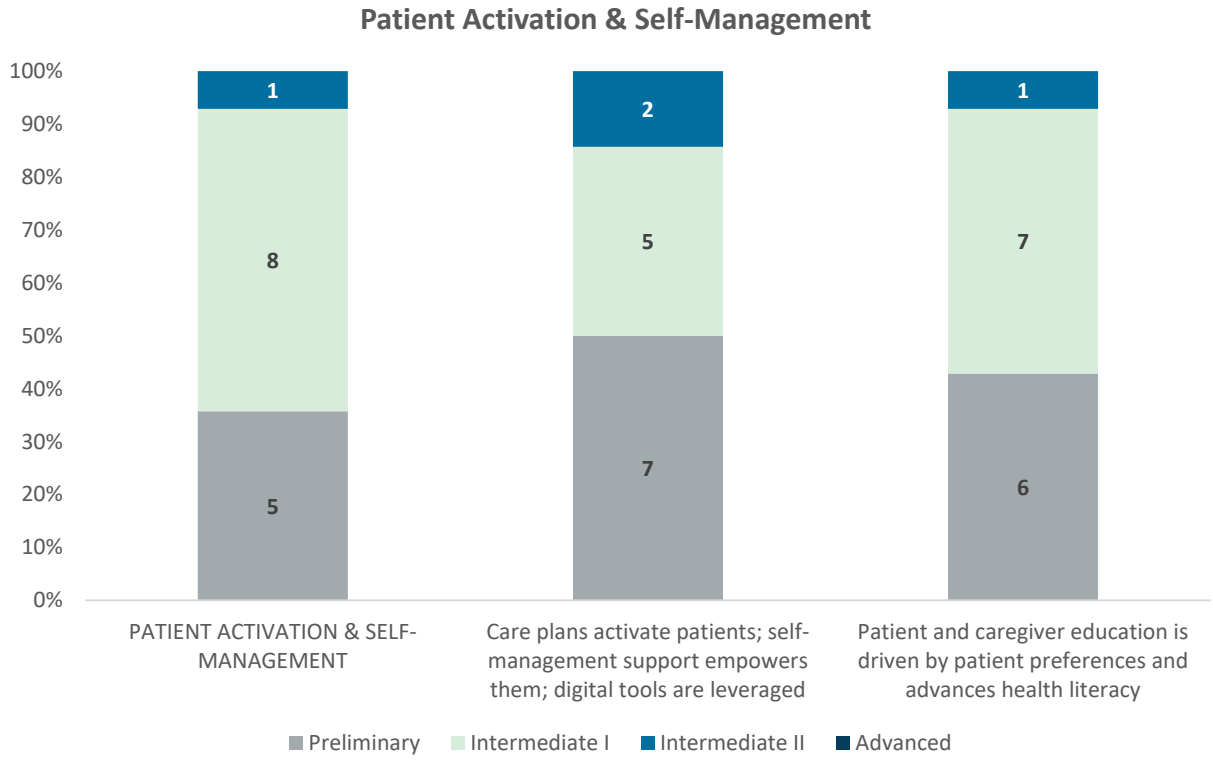


Table 12. Baseline State and Improvement Areas for Patient Activation and Self-Management

Secondary driver	Status assessment
Care plans activate patients; self-management support empowers them; digital tools are leveraged.	Baseline State: Preliminary (CAT score: 2.85) • Care plans exist but are *not routinely* developed or recorded. • Self-management support is *limited* to distribution of written information. Improvement would include the following: • Care plans are developed collaboratively with patients and families and include self-management and clinical management goals that are *routinely* recorded. • Digital tools are leveraged to the *fullest.* • Self-management support is *provided* by care team members trained in patient empowerment and *adapted* to meet the diverse needs of the communities served.
Patient and caregiver education is driven by patient preferences and advances health literacy.	Baseline State: Intermediate I (CAT score: 3.10) • Patient and caregiver education resources are *tailored* to meet *some* of the cultural, linguistic, and literacy needs of selected populations. • *Some* resources are available in a range of formats and are web-accessible. Improvement would include the following: • Patient and caregiver education resources are *systematically tailored* to meet *most* of the cultural, linguistic, and literacy needs of local populations. • *Most* resources are available in a range of formats and leverage technology to the *fullest.*

Community Partnerships

At baseline, more teams reported strength within the secondary driver Agreements With Community Partners (five rated themselves Intermediate II or Advanced) than within Data Sharing for Closed-Loop Referrals (two teams rated themselves Intermediate II). On average, the majority of the teams (11 teams, 78.5%) scored in the Intermediate I level at baseline (Figure 12). Table 13 shows the current state at baseline and areas for improvement for Community Partnerships.

Figure 12. Self-Ratings on Community Partnerships and Its Secondary Drivers

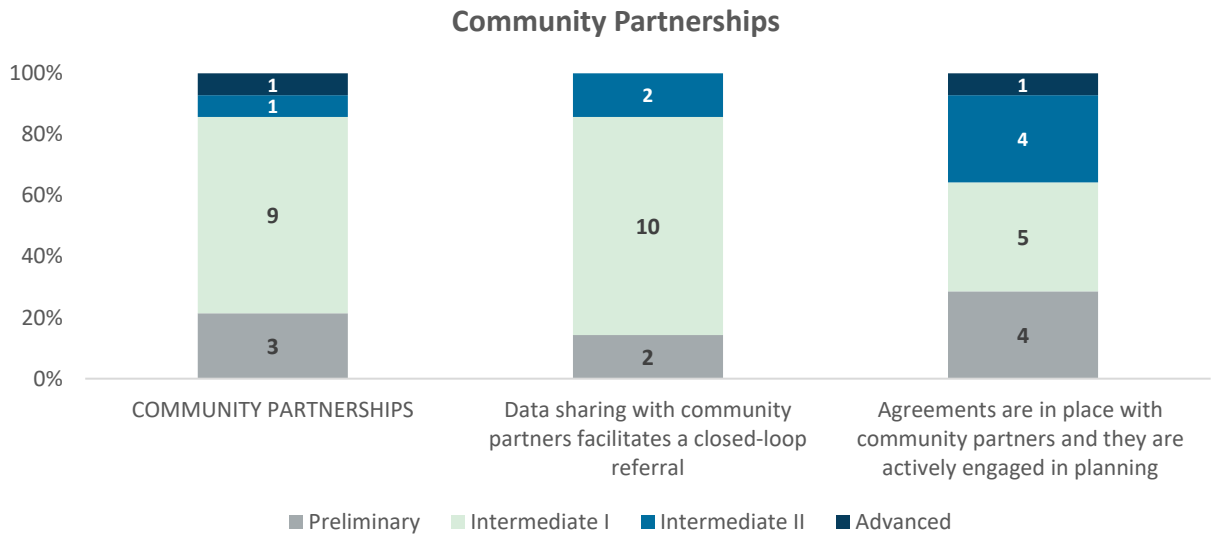


Table 13. Current State and Improvement Areas for Community Partnerships

Secondary driver	Status assessment
Agreements are in place with community partners and they are actively engaged in planning.	Baseline State: Intermediate I (CAT score: 4.36) • The organization has identified a network of specialty care and social service partners and is *building* these relationships. • Standard communication plans and formal agreements with one or more partners are *in process*. Improvement would include the following: • Community partner organizations are *systematically* engaged in planning behavioral health initiatives to expand the scope of available interventions beyond the clinic facility.
Data sharing with community partners facilitates a closed-loop referral.	Baseline State: Intermediate I (CAT score: 3.96) • Linking patients to supportive community-based resources is done *sporadically* or only at the initiative of *individual* providers. • Follow-up on referrals for social needs is done *sporadically* or only at the initiative of individual providers. There is *no* system for monitoring the extent of follow-up. Improvement would include the following: • The care team consistently links patients to supportive community-based resources as a normal part of care delivery. • The processes and systems for linking patients to supportive community-based resources are *well established*, *patient-centered*, and *tailored* to the community being served. • A closed-loop referral process is in place for *regularly* monitoring the effectiveness of activities to link patients with resources. • Follow-up on referrals for social needs is done using a *systematic* process with *rigorous* monitoring of patient utilization and *proactive* outreach.

Change in Primary and Secondary Drivers by Team

Trends in CAT **primary driver levels** over time are summarized in Figure 13, a stacked bar chart showing the number of teams with scores in each level (gray = preliminary, green = intermediate I, light blue = intermediate II, and dark blue = advanced) for each of the six primary drivers. Figure 14 shows changes in CAT **primary driver scores** over time using a box-and-whisker plot showing the distribution of scores across all 14 teams at baseline (green boxes), endline (grey boxes), and follow-up (orange boxes) for each of the six primary domains. Figure 15 shows the **amount of change by secondary drivers** over time, and Figure 16 shows the highest and lowest secondary driver change by intervention group, defined by the primary change idea theme as described in the Health Centers' Change Ideas for Systemic Change subsection of this report. Key findings from these figures are summarized below.

Improvement over Time Across Broader Primary Drivers

- From baseline to follow-up, the number of teams in Intermediate II level and Advanced increased across all primary drivers, with the most improvements shown in Access to Care and Integrated Care Team and Care Delivery. Between endline and follow-up, some teams returned from an improvement to Intermediate I score back down to a Preliminary score (Figure 13). This occurred in every primary driver except Data-Driven Systems, which indicates that sustaining changes can be difficult in a system with many competing priorities. Some of this variation in ratings could also be due to changes in the staff completing the self-assessment, as leadership and staff turnover during the implementation period was significant.
- Change in total score varied across teams, with the smallest change of 1.3 points, and the greatest change of 7.3 points, and an average change in total score of 3 points across teams (improving on average from 3.6 to 6.5 points across the primary drivers).
- Three primary drivers (Senior Leadership and Organizational Commitment, Data-Driven Systems, Access to Care) saw an increase between 3 and 4 points.
- The remaining primary drivers saw between a 2- and 3-point change on average across teams (Integrated Care Teams and Care Delivery, Patient Activation and Self-Management, and Community Partnerships). Most teams began the collaborative with an Intermediate score on Integrated Care Teams and Care Delivery, which indicates that processes were more established on this domain, and potentially accounting for the lower gain over time.
- The majority of the change across primary drivers occurred during the implementation period; however, all factors and drivers continued to improve between endline and follow-up assessment, increasing on average from a minimum of 0.2 points (Cultural

tailoring in screening, assessment, and management) to a maximum of 1.2 points (Social needs screening, assessment, and management) between the 2023 and 2024 assessment period. The only secondary driver that did not improve in the year after implementation was Adopting trauma-informed care best practices.

Figure 13. Stacked Bar Charts Showing Distribution of Primary Level of Capability Over Time

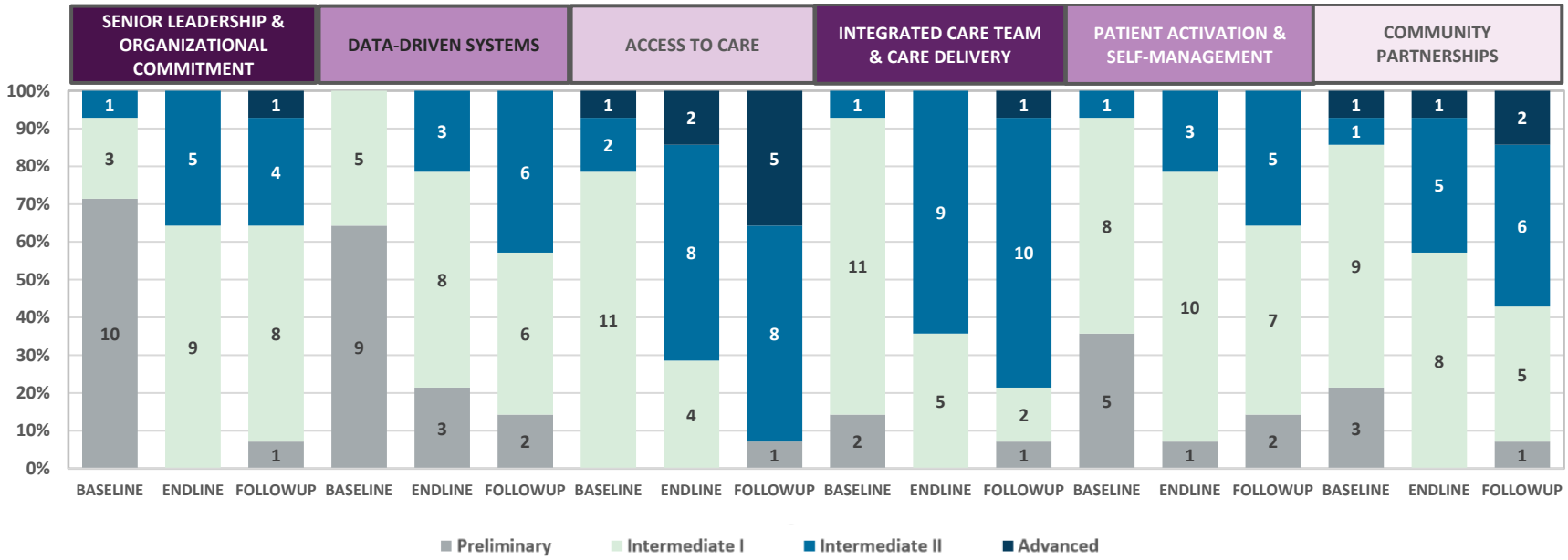


Figure 14. Box-and-Whisker Plots of Primary Drivers from Baseline (October 2021) to Follow-Up (May 2024)

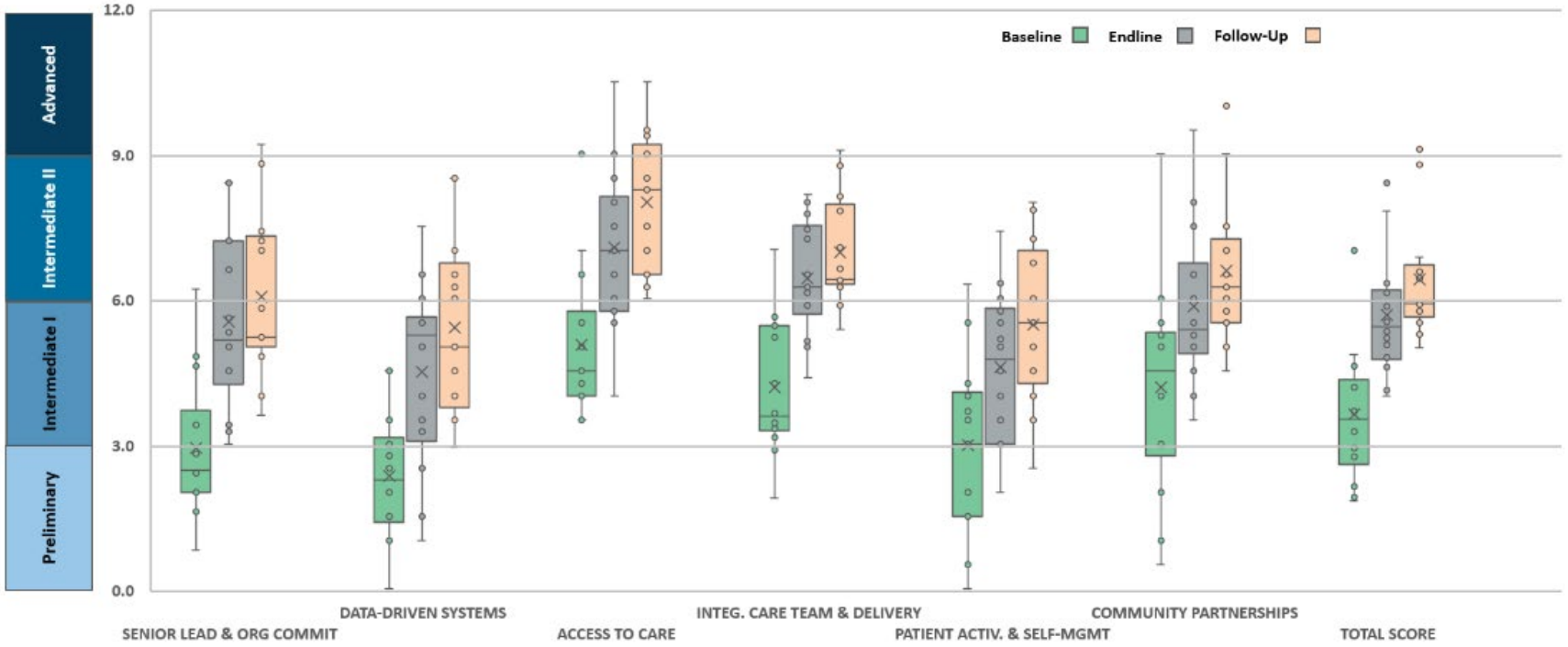


Figure 15. Level of Capability at Follow-Up Across Secondary Drivers

The highest scored capabilities at follow-up:

- (9.7) Mental health screening, assessment, and management.
- (8.6) Multimodal visits reduce barriers.
- (7.4) Appointment scheduling respects patient and family needs and preferences.

The lowest scored capabilities as of follow-up:

- (5.4) Adopting trauma-informed culture best practices.
- (5.2) Care plans activate patients; self-management support empowers patients; and digital tools are leveraged.
- (5.2) Data analysis and measure reporting accelerate reductions in health inequity.

The most improved capabilities since baseline:

- (+3.5) Listening to the voice of all patients.
- (+3.5) Leading, planning, and creating an organizational culture that advances health equity.
- (+3.5) Social needs screening, assessment, and management.

The least improved capabilities since baseline:

- (+1.8) Data sharing with community partners facilitates a closed-loop referral.
- (+2.3) Adopting trauma-informed care best practices.
- (+2.3) Cultural tailoring in screening, assessment, and management.

Figure 16 shows how CAT secondary drivers changed over time overall and for the three change idea groups.

Figure 16. Top 5 Highest and Lowest Changes on Capability Factors, Overall and by Primary Change Idea Group

PRIMARY DRIVER	Secondary Driver/Factor	Top 5 highest and lowest CAT score improvements			
		Group 1	Group 2	Group 3	All
LEADERSHIP	Adopting TIC best practices	1.9	2.0	3.0	2.3
	Developing a culturally intelligent workforce	3.2	2.9	3.1	3.1
	Hiring an equitable, inclusive and diverse workforce	3.8	3.4	2.6	3.3
	Leading, planning and creating an organization culture that advances health equity	4.7	3.5	2.5	3.5
	Listening to the voice of all patients	3.7	3.1	3.8	3.5
DATA DRIVEN	Data analysis and measure reporting accelerate reductions in health	1.4	3.2	3.6	2.7
	Integrated care registries support equitable PHM	3.9	2.9	3.5	3.4
ACCESS TO CARE	Appointment scheduling respect patient and family needs and	3.8	2.2	2.6	2.8
	Multi-modal visits reduce barriers	3.9	3.0	2.3	3.1
INTEGRATED CARE TEAM	Clinical workflows are established for common BH comorbid conditions; Evidence-based interventions used.	2.7	1.7	3.4	2.5
	Cultural tailoring in screening, assessment and management	2.6	2.7	1.7	2.3
	Mental health, substance use, and primary care services are integrated	2.5	2.8	3.2	2.8
	MH screening, assessment and management	3.5	1.3	2.9	2.5
	Social needs screening, assessment and management	3.6	2.9	4.3	3.5
	Staff are appropriately trained for integrated care team roles and responsibilities	3.2	2.0	3.6	2.9
	SUD screening, assessment and management	2.4	0.7	5.0	2.5
	Team-based care is embedded into integrated BH team practice	3.5	2.7	4.2	3.4
PATIENT ACTIVATION	Care plans activate patients; Self-management support empowers them; Digital tools are leveraged.	2.6	1.6	3.0	2.3
	Patient and caregiver education is driven by patient preferences and advances health literacy	2.4	3.0	2.5	2.6
COMMUNITY PARTNERSHIPS	Agreements are in place with community partners and they are actively engaged in planning	3.0	2.5	2.1	2.4
	Data Sharing with community partners facilitates a closed-loop referral	2.5	1.4	1.8	1.8

Conditions That Influenced Increased total and Primary Driver Scores

In this section, the authors present the results of the analyses exploring the relationship between baseline conditions and program activity conditions and increased total and primary driver CAT scores. Table 14 shows the relationship between the baseline conditions and increased total and primary driver CAT scores. The baseline condition of percentage of behavioral health staff strongly or moderately co-occurs with all increased CAT scores except for increased integrated care team and care delivery CAT score. This pattern holds when baseline percentage of behavioral health staff is tested as a singular condition and in combination with other conditions. A baseline high CAT score on access to care often strongly or moderately co-occurred with all increased CAT scores. This pattern is primarily found when baseline access to care CAT score is tested as an individual condition rather than when it is tested in combination with other conditions.

In terms of the relationship between program activities and increased CAT scores (Table 15), the conditions of leadership consistency and high participation in coaching often strongly or moderately co-occurred with all increased CAT scores. This pattern holds when these conditions are tested as singular conditions and in combination with other conditions. Increased integrated care team and delivery CAT score and increased number of enabling staff often strongly or moderately co-occurs with all increased CAT scores except for data driven systems. This pattern holds when these conditions are tested as singular conditions and in combination with other conditions. A change idea focus on priority populations strongly co-occurs with increased community partnerships CAT score, but only in combination with other conditions (increased number of enabling staff). Increased percentage of behavioral health staff does not co-occur with increased total or primary driver CAT scores.

Several combinations of conditions have strong co-occurrence with increased total or primary driver scores on the CAT.

- High baseline percentage of behavioral health staff + [Absent] High baseline Patient Activation and Self-Management score + High baseline Community Partnerships score strongly co-occurs with increased Data-Driven Systems CAT score.
- [ABSENT] Large Organization + [ABSENT] High baseline Integrated Care Team and Delivery CAT score strongly co-occurs with increased Patient Activation and Self-Management CAT score.
- High baseline percentage of behavioral health workers + High baseline Integrated Care Teams and Delivery score + [ABSENT] High Patient Activation and Self-Management score strongly co-occurs with increased Community Partnerships CAT score.

Table 14. Relationship Between Baseline Conditions and Increased Total and Primary Driver CAT Scores

Baseline conditions	Increased CAT Scores													
	Total		Senior Leadership and Organizational Commitment		Data-Driven Systems		Access to Care		Integrated Care Team and Care Delivery		Patient Activation and Self-Management		Community Partnerships	
	Indiv	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*
Organizational size												S		
Baseline proportion of care team licensed behavioral health staff	M	M	M	M	S	S	M				M	M	M	S
Senior Leadership and Organizational Commitment — Baseline		M												
Data-Driven Systems — Baseline														
Access to Care — Baseline	M		M		M				M		M	S	M	M
Integrated Care Team and Care Delivery Systems — Baseline		M												S
Patient Activation and Self-Management — Baseline														
Community Partnerships — Baseline		M				S			M		M	S		
Total — Baseline														

Note: Indiv = Individual causal condition's relationship with outcome; In Comb = Causal condition's relationship with outcome in combination with other conditions; S = Strong relationship (≥.75 Consistency AND ≥.50 Coverage); M = Moderate relationship (≥.75 Consistency AND ≥.25 Coverage).

Table 15. Relationship Between Program Activity Conditions and Increased Total and Primary Driver CAT Scores

ABHE-PC learning collaborative Activities	Increased CAT Scores													
	Total		Senior Leadership and Organizational Commitment		Data Driven Systems		Access to Care		Integrated Care Team and Care Delivery		Patient Activation and Self-Management		Community Partnerships	
	Indiv	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*
Leadership Consistency	S	S	S	S	S		S	M		M	M	S		M
Focus of Systems Change: Improve screening and care delivery		S		S				M		M		S		M
Focus of Systems Change: Focus on a priority population				M										S
Focus of Systems Change: Prioritize teamwork				M								M		M
Increase in enabling staff	M	S	M	S			S	M		M		S	M	S
Increase in proportion of care team licensed in behavioral health														
Coaching attendance	M	S	M	S	M		M	M	M	M	M	S	M	M
Leadership attendance at learning sessions				M								M		M

Note: Indiv = Individual causal condition's relationship with outcome; In Comb = Causal condition's relationship with outcome in combination with other conditions; S = Strong relationship (≥.75 Consistency AND ≥.50 Coverage); M = Moderate relationship (≥.75 Consistency AND ≥.25 Coverage).

- Change idea focus on improving screening and care delivery + High leadership consistency + Increased number of enabling staff + High participation in coaching strongly co-occurs with increased total CAT score, increased Strategic Leadership and Organizational Commitment CAT score, and increased Patient Activation and Self-Management CAT score.
- Change idea Focus on priority population + [ABSENT] Leadership consistency + Increase in number of enabling staff strongly co-occurs with increased Community Partnerships CAT score.

Key Takeaways:

- Staffing infrastructure (at baseline and expanding over the course of the program) and leadership consistency throughout systems change efforts are important to improving organizational capabilities.
- The coaching that occurred through the learning collaborative helped ABHE-PC Teams improve their organizational capabilities.
- Increasing the number of enabling staff was particularly helpful in increasing CAT scores for AHBE-PC Teams that focused their change activities on screening and care delivery or priority populations.

Patient Needs and Experience

To obtain an assessment of patient experience within ABHE-PC CHCs at baseline and again near the end of the implementation period (endline), AIR worked with participating ABHE-PC teams to administer a patient experience survey. Results from this instrument informed research questions about the impact of the evaluation on patients and their perceptions and experiences in the systems of care at ABHE-PC sites (RQ11). No additional surveys were collected during the follow-up period.

Description of Sample

While the original goal was to recruit 75 respondents per organization, or 1,050 respondents in total, recruitment across ABHE-PC teams was uneven and lower than anticipated in both waves of the survey. Therefore, the results from these samples are not generalizable across the entire cohort and are not directly comparable given the variation in survey participation across CHCs and within CHCs across each wave. Table 16 provides the number and proportion of survey respondents by team in each wave.

Table 4. Response Rates by Team*

Team	Baseline		Endline	
	Number	Percentage	Number	Percentage
Chinatown Service Center	65	13.4%	70	15.5%
Community Health Centers (Central Coast)	70	14.5%	12	2.7%
Eisner Health	8	1.7%	71	15.7%
Elica Health Centers	6	1.2%	26	5.8%
Korean Community Services	50	10.3%	72	15.9%
Los Angeles General Medical Center	10	2.0%	51	11.3%
Marin City Health and Wellness Center	6	1.2%	43	9.5%
Opsam Health	8	1.7%	35	7.7%
Petaluma Health Center	124	25.6%	7	1.6%
Santa Barbara Neighborhood Clinics	6	1.2%	0	0.0%
The Achievable Foundation	26	5.4%	8	1.8%
UC Davis Health	7	1.5%	3	0.7%
Valley Springs Health and Wellness Center	38	7.9%	35	7.7%
Via Care Community Health Center	65	13.4%	19	4.2%
Total	489	100%	452	100%

*At baseline, the total count of patients visiting a participating organization (489) was greater than the number of patients who completed the survey (484) because 5 patients reported attending clinics operated by more than one organization.

Demographic information was collected from respondents (Table 17). At baseline, the majority (52.5%) of respondents identified as White, and 46.1% identified as Latinx or Hispanic. Those who chose to self-describe their race were primarily those identifying as Latinx (n = 15), with others noting "multi-race," or "Middle Eastern." More than two-thirds of respondents were female (68.8%), a quarter were male (25.5%), with the remaining one-twentieth (5.7%) identifying as transgender men or genderqueer or preferring not to state or self-describe their gender identity. More than one-tenth of respondents identified as LGBTQ (13.0%), with three-fourths (75.4%) identified as straight or heterosexual. More than two-thirds (69.8%) of survey respondents reported primarily speaking English at home, followed by just under a quarter who reported primarily speaking Spanish (23.1%).

At endline, a little more than one-third (35.2%) of respondents identified as White, and, similar to baseline, 40.3% identified as Latinx or Hispanic. In addition, one-third (61.7%) identified as female, and three-fourths (72.8%) identified as straight or heterosexual. At endline, there was a decrease (61.7%) in the percentage of survey respondents who reported primarily speaking English at home, with a similar proportion of just under a quarter who reported primarily speaking Spanish (22.6%).

While the survey itself was offered in seven languages (English, Spanish, Chinese, Tagalog, Korean, Vietnamese, and Farsi), most respondents completed the survey in English at baseline, compared to only three-quarters completing the survey in English at endline (baseline and endline: 82.9% and 75.4%). A greater proportion of respondents took the survey in Spanish at endline (baseline and endline: 14% and 18.1%), and a greater proportion of respondents took the survey in Chinese at endline (baseline and endline: 3% and 5.8%). Less than 1% of respondents took the survey in Tagalog or Korean across both survey waves. No respondents completed surveys in Vietnamese or Farsi.

Table 5. Survey Respondent Demographics

Demographic groups	Baseline		Endline	
	Number	Percentage	Number	Percentage
Race				
American Indian or Alaska Native	17	3.5%	12	2.7%
Asian (Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, or other Asian)	61	12.6%	76	16.8%
Black or African American	33	6.8%	48	10.6%
Pacific Islander (Native Hawaiian, Guamanian or Chamorro, Samoan, or Other Pacific Islander)	5	1.0%	1	0.2%
White	254	52.5%	159	35.2%
Prefer to self-describe	18	3.7%	37	8.2%
Prefer not to state	66	13.6%	89	19.7%
Missing	48	9.9%	30	6.6%
Latinx or Hispanic ethnicity				
Yes	224	46.1%	182	40.3%
No	236	47.5%	219	48.5%
Prefer not to state	18	3.7%	32	7.1%
Missing	13	2.7%	19	4.2%
Gender identity				
Male	123	25.4%	130	28.8%
Female	333	68.8%	279	61.7%
Transgender man, trans man, female-to-male (FTM)	4	0.8%	1	0.2%
Transgender woman, trans woman, male-to-female (MTF)	0	0.0%	0	0.0%
Genderqueer, gender nonconforming, neither exclusive male nor female	5	1.0%	10	2.2%
Prefer to self-describe	1	0.2%	1	0.2%
Prefer not to state	15	3.1%	16	3.5%
Missing	3	0.6%	15	3.3%

Demographic groups	Baseline		Endline	
	Number	Percentage	Number	Percentage
Sexual orientation				
Straight or heterosexual	366	75.6%	329	72.8%
Lesbian or gay	20	4.1%	28	6.2%
Bisexual	34	7.0%	18	4.0%
Queer, pansexual, and/or questioning	11	2.3%	9	2.0%
I don't know	3	0.6%	7	1.6%
Prefer to self-describe	1	0.2%	7	1.6%
Prefer not to state	37	7.6%	35	7.7%
Missing	12	2.5%	19	4.2%
Primary language				
English	338	69.8%	279	61.7%
Spanish	112	23.1%	102	22.6%
Tagalog or Filipino	2	0.4%	3	0.67%
Chinese (including Cantonese and Mandarin)	19	3.9%	39	8.6%
Vietnamese	2	0.4%	2	0.4%
Korean	2	0.4%	5	1.1%
Hmong	0	0.0%	0	0.0%
Farsi	1	0.2%	3	0.7%
Dari	0	0.0%	0	0.0%
Pashto	0	0.0%	0	0.0%
Russian	0	0.0%	2	0.4%
Armenian	1	0.2%	0	0.0%
Other	4	0.8%	6	1.3%
Missing	3	0.6%	11	2.4%
Language used for survey administration				
English	401	82.9%	341	75.4%
Spanish	66	13.6%	82	18.1%
Chinese (including Cantonese and Mandarin)	13	2.7%	26	5.8%
Tagalog or Filipino	2	0.4%	0	0.0%
Korean	2	0.4%	2	0.4%
Missing	0	0.0%	1	1.2%

Behavioral Health Needs

Table 18 outlines the types of behavioral health needs experienced over the 12 months prior to taking the survey. At baseline, 59 respondents (12.2%) reported not needing any of the listed services. The most prevalent need was for counseling or treatment for personal problems or emotional and mental health (70.9%), followed by the need for prescription medicine for mental health (31.8%), and counseling or treatment for a traumatic event (19.0%). On average,

respondents experienced 1.6 needs, ranging from 1 to 5 behavioral health needs, with 58.4% of those who needed services only needing 1 service and 14.0% needing 3–5 services.

In the endline period, a smaller proportion of respondents did not need behavioral health services (6.2%); counseling for personal problems or emotional health, prescription medication for mental health, and counseling for a traumatic event were the most needed services (83.0%, 36.5% and 25.0%, respectively). Counseling to address drug and alcohol use was more prevalent at endline (11.7%) while the need for prescription medicine to help with detox or staying off drugs or alcohol was less common at endline (6.2%).

Table 6. Reported Behavioral Health Needs in Prior 12 Months

Response options	Baseline		Endline	
	Number	Percentage*	Number	Percentage*
Needed services: No	**59**	**12.2%**	**28**	**6.2%**
Needed services: Yes	**425**	**87.8%**	**424**	**93.8%**
Counseling or treatment for personal problems or emotional or mental health	343	70.9%	375	83.0%
Counseling or treatment for drug or alcohol use	45	9.3%	53	11.7%
Counseling or treatment for a traumatic event	92	19.0%	113	25.0%
Prescription medicine to help you detox or stay off drugs or alcohol	50	10.3%	28	6.2%
Prescription medicine for your mental health	154	31.8%	165	36.5

Variation by Ethnicity at Endline

As shown in Table 19, at endline, Latino or Latinx respondents were significantly

- **Less likely** to report that they needed counseling for a traumatic event or needed prescription medicine for mental health, and
- **More likely** to need help with transportation to and from health care appointments.

Table 19. Patient Behavioral Health Needs by Ethnicity at Endline

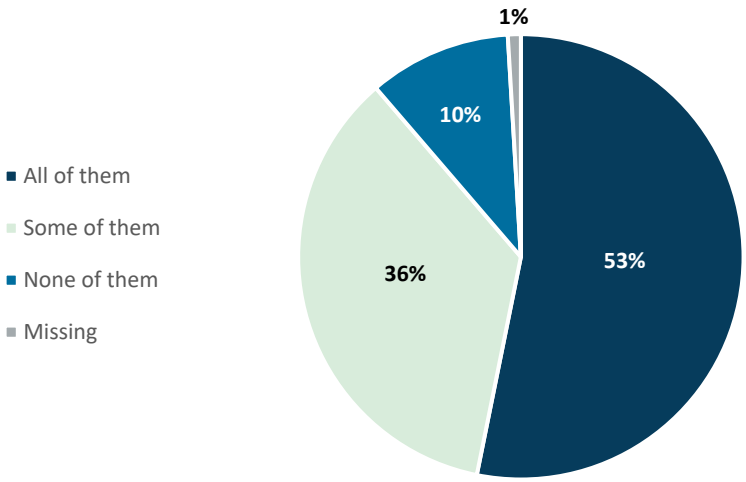
Response options				
	Always	Usually	Sometimes	Never
Received services as soon as they are needed				*p*=0.022
Non-white	34.1%	36.9%	24.4%	4.6%
White	47.7%	30.7%	14.4%	7.2%

Response options				
	Always	Usually	Sometimes	Never
Had counselors and treatment providers explain things in a way you could understand				*p*=0.002
Non-white	54.0%	24.4%	18.8%	2.8%
White	69.7%	22.4%	5.3%	2.6%
Counselors and treatment providers "always" spend enough time with you				*p*=0.027
Non-white	47.2%	31.8%	17.1%	4.0%
White	60.3%	23.8%	9.3%	6.6%
Felt involved as much as they wanted in counseling and treatment				*p*=
Non-white	34.1%	36.9%	24.4%	4.6%
White	47.7%	30.7%	14.4%	7.2%
Felt comfortable reporting all of their physical health, mental health, or drug or alcohol needs to their providers				*p*=0.
Non-white	34.1%	36.9%	24.4%	4.6%
White	47.7%	30.7%	14.4%	7.2%

Accessibility of Behavioral Health Care

Among respondents who experienced behavioral health needs in the baseline period (*n* = 425), accessibility to care varied, with some slight improvements in accessibility reported by the respondents that participated at endline. Only half (53.2% at baseline; 56.9% at endline) were able to get all of the counseling, treatment, or medicine they felt they needed; one-third (35.5% at baseline; 29.2% at endline) received some of the services needed; and one-tenth or less (10.4% at baseline; 4.2% at endline) received none of the services needed (baseline shown in Figure 17).

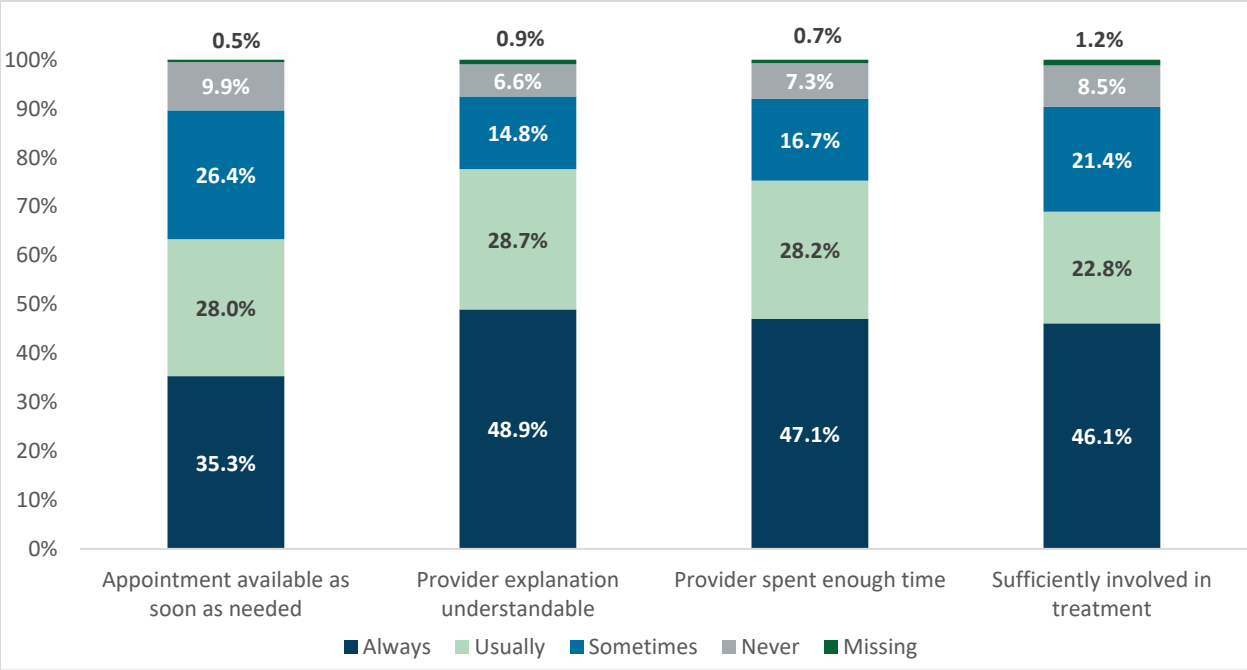
Figure 17. Self-Reported Proportion of Needed Counseling, Treatment, or Medicine Received — Baseline



Those who did not get the services they needed (*n* = 44 at baseline and *n* = 19 at endline) most often indicated that they sought counseling or treatment for personal problems or emotional or mental health (88.6% at baseline; 100% at endline) or counseling or treatment for a traumatic event (34.1%) at baseline,, and prescription medication for mental health and counseling for a traumatic event (both 21.1%) at endline,. At baseline, 11% sought treatment for drug or alcohol abuse (compared with 15.8% at endline), and 11% also sought prescription medicines. At endline, 10.5% sought prescription medicines to help detox from drugs and alcohol.

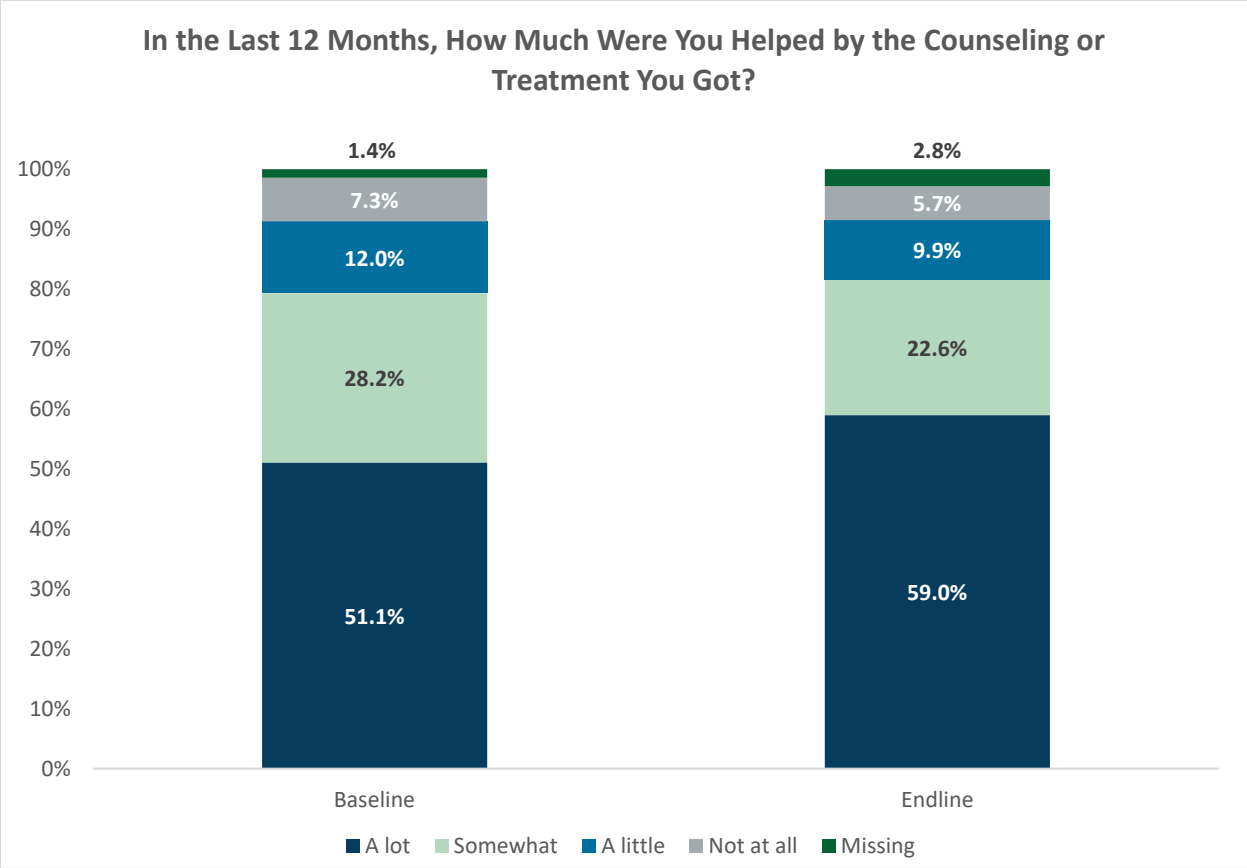
At baseline, the majority of respondents reported that the care they sought in the last 12 months was "always" or "usually" accessible (Figure 18); they were able to secure an appointment as soon as they needed it (62%); behavioral health providers explained things in a way that was understandable (78%); behavioral health providers spent enough time with them (75%); and respondents were involved as much as they wanted to be in their counseling or treatment (68%). Response patterns at endline were similar.

Figure 18. Accessibility of Care of the Last 12 Months — Baseline



Less than half (44%) of those needing behavioral health services at baseline engaged in conversations with ABHE-PC CHC staff about whether to include their family or friends in their counseling or treatment (compared with 36.1% at endline); however, almost three-quarters (73.7%) indicated that they received information about the kinds of counseling or treatment available. (This decreased slightly at endline to 63.7%). Treatment effectiveness was sufficient for most, with 51.1% receiving "a lot" of help and 28.2% being helped "somewhat" at baseline, compared to 59.0% receiving "a lot" of help and 22.6% being helped "somewhat" at endline (Figure 19).

Figure 19. Treatment Effectiveness



Variation by Race at Endline

At endline, respondents who did not identify as White people were significantly

- **Less likely** to always get an appointment as soon as they wanted
- **Less likely** to receive explanations in a way they could understand
- **Less likely** to feel counselors spent enough time with them
- **Less likely** to feel involved as much as they wanted in counseling and treatment
- **Less likely** to feel comfortable reporting all of their physical health, mental health, or drug or alcohol needs to their providers

Table 20 shows related proportions across all response options and chi-square statistical test *p*-values. Test significance levels are not corrected for multiple comparisons.

Table 20. Patient Care Experience Differences by Race

Response options	Always	Usually	Sometimes	Never
Received services as soon as they are needed				*p*=0.022
Non-white	34.1%	36.9%	24.4%	4.6%
White	47.7%	30.7%	14.4%	7.2%
Had counselors and treatment providers explain things in a way you could understand				*p*=0.002
Non-white	54.0%	24.4%	18.8%	2.8%
White	69.7%	22.4%	5.3%	2.6%
Counselors and treatment providers "always" spend enough time with you				*p*=0.027
Non-white	47.2%	31.8%	17.1%	4.0%
White	60.3%	23.8%	9.3%	6.6%
Felt involved as much as they wanted in counseling and treatment				*p*=0.049
Non-white	47.7%	27.8%	20.5%	4.0%
White	61.4%	20.9%	12.4%	5.2%
Felt comfortable reporting all of their physical health, mental health, or drug or alcohol needs to their providers				*p*=0.002
Non-white	45.6%	28.0%	17.6%	8.8%
White	64.2%	20.8%	12.6%	2.5%

Further, as show in Table 21, Latino or Latinx respondents were significantly

- **Less likely** to report they were helped "a lot" by the counseling or treatment they received over the last 12 months
- **More likely** to report being able to get "all of" the supports or help they felt they needed of the past 12 months

Table 21. Patient Care Experience Differences by Ethnicity

Response options				
	A lot	Somewhat	A little	Not at all
How much patients were helped by counseling or treatment received over the last 12 months				*p*=0.000
Latinx/Hispanic	51.8%	24.1%	15.1%	9.0%
Not Latinx/Hispanic	71.4%	20.7%	5.4%	2.5%
Prefer not to state	41.9%	41.9%	9.7%	6.5%
	All of them	**Some of them**	**None of them**	
Proportion of the supports or help they needed that they were able to get				*p*=0.010
Latinx/Hispanic	38.5%	47.3%	14.3%	
Not Latinx/Hispanic	53.5%	39.5%	7.0%	
Prefer not to state	34.4%	50.0%	15.6%	

"Appointments were quick and easy, and the providers genuinely seemed to care."

Respondents were asked two open-ended questions about what was most helpful and what could be improved in the drug or alcohol use or mental health services received from their CHC. At baseline, consistency, efficiency, patience, and ease of securing appointments were all appreciated by respondents who received drug and alcohol or mental health services in the prior 12 months. Respondents reported feeling heard by their providers and valuing the reliability of recurring behavioral health appointments. Additionally, a few respondents noted that convenience of location and cost were facilitators in the care they received. At endline, respondents noted similar themes and stressed that they felt valued ("how they care for us no matter what or how we look"), which included experiencing care and consideration for Latino or Latinx and LGBTQ experiences and needs. A few respondents noted that the nursing and scheduling staff calling to check on them helps them receive care when they need it most; these calls also help to ensure that medications and refills are prescribed on time. A few respondents also noted that phone appointments helped them to make appointments during the workday. One person who was experiencing homelessness noted that the ability to receive care through open clinic three days a week helped them to receive care as their needs arose.

"I felt like was acknowledged. The counselor was professional and sensitive to my needs. After my sessions, I felt more comfortable. I respected the counselor. I felt a connection, which is important to me."

On the other hand, when asked how the behavioral health services received over the last year could have been improved, many respondents at baseline and endline

commented on their desire to have more staff available and additional appointment availability. They also cited long wait times as a barrier to receiving services. Many also noted that appointments were too short and some mentioned that time was not always managed effectively. Reductions in the cost of services and for medication was mentioned by a few respondents as a desired improvement. Some respondents noted that provider consideration and care were lacking, with others noting that they would like more in-person care to be available and more group and supplemental therapies like art or music therapy. A few respondents noted that engaging family in care planning and services was difficult. In a closed-response question, only a little more than one-third (36.1%) of respondents noted that anyone had talked to them about whether to include their family or friends in their counseling of treatment over the last 12 months.

Further, some respondents did not feel like their provider was a good match. In those cases, these respondents noted that they would have appreciated being able to see another provider. In addition to requesting more providers, respondents also asked for information on the availability of additional forms of therapy. While these themes were covered in the recommendations to improve care at endline, it is important to note that almost half of the respondents who answered the question mentioned that they did not have any recommendations for improvements and were happy with the care they received.

Care Integration

Half (54.6% at baseline and 50.0% at endline) of respondents reported "always" or "usually" receiving behavioral health and physical health services from the same location. However, at baseline, 12.0% (compared with 13.3% at endline) did not receive both physical and behavioral health services in the previous 12 months, and 11.1% (compared with 10.8% at endline) did not receive both types of care from the same location over the time period.

In the 12 months prior to completing the surveys,

- **64.3% at baseline and 66.6% at endline** reported that the ABHE-PC CHC asked them to fill out a questionnaire about how they were feeling or asked whether they needed any help with drug, alcohol, or other problems.
- **53.1% at baseline and 50.9% at endline** "always" felt comfortable reporting all of their physical health, mental health, or drug or alcohol treatment needs to providers.
- **61.0% at baseline and 61.3% at endline** received information about organizations in their community that could help them with emotional support, food, safety, housing, and other needs.

- **72.0% at baseline and 61.3% at endline** among those who needed a connection to treatment or counseling reported that the ABHC-PC CHC helped them connect to counseling or treatment services, including calling the providers and helping to set up an appointment, introducing the patient directly to the providers, or arranging transportation.

At baseline, a few respondents commented that their primary care providers were helpful in getting them behavioral health services during the prior year. These providers either worked to deliver behavioral health services themselves or were helpful in referring the respondents to additional services and resources. Having access to both primary care and behavioral health care was an additional facilitator of receiving services.

> "My therapist, psychiatrist, and primary care … actually when I'm having an issue … work together to help."

A handful of respondents noted that integration could be improved, including integration of the care providers, health center, and pharmacy, and that generally there should be more coordination between providers during a switch in treatment. Integration was not noted as an area for improvement by the majority of respondents and was not a key topic in endline open-ended responses.

Variation in Screening by Sexual Orientation at Endline

As shown in Table 22, at endline, LGBTQ respondents were significantly

- **More likely** to be asked to fill out a questionnaire on how they were feeling or whether they needed any help with drugs, alcohol, or other problems in their life

Table 22. Patient Social Needs by Sexual Orientation

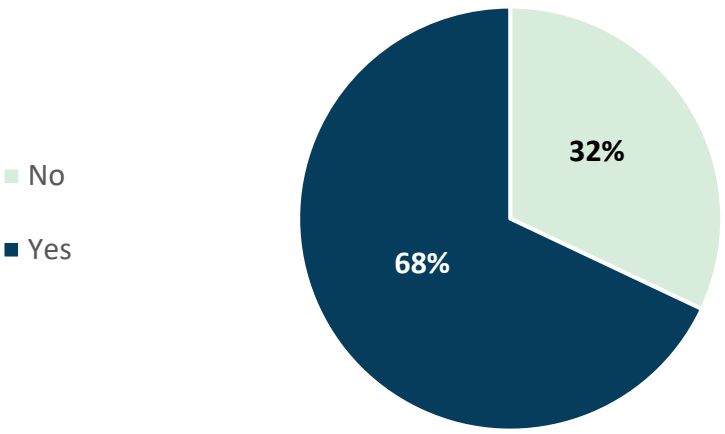
Response options	Yes	No
Asked to complete a questionnaire on feelings or help with drugs, alcohol, or other problems		*p*=0.026
LGBTQ	80.9%	19.1%
Heterosexual	68.2%	31.8%

Access to and Experiences with Telehealth

Respondents were asked if they had used telehealth services over the last 12 months, either over video or phone. At baseline, two-thirds (67.6%) of respondents indicated that they had used telehealth, and one-third (31.8%) had not (Figure 20). At endline, telehealth increased,

with 73.2% of respondents indicating that they had used telehealth, and 23.3% indicating that they had not.

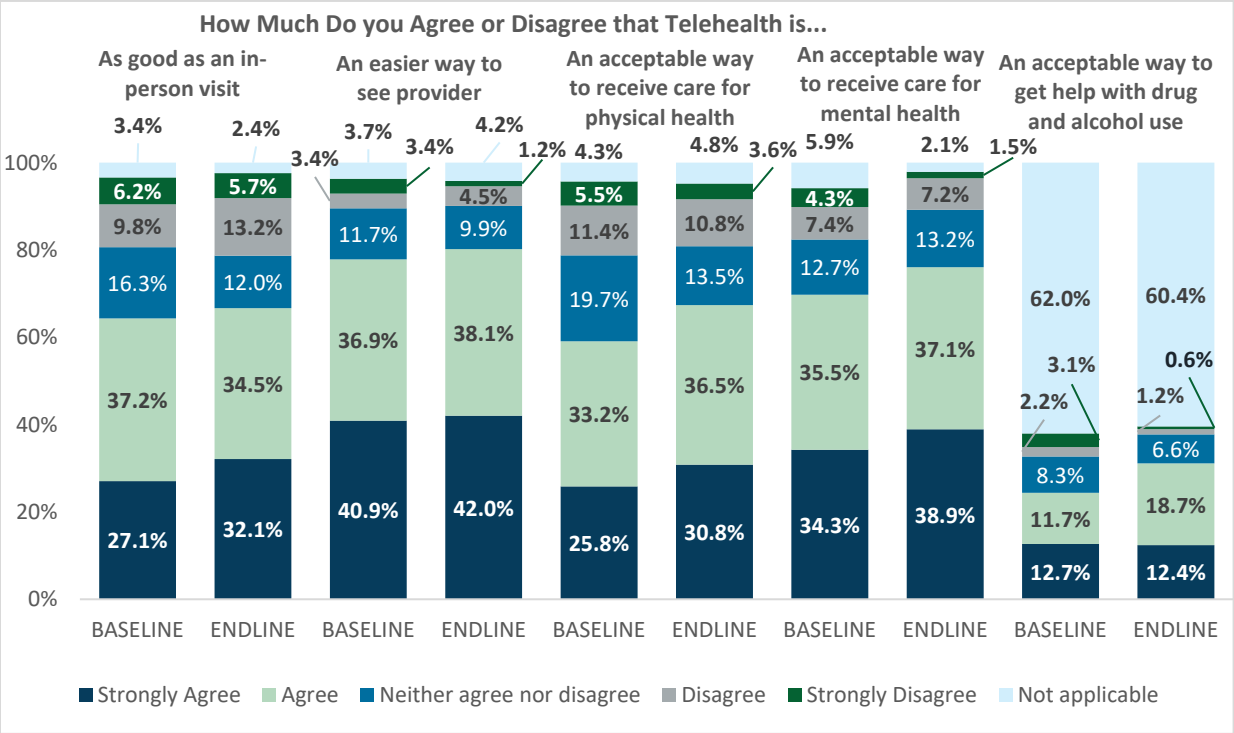
Figure 20. Telehealth Use in Last 12 Months



Generally, respondents who had received telehealth services were satisfied with the process, though satisfaction declined between baseline and endline. This decline in satisfaction may be due to the different mix of CHCs represented in the two waves of data collection, which may indicate that systems supporting telehealth platforms can vary in quality and usability (Figure 21). At baseline and endline, 62% and 49% of respondents "agreed" or "strongly agreed" that telehealth was just as good as an in-person visit. Seventy-eight percent and 59% of respondents "agreed" or "strongly agreed" that telehealth was an easier way to see a provider.

While most baseline respondents noted that they did not need help with drug or alcohol use, among those who did and received telehealth services, 79 of 96 respondents "agreed" or "strongly agreed" that telehealth was an acceptable way to receive that help. While more than half of endline respondents noted that they did not need help with drug or alcohol use, among those who did and who received telehealth services, 103 of 129 respondents "agreed" or "strongly agreed" that telehealth was an acceptable way to receive that help.

Figure 21. Patient Satisfaction with Telehealth Visits



At baseline, two respondents noted that telehealth was one of the most helpful things about the services they had received over the last year. One noted, “Thank goodness telephone appointments were available during the last few years of the pandemic.” Three respondents noted that they appreciated the phone-based therapy, which accommodated their busy schedules.

A few more respondents, however, commented that they could have used extra support in facilitating telehealth visits. Others asked that in-person sessions resume, preferring not to engage in therapy via telehealth, which was echoed at endline by a handful of respondents.

Social Health Needs

Half of all survey respondents at both time points needed one or more supports to address social needs. Two hundred and fifteen respondents (44.4%) at baseline and 208 respondents (46.0%) at endline noted that they experienced the need for social support in the prior 12 months and that they needed support signing up for public benefits (55.8% and 46.2%), assistance with transportation to health care appointments (38.6% and 53.9%), and help signing up for Medicaid (27.4% and 20.2%) (Table 23, baseline only). Baseline and Endline respondents on average sought services in 1.3 of the 3 categories listed, and 76.6% only needed services in a single category at baseline; 69.2% only needed services in a single category at endline.

Table 7. Reported Social Support Needs in Prior 12 Months

Response options	Baseline		Endline	
	Number	Percentage	Number	Percentage
Needed services: No	**269**	**55.6%**	**244**	**54.0%**
Needed services: Yes	**215**	**44.4%**	**208**	**46.0%**
Help with transportation to and from health care appointments	83	38.6%	112	53.9%
Help with getting signed up for Medicaid	59	27.4%	42	20.2%
Help with getting signed up for public benefits such as WIC, CalFresh, childcare subsidies, employment services, or housing assistance	120	55.8%	96	46.2%

Across all respondents, just under half (44.6% and 44.0%) reported that they were able to get "all" of the supports or help they felt they needed or wanted, while one-tenth (10.1% and 10.8%) noted that none of their social support needs were met. For those who reported that none of their needs were met (n = 49 at baseline, n = 19 at endline), 30.6% at baseline and 31.6% at endline had needed help signing up for public benefits, and 28.6% at baseline and 52.6% at endline had needed help with transportation to and from appointments; at endline alone, 26.3% needed support signing up for Medicaid.

Variation in Social Needs by Race at Endline

As shown in Table 24, at endline, respondents who did not identify as White people were significantly

- **More likely** to need help signing up for Medicaid and other public benefits (though need was low: <20% of respondents)

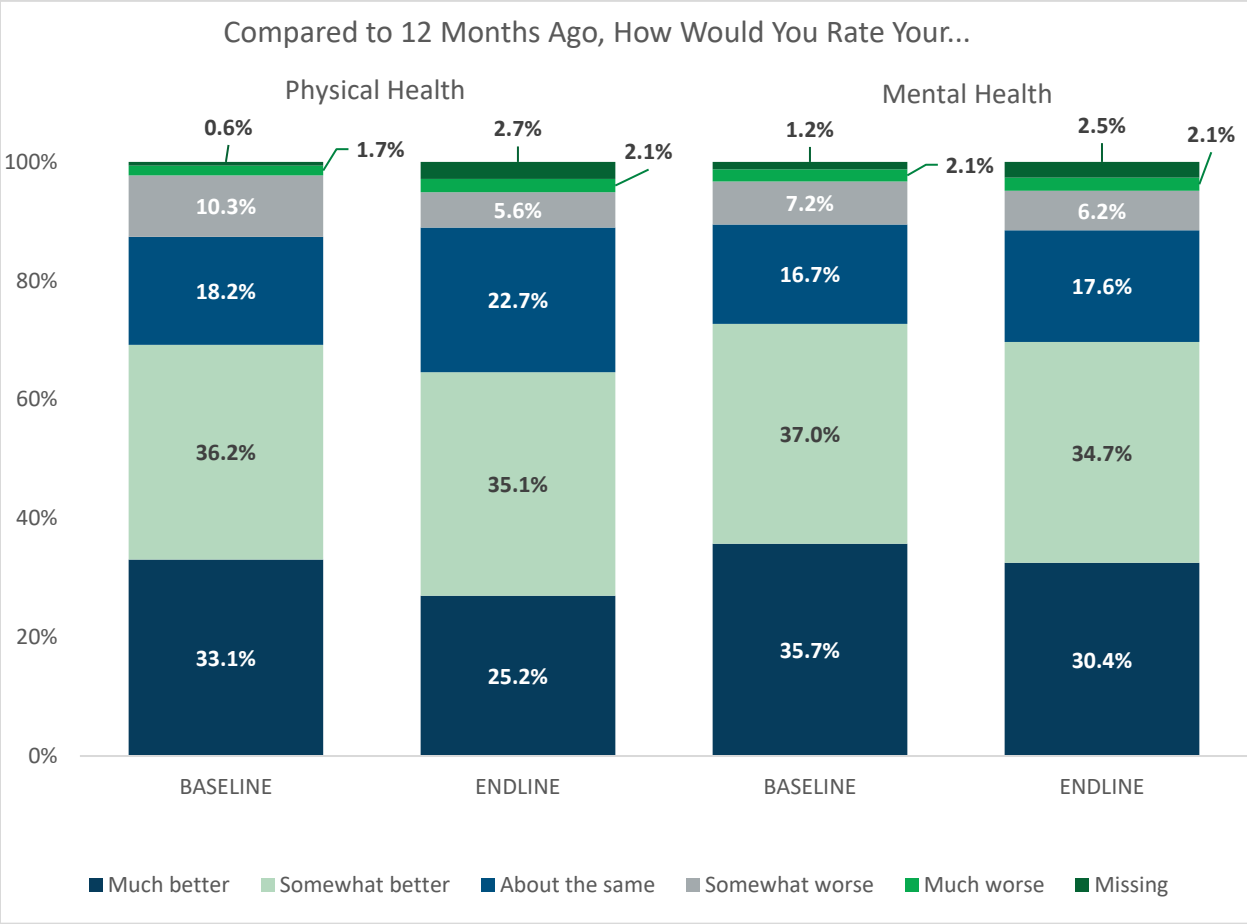
Table 24. Patient Social Need Differences by Race

Response options	Yes	No
Needed help with getting signed up for Medicaid in the last 12 months		p=0.012
Nonwhite	13.8%	86.2%
White	5.7%	94.3%

Self-Reported Health

Figure 22 shows respondents' improvement in self-reported physical and mental or emotional health, with three-quarters reporting their health was "much better" or "somewhat better" in both categories.

Figure 22. Self-Reported Health Outcomes



Among the 205 respondents at baseline who used drugs or alcohol, 45.9% noted that their ability to reduce use of or keep off drugs and alcohol compared to their ability to do so 12 months ago was "much better," with a quarter (25.4%) reporting their ability as "somewhat better." Three percent noted that they were "much" or "somewhat" worse. At endline, among the 146 respondents who used drugs or alcohol, less than half (46.6%) noted that their current ability to reduce use of or keep off drugs and alcohol compared to their ability to do so 12 months ago was "much better," with one-third (33.6%) reporting their ability as "somewhat

"My anxiety and depression have decreased significantly, and I feel I have a clearer understanding of what I want in my everyday life. My therapist has guided me through all of the struggles that I've dealt with and helped me grow and I'm very thankful for her."

better." The remainder reported that their ability was "about the same," with none reporting that their ability was worse.

At baseline, respondents reported various forms of treatment, including medication, counseling and therapy, and skill and technique building around managing stressors and anxiety, as helpful in dealing with drug or alcohol use or mental health issues over the last year. At endline, many noted that they learned new skills ("tools and tricks") to manage stressors, process trauma, and get through difficult times in their lives with more confidence. Many noted how monthly appointments were a safe space where they did not feel judged, and they noted that this helped them feel heard and open up more. Others noted that they learned skills to set goals, plan for the future, and observe and regulate their emotions. They noted that the consistent support they received over time helped them make healthy behavior change. Time with navigators was noted as helpful for learning about other services offered at the center. Anger management support and space to talk about substance use was specifically noted by a quarter of respondents. About one-third mentioned that medication management, including medication-assisted treatment (MAT), and individual and group counseling (e.g., Alcoholics Anonymous, Narcotics Anonymous) to support SUD were helpful. Others noted that specific treatments like EMDR, supports for parents, and boundary-setting resources were particularly helpful, with others noting that they felt like staff provided enough attention to their needs to help with deeper mental health needs and concerns.

Cultural Considerations and Experiences with Discrimination

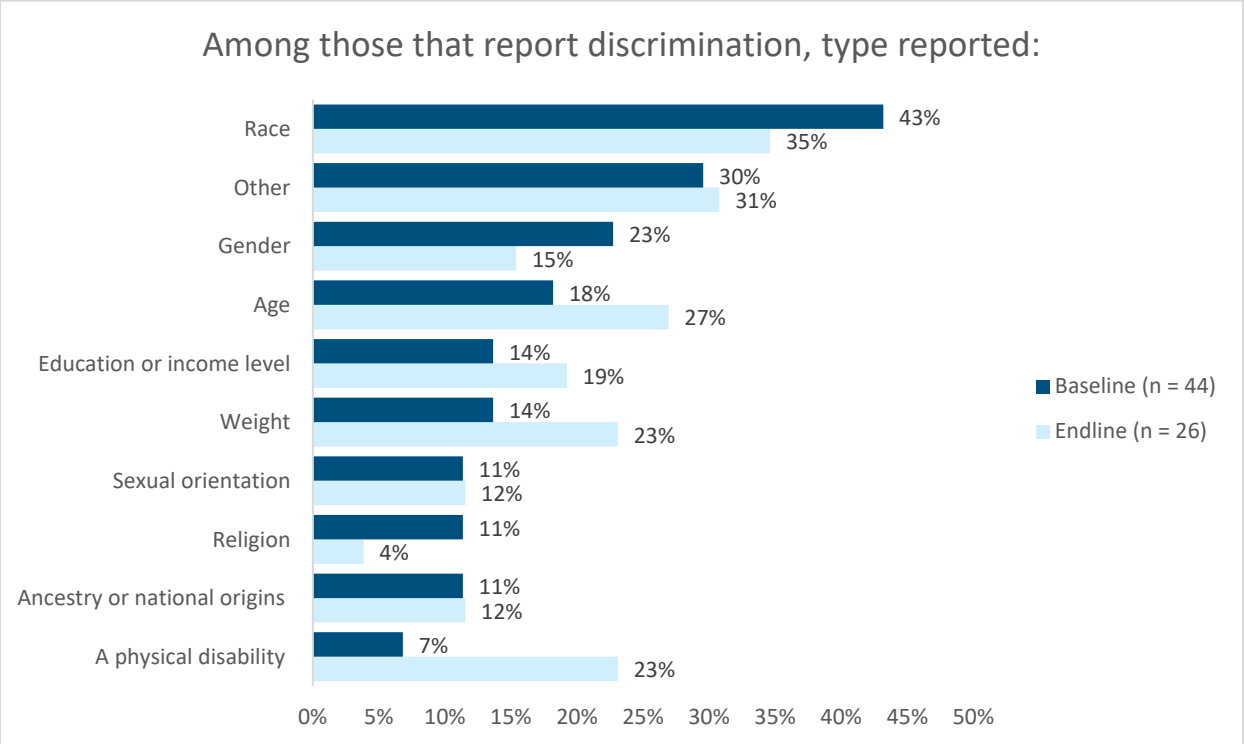
Eighty-five respondents (17.9% of all respondents) at baseline and 92 respondents (20.4% of all respondents) at endline noted that their language, race, religion, ethnic background, or culture made a difference in the kind of counseling they needed. Within this subgroup of respondents 78.8% at baseline noted that the care they received was responsive to those needs, with 93.5% indicating that care was responsive at endline. In a separate question, 7% noted at baseline that their gender identity or sexual orientation made a difference in the kind of counseling they needed, and nearly three-quarters (69.6%) noted that they received care that was responsive to those needs. At endline, a similar proportion of respondents reported these experiences (8.0% and 91.7%, respectively) with an increase in the proportion who felt that care was responsive to these needs.

At baseline, 44 respondents (9.2% of all respondents) noted that, in the last 12 months, they have been discriminated against, hassled, or made to feel inferior while getting care in the health care setting; 26 respondents or 5.8% of all endline respondents also reported

discrimination. Self-reported discrimination rates in health care at the national level are higher (21%) than the discrimination rates reported by survey respondents. As in the nation as a whole, racial and ethnic discrimination was the most commonly reported type of discrimination in health care settings.[25]

At baseline, 6 individuals responded that they "always" feel discriminated against, whereas 13 responded that they "usually" felt discriminated against and 25 responded that they "sometimes" felt discriminated against. At endline, 5 individuals responded that they "always" feel discriminated against, 6 responded that they "usually" felt discriminated against, and 15 responded that they "sometimes" felt discriminated against. Figure 23 shows the prevalence of different types of discrimination experienced within this subpopulation of 44 respondents at baseline and 26 respondents at endline. The most common reason specified for Other types of discrimination in both baseline and endline were a history of drug abuse in general or specific mentions of prescription pain medication use, or current issues with alcoholism. One to two people mentioned the following: history of domestic violence (unclear if victim or aggressor), unvaccinated for COVID-19, and inability to speak English. At endline, a quarter of respondents mentioned discrimination by age, weight, or by a physical disability.

Figure 23. Prevalence of Reported Discrimination, by Type*



*The percentages do not sum to 100 because the response options are not mutually exclusive; respondents were instructed to select all that apply.

> "Teach therapists more about LGBTQIA+ community and neurodivergent lifestyles. Continuing education of gender-affirming services for LGBTQIA+ individuals."

At baseline, a handful of respondents expressed concern about being treated poorly due to their race or sexuality. They suggested that providers should be more empathetic toward their patients and not discriminate based on differences. One respondent suggested adding more female doctors to the staff, as the respondent did not feel understood by men. Another suggested that the mental health staff learn more about autism and other spectrum disorders so as to better accommodate the needs of patients who have such diagnoses. At endline, a handful of patients requested that ABHE-PC CHCs continue receiving training on LGBTQ communities and providing gender-affirming services. There was also mention again of supporting services for neurodivergent populations.

Variation by Sexual Orientation at Endline

Understanding and building trust with the LGBTQ and other groups that feel their identity can help address needs of this population. Notably, at endline, LGBTQ respondents were

- **more likely** to report that they needed help getting signed up for Medicaid recently (Table 25).

Table 25. Patient Social Need Differences by Sexual Orientation

Response options	Yes	No
Needed help with getting signed up for Medicaid in the last 12 months		*p*=0.046
LGBTQ	29.0%	71.0%
Heterosexual	18.4%	81.7%

KEY TAKEAWAYS: PATIENT SURVEYS

Self-reported accessibility of needed counseling, treatment, or medicine is high at endline, and care appears to be helping patients, though not all needs are met.

- Among those who needed a connection to treatment or counseling, **most respondents (82.4%)** reported that the **ABHE-PC CHC helped them connect to counseling or**

treatment services. This included calling the providers and helping to set up an appointment, introducing the patient directly to the providers, or arranging transportation.

- Respondents noted overall satisfaction with care delivery. At endline, the majority of respondents reported encouraging satisfaction rates on many measures of access, indicating:
  - Satisfaction with telehealth
  - Perceived treatment effectiveness
  - Receipt of culturally responsive care
- Although overall satisfaction was found, at endline, there were still indications that some populations experience differences in care based on race, ethnicity, and sexual orientation.

Patient Listening Sessions

Patients were asked about their experience receiving behavioral health care at their CHC. Specifically, patients were asked about which staff were most helpful in getting the services they needed, how well their providers worked together to provide care, the ease of scheduling and the availability of appointments, and getting help with social needs.

Care Coordination

Patient respondents mentioned several positives related to care coordination:

- Patients reported receiving warm handoffs from primary care to behavioral health as a result of screening and self-disclosing issues with their primary care providers.
- Patients found that the multiple appointment reminders and check-ins after missed appointments were helpful.
- Patients appreciated having the option of telehealth, especially behavioral telehealth, which provided them with increased access.
- Once a relationship had been established with a behavioral health provider, most patients reported that they had regularly scheduled behavioral health appointments, usually weekly or biweekly.

> "Originally, I didn't want to get behavioral health, but after I talked to her [the psychiatrist], she made me feel that it was really up to me, and I felt like she was the most helpful. Yes, they [primary care] actually had one of their staff walk me over. And if I was to have gone there myself, I probably would have chickened out. It gave me an introduction as to what my next steps should be."

Conversely, patient respondents also reported several pain points in getting the care they needed:

"I don't really think they communicate between each other as much because when I see my primary care physician, they still give me that survey about behavioral health, how I'm feeling, and then I also think that the only information that they do share is the medication that I take."

- Although most patients reported getting a behavioral health appointment quickly once referred, some noted that there were long wait times for initial appointments. Patients also found the call center wait times to schedule appointments to be challenging.
- Most patients were not aware of care coordination between their primary care and behavioral health care teams. This led a patient to question the need for repeated screenings in primary care.
- There was a reported perception of a lack of solid staffing and processes to treat SUD within at least one CHC.
- Patients did not generally report missing appointments, and those who did reported individual issues such as returning to alcohol use or arriving late due to traffic, rather than care coordination issues the health center could help with (e.g., transportation, reminders).

Trust and Patient Engagement

Overall, patients reported satisfaction with cultural needs and orientations, and noted that they had the flexibility to change behavioral health providers if they were not a good fit. Some patients commented on turnover in primary care leading to frustrations related to having to reestablish relationships and spend time discussing what was already in their file. There was also a perception of the ABHE-PC CHCs as having supportive, accepting staff who were willing to provide different types of care as needed (e.g., recovery services, addressing discrimination in the community).

"For me, I was referred to a first therapist who I felt didn't have the right approach. I requested a second therapist and felt we had a better fit. It was easy to see that the first person wasn't for me. I asked around, I have others that use the same clinic and from their services I heard about the current therapist."

Change over Time and Perceived Improvements in Care Received

"Before I could call and tell them, 'hey, I'm running a bit late,' and they would know. Now I just don't call them because I just know they won't answer the phone."

Most patients did not report witnessing any change in the process of receiving their behavioral health care. Those that did, however, reported that the front office staff were less accommodating about them showing up late or less helpful in scheduling appointments. They also reported challenges in getting routed to a call center rather than the front desk staff, and increased wait times for an actual appointment.

Patients reported feeling more comfortable with their behavioral health providers over time. This led to perceived improvements in the care they received. Patients noted feeling more comfortable in navigating the system and advocating for themselves to get what they needed. In some cases, this led to a reduction in appointment frequency — from weekly to biweekly. Conversely, in another case, a patient discovered that it was easier to physically walk into the clinic to make an appointment rather than do it over the phone. Although she was comfortable doing this, it was ultimately a workaround to a challenging phone appointment system.

Perceived Needs and Gaps in Care

Most patients reported either not knowing that social needs resources were available, or they knew they were available but had not needed them. Further, providing handouts without discussing them in person was not an effective way of communicating the availability of social needs resources, especially among those of different cultural backgrounds.

Patients who were satisfied with behavioral health services felt they could be more widely advertised so that others could take advantage as well. There was limited awareness of the behavioral health services offered, other than when a need was identified in the primary care setting. One patient suggested the use of presentations that described the behavioral health offerings and what insurance was accepted.

A couple of patients requested a behavioral health check-in, where if they stopped receiving behavioral health services, they could be checked on rather than having to report that they wanted to continue services.

KEY TAKEAWAYS: PATIENT LISTENING SESSIONS

- Patients receiving behavioral health care were mostly satisfied with services, have regularly scheduled appointments, and enjoy the flexibility of telehealth.
- Noted perceptions of change over the last year highlight the workforce challenges that health care has undergone over the last few years, and the capacity constraints that ABHE-PC CHCs experience in providing services to patients.
- There is a need for more patient education in primary care on the value of screening and monitoring, and what monitoring is. Patients were generally unaware of their primary and behavioral health providers being in contact with one another about their care.
- There is a potential for care process improvements to implement behavioral health check-ins for patients who have paused their behavioral health care, as they may not reengage on their own.

Behavioral Health Access, Utilization, and Equity

In this section, the authors review results from the UMS that track changes in patient and practice outcomes of interest for the evaluation (RQ5 and RQ12). These results reflect staffing and patient outcomes for three measure assessment windows: baseline (January–June 2021), endline (January–June 2023), and a follow-up period (January–June 2024) from one year after the end of the program.

ABHE-PC Teams submitted 11 measures on their patient populations, provider capacity, utilization of mental and behavioral health services, and performance on clinical quality measures (Table 26). Six of the 11 measures are standard measures that have been used in quality reporting programs for Medicare and Medicaid, while five measures were developed specifically for the ABHE-PC learning collaborative. Teams varied in their capacity to report UMS data, especially stratified data, as shown in Table 26. Thirty-one of the 33 sites submitted baseline data; at follow-up, 28 sites submitted data, and 26 sites submitted data for all three time periods. Given the variation in teams' ability to prepare reports at the site level, statistics and counts are reported at the CHC, or organization level (n = 14) through the remainder of this section, with each CHC data point including only those health care facilities that teams chose for participation in ABHE-PC. One team was not able to submit any baseline data to the program. Findings from the analysis of the UMS in this section should be interpreted with these important limitations in mind.

Table 8. Measure Data Availability Across ABHE-PC Sites (n = 14)

Measure	Baseline		Follow-up	
	Number and percentage of CHCs reporting measure	Number and percentage of CHCs reporting any stratified data	Number and percentage of CHCs reporting measure	Number and percentage of CHCs reporting any stratified data
ABHE_1 Clinical Providers, Enabling Staff, and Adult Patient Counts	13 (92.9%)	13 (92.9%)	14 (100%)	13 (92.9%)
ABHE_2 Mental Health and Substance Use Disorder Diagnoses	13 (92.9%)	12 (85.7%)	12 (85.7%)	12 (85.7%)
ABHE_3 Behavioral Health Care Utilization	12 (85.7%)	11 (78.6%)	13 (92.9%)	13 (92.9%)
ABHE_4 Depression Utilization of the PHQ-9 Tool	13 (92.9%)	11 (78.6%)	13 (92.9%)	13 (92.9%)
ABHE_5 Depression Remission at Twelve Months	12 (85.7%)	11 (78.6%)	13 (92.9%)	13 (92.9%)
ABHE_6 Controlling High Blood Pressure	12 (85.7%)	11 (78.6%)	13 (92.9%)	13 (92.9%)

Measure	Baseline		Follow-up	
	Number and percentage of CHCs reporting measure	Number and percentage of CHCs reporting any stratified data	Number and percentage of CHCs reporting measure	Number and percentage of CHCs reporting any stratified data
ABHE_7 Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%)	12 (85.7%)	11 (78.6%)	13 (92.9%)	13 (92.9%)
ABHE_8 Initiation and Engagement of Alcohol and Other Drug Dependence Treatment	7 (50.0%)	7 (50.0%)	9 (64.3%)	9 (64.3%)
ABHE_9 Closing the Referral Loop: Receipt of Specialist Report	6 (42.9%)	6 (42.9%)	9 (64.3%)	6 (42.9%)
ABHE_10 Behavioral Health Appointment Encounter Status	10 (71.4%)	9 (64.3%)	12 (85.7%)	12 (85.7%)
ABHE_11 Days Waiting for Mental/Behavioral Health or Substance Use Appointment	7 (50.0%)	4 (28.6%)	10 (71.4%)	6 (42.9%)

General Limitations in Reporting UMS Data

The authors noted several common limitations that teams had when reporting UMS data, especially at baseline. First, while all teams were able to provide stratified data for at least one measure, they were not able to provide every type of stratification for each measure (Table 27). For example, teams may have been able to provide data on sex or preferred language but were unable to provide SOGI or race and ethnicity stratifications on their data. When reporting provider data, only two of 11 organizations reporting staff counts could provide all REL/SOGI stratifications because they do not collect this information or they needed to access other systems (such as human resources data) to report it. Reviewing follow-up reporting, 14 organizations provided staffing data, 10 could stratify at least one demographic, and 2 (including 1 that could also report all stratifications at baseline) could report all stratifications. Across baseline and follow-up, organizations found gender identity and sexual orientation to be the most difficult demographic information to report.[†††] This variability in the data was a considerable limitation across measures and across reporting periods. To ensure that the authors made valid comparisons, for each CHC, AIR only included those stratifications that were available across all three waves of UMS data collection in final analysis tables.

Table 9. Stratification Data Availability Across ABHE-PC Sites at Baseline (*n* = 14)

Stratification data availability	Number and percentage of reporting CHCs
All stratifications included in at least one measure	9 (64.3%)

[†††] Reporting all "unknown" did not count as stratifying.

Missing spoken language stratification	1 (7.1%)
Missing sexual orientation and gender at birth stratifications	1 (7.1%)
Missing race, ethnicity, sexual orientation, and gender identity stratifications	1 (7.1%)
Missing all stratifications	1 (7.1%)
Unable to report at baseline (provided 2 measures at follow-up, 1 stratified)	1 (7.1%)

Other data limitations arose because of how ABHE-CHCs' EHR systems are set up or how patient, provider, or appointment information is collected. For example, at baseline, one team was unable to report measures separately for each of its participating sites, and four teams were unable to follow specifications for at least one of the measures. Some of the sites worked around these limitations by conducting different queries of their data, while others had to pull the data manually.

Measure-Specific Limitations

As Table 26 shows, ABHE_8, 9, and 11 had the lowest reporting rates, and we do not report stratifications for these measures due to concerns about data reliability.

Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (ABHE_8). Half of the teams were unable to report data on ABHE_8 at baseline because they provided limited or no SUD services on-site or did not have a process in place for tracking referrals of patients to external providers for treatment. At follow-up, one organization transitioned to a new EHR and could not determine the number of days between episode start date and initiation of medication. A separate organization did not have a report available that could calculate days elapsed between diagnosis and receipt of medication or intervention. At baseline, one of these organizations referred patients with opioid use disorder to their internal MAT team by sending a message to the MAT program director, a process incompatible with systematic tracking of the days elapsed between a new episode of alcohol or other drug use and the subsequent treatment initiation visit. After transitioning to a trackable referral system, this organization was able to report ABHE_8 data at follow-up. Other organizations expanded their SUD service offerings or improved their reporting capabilities, with two additional teams reporting follow-up data.

Closing the Loop (ABHE_9). More than half of the teams (8) did not yet have workflows or data systems in place to facilitate tracking and reporting on referrals at baseline. For example, one organization noted in its baseline Data Collection Manager that it was unable to systematically track telephone encounters and phone calls to the Behavioral Health coordinator. Throughout the ABHE-PC learning collaborative, this organization and several others — for a total of four — implemented systems changes (e.g., new processes for sending referrals via EHR) that enabled

them to efficiently record, extract, and report on the status of patient referrals to mental health and SUD services at follow-up. Because one of the organizations that provided ABHE_9 data at baseline later experienced an EHR transition that made it difficult to extract and validate referral data for subsequent reporting periods, there was only a net improvement of three additional organizations with data reporting capabilities at follow-up.

Days Waiting for Care (ABHE_11). The most difficult measure for teams to report at baseline was ABHE_11, which tracks the average number of days patients wait for a mental or behavioral health appointment after requesting one. At baseline, half of the organizations did not explicitly collect or track this information or were unable to link a request for an appointment (which may have been documented in the provider's notes) to an appointment date. Over the course of implementation, reporting for this measure did increase, with three organizations adding ABHE_11 data to their follow-up submissions. In comparing data availability notes for ABHE_11 between baseline and follow-up, two additional organizations were able to report data for this measure on both internal and external appointments, while one additional organization was able to report ABHE_11 data for internal appointments only.

Mental Health and Substance Use Disorder Diagnoses (ABHE_2). While most teams submitted these data at baseline, several teams noted in technical assistance (TA) check-ins and in their Data Collection Manager Tool that mental and behavioral health diagnoses could be underreported as they might not always be tracked or seen in limited, sometimes "top 3" current and active diagnosis lists that are available for export. Several organizations indicated that they do not screen for or track cases of intimate partner violence or human trafficking.

Patient Population and Provider Capacity

Total patient population with a visit during the assessment period increased over time within teams submitting patient counts in baseline, endline, and follow-up, increasing 15% from baseline to follow-up (Table 28). Over this same time period, the total number of patients receiving any BH services decreased slightly, and therefore the proportion of patients receiving BH services also declined. That said, the total count of services delivered increased with the number of services received increasing from 2.7 services per patient to 3.4 services per patient over the six-month assessment window.

Table 10. Number of Patients Receiving BH Services, Utilization 6-Month Assessment Period (*n* = 13)

Language	Baseline	Endline	Follow-up	Percent change, baseline to follow-up
Number of patients	106,644	117,737	122,455	15%

Number of patients receiving BH services	12,267	12,292	11,768	-4%
Proportion of patients receiving BH services	12%	10%	10%	-16%
Number of BH services total	32,882	42,009	39,835	21%
Number of services per patient, among patients receiving BH services	2.7	3.4	3.4	26%
Number of patients per team: Average (range) over 6-month assessment period	8,203 (1,422–22,474)	9,056 (1,434–23,681)	9,419 (1,610–26,247)	15%

The average number of patients per team increased over time. In all waves, two teams skewed the average with more than 20,000 patients per wave, with number of patients served over each six-month assessment period varying greatly across sites.

The UMS captured a variety of staff types as outlined by the Health Resources and Services Administration (HRSA) Health Center program Uniform Data System (UDS) (Table 29). AIR researchers used these counts to monitor care team adequacy per patient and across provider mix, including:

- Patient to physician ratio
- Licensed mental health services staff to physician ratio
- Proportion of care team that is behavioral health-focused[‡‡‡]
- SUD services staff to physician ratio

Table 11. Staff Categories Collected Through Universal Measure Set

Staff category name	Description
Total Physicians	UDS Table 5 Line 8; includes family physicians (Line 1), general practitioners (Line 2), internists (Line 3), obstetrician/gynecologists (Line 4), pediatricians (Line 5), and other specialty physicians (Line 7).
Total Nurse Practitioners, Physician Assistants, and Certified Nurse Midwives	UDS Table 5 Line 10a; includes UDS Lines 9a (nurse practitioners [NPs]), inclusive of advanced practice nurses (APNs), and, as clarified in the 2023 UDS, advanced practice registered nurses (APRNs), as well as UDS Lines 9b (physician assistants [PAs]) and 10 (certified nurse midwives).
Other Nurses	UDS Table 5 Line 11; includes licensed practical nurses, licensed registered nurses, licensed vocational nurses, home health nurses, visiting nurses, clinical nurse specialists, and public health nurses.
BEHAVIORAL HEALTH-FOCUSED STAFF	
Psychiatrists	UDS Table 5 Line 20a.

[‡‡‡] Included Psychiatrists, Licensed Clinical Psychologists, Licensed Clinical Social Workers, Other Licensed Mental Health Providers, Other Mental Health Personnel.

Staff category name	Description
Licensed Clinical Psychologists	UDS Table 5 Line 20a1.
Licensed Clinical Social Workers	UDS Table 5 Line 20a2.
Other Licensed Mental Health Providers	UDS Table 5 Line 20b; includes psychiatric social workers, psychiatric NPs, psychiatric PAs, family therapists, and other licensed master's degree–prepared providers.
Other Mental Health Personnel	UDS Table 5 Line 20c; includes unlicensed personnel and support personnel, including "certified" personnel, who provide counseling, treatment, or support to mental health providers.
CROSS-LISTED SUBSTANCE USE DISORDER STAFF	
Substance Use Disorder Services Staff	UDS Table 5 Line 21; includes substance use disorder social workers, psychiatric nurses, psychiatric social workers, mental health nurses, clinical psychologists, clinical social workers, alcohol and drug abuse counselors, family therapists, and other individuals providing substance use disorder counseling and/or treatment services.
ENABLING SUPPORT-FOCUSED STAFF	
Patient Services Support Personnel and Other Medical Personnel	Non-Clinical Support Services, UDS Table 5 Lines 30a-32. Includes medical assistants.
Case Managers	UDS Table 5 Line 24; includes care coordinators and referral coordinators.
Patient and Community Education Specialists	UDS Table 5 Line 25; in the 2023 UDS, this line is titled health education specialists.
Outreach Workers	UDS Table 5 Line 26.
Transportation Workers	UDS Table 5 Line 27.
Eligibility Assistance Workers	UDS Table 5 Line 27a; 2023 UDS clarifies that the following positions should be counted here: patient navigators, certified assisters, and eligibility workers.
Interpretation Personnel	UDS Table 5 Line 27b.
Community Health Workers	UDS Table 5 Line 27c. The following roles should be counted here: community health advisors, lay health advocates, promotoras, community health representatives, peer health promoters, or peer health educators.

The average number of staff at the sites overseen by each team increased from 517 staff at baseline to 832 staff at follow-up, a 60.9% increase. Consistent with the CHC model of care, the provider base for a site consisted of primary care physicians, nurse practitioners, physician assistants, and certified nurse midwives. However, the availability of licensed mental and behavioral health providers was far more limited and varied widely across ABHC-PC CHCs. Two ABHE-PC CHCs had no psychiatrists or licensed psychologists at baseline; one of the two ABHC-PC CHCs also had licensed clinical social workers, while the other ABHC-PC CHC did not have licensed clinical social workers, or other licensed mental health providers. Nine of the 14 ABHE-PC CHCs had licensed independent clinical social workers or other licensed mental and behavioral health providers, but only one team had an SUD provider at baseline. Providers with

SUD treatment classification were added at five additional ABHE-PC CHCs between baseline and follow-up.

ABHE-PC CHCs also had a mix of other enabling staff, such as case managers (baseline: 7 teams; follow-up: 9 teams), community health workers (baseline: 3 teams; follow-up: no teams), and eligibility assistance workers (baseline: 4 teams; follow-up: 5 teams). No ABHE-PC CHCs offered transportation personnel at baseline, with one ABHE-PC CHC adding transportation personnel at follow-up. Similarly, translation services went from none offered, to one ABHC-PC listing them in its staffing counts at endline, though these services could be facilitated by more general case managers or care coordinators. A summary of providers and staff in key staff classifications and the ratio of patients to each classification at baseline and follow-up is listed in Table 30.

Table 30. ABHE_1 Clinical Providers, Enabling Staff, and Adult Patient Counts (*n* = 13)

Provider type	Baseline				Follow-up			
	Number of teams with at least one provider	Cross-team average number	Cross-team range	Adult patient-to-provider ratio	Number of teams with at least one provider	Cross-team average number	Cross-team range	Adult patient-to-provider ratio
Physicians	13	320	7–2,090	26:1 208:1††	13	538	25–4,718	18:1 99:1††
Nurse practitioners, physician assistants, and certified nurse midwives*	13	54	1–198	160:1	12	123	0–462	77:1
Licensed Mental Health Providers†	12	35	0–80	252:1	12	44	0–108	214:1
Care Coordination and Enabling Staff‡	11	107	0–588	79:1	12	127	0–623	74:1
Substance Use Disorder Services Staff **	1	0.5	0–7	15,235:1	6	7	0–35	1,276:1

*Includes licensed nurse practitioners and registered nurses.
†Includes psychiatrists, licensed clinical psychologists, licensed independent clinical social workers, and other licensed mental health providers.
‡Provider types in this row include social workers, substance use disorder staff, unlicensed mental/behavioral health providers, case managers, patient and community education specialists, outreach workers, transportation personnel, eligibility assistance workers, interpretation personnel, community health workers, clerks, and other enabling staff.
**Any provider type can be counted in this row, if certified as described in the HRSA UDS to provide substance use disorder services. This categorization corresponds to Table 5, Line 21 of the 2023 UDS. It is inclusive of substance use disorder social workers, psychiatric nurses, psychiatric social workers, mental health nurses, clinical

psychologists, clinical social workers, alcohol and drug abuse counselors, family therapists, and other individuals providing substance use disorder counseling and/or treatment services. However, the 2023 UDS also defines the term behavioral health as "synonymous with the prevention or treatment of mental health *and* substance use disorders," further specifying that "centers may choose to identify all behavioral health services as Mental Health Services if there is no way to reasonably split these services." For this reason, it is possible that participating organizations in the ABHE-PC learning collaborative recorded staff providing some SUD counseling and/or treatment services entirely in the rows for Licensed Mental Health Providers or Care Coordination and Enabling Staff (i.e., for unlicensed mental health/SUD providers).

[††]Outlier total physician count for one team led to estimation of a second average cross-team ratio for comparison.

In addition to reviewing patient-to-provider ratios, behavioral health workforce planners also recommend reviewing behavioral health provider-to-primary care provider ratios and thresholds (Table 31). AIR compared teams to national FQHC trend data to identify how many teams had sufficient staffing ratios to meet the anticipated needs of the patient population.[26] While these ratios and percentage comparisons in the ABHE-PC evaluation use staff counts – and not full-time-equivalents, which is the more common standard – they can inform monitoring of the depth of the behavioral health workforce bench and change over time. The number of teams meeting the licensed mental health and SUD services staff ratios increased over time. One team's care team mix went from having more than 11% to then having less than 11% of the care team staff from licensed BH staff categories, leaving eight of the teams meeting the threshold at follow-up.

Table 31. Number of Teams Meeting BH Staffing Coverage National Rates

Staff capacity ratio	Baseline Number of teams meeting target estimate range	Follow-up Number of teams meeting target estimate range
Ratio of licensed mental health services staff to physicians met or exceeded 1.1	2 teams (0, 6)	3 teams (0, 1.9)
Ratio of SUD services staff to physicians met or exceeded 0.2	1 team (0, 1)	5 teams (0, 0.4)
Licensed BH staff comprise 11% or more of the care team	9 teams (0%, 53.2%)	8 teams (0, 30.8%)

ABHE-PC CHCs' patient populations are racially and linguistically diverse. On average, at baseline, sites reported that about 40% of their patient population identified as Hispanic (Figure 24), and nearly 20% identified as Black, Native American/Alaska Native, or Asian (Figure 25). Twenty-seven percent had an "Unknown" race at follow-up (Figure 25).

Figure 24. Follow-Up Patient Population, by Ethnicity

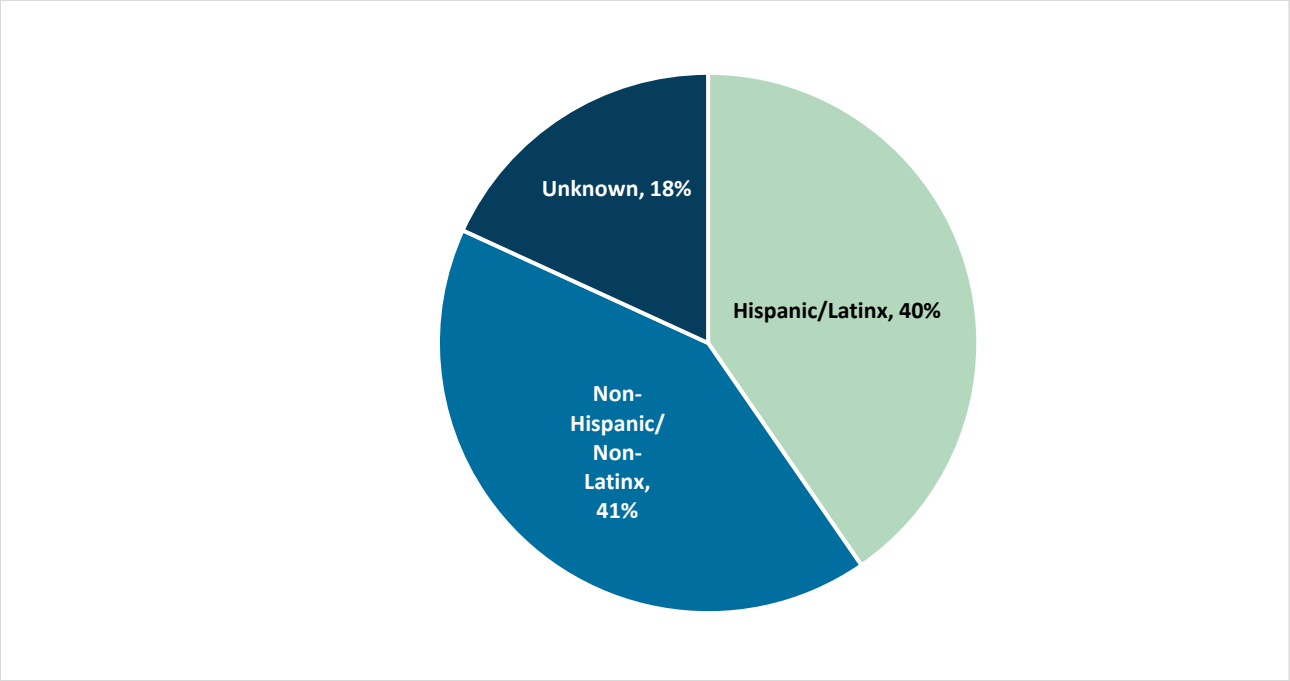
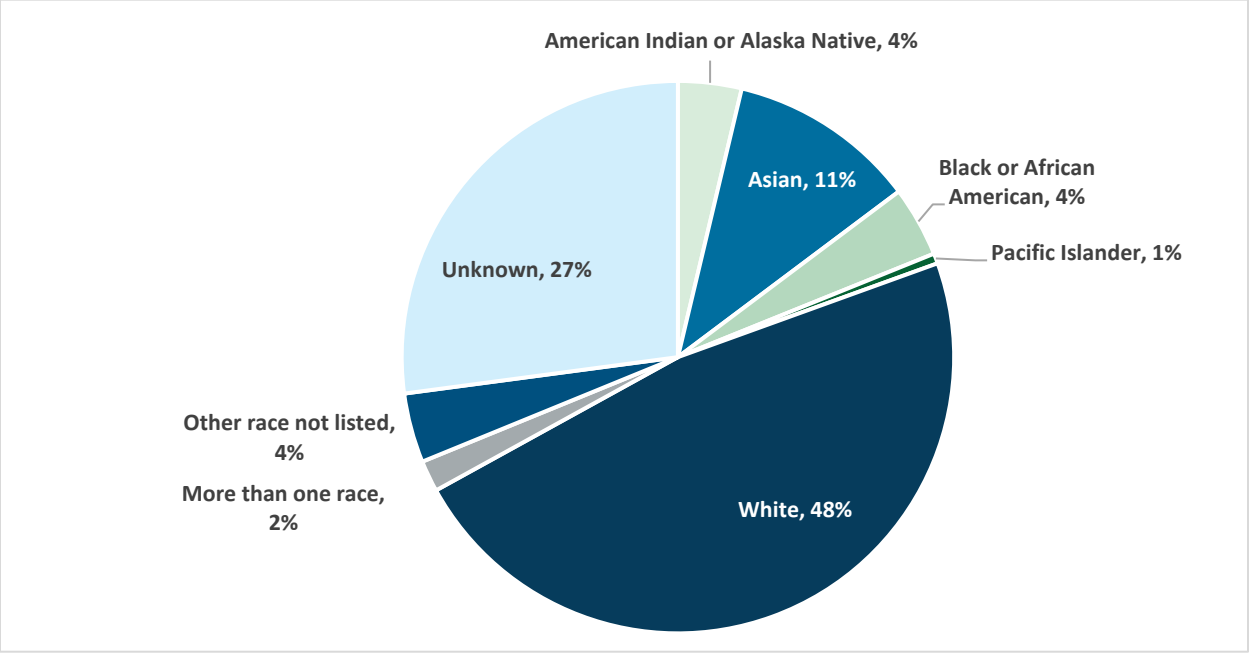


Figure 25. Follow-up Patient Population, by Race*



* The Asian category includes people of an Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, or Other Asian race. The Pacific Islander category includes people of a Native Hawaiian, Guamanian or Chamorro, Samoan, or Other Pacific Islanders race.

Linguistic diversity among ABHE-PC CHCs is linked to CHCs' geographic locations and the populations they aim to serve. When the authors looked at language preferences across all sites at baseline, a large majority of patients reported English as their preferred language, and in the aggregate, there is a comparable percentage of providers who speak the patients' preferred languages. However, these cross-site averages only roughly estimate the diversity of patients. When the authors analyzed linguistic preferences at the site level, there is wide variation, with some sites reporting that more than 70% of their patients at baseline had a preferred language other than English (Table 32).[§§§] Therefore, it is helpful to analyze language concordance between providers and patients at the site level. The authors found that in 14 sites, there was a language discordance of 30% or more between primary care providers and their patients. The authors did not analyze language concordance between patients and mental/behavioral health providers because within and across sites, the number of these providers was small. However, in considering how to advance behavioral health equity, sites should consider the linguistic preferences of their patient population when adding mental and behavioral health providers.

Table 12. ABHE_1 Baseline Patient Languages Spoken*

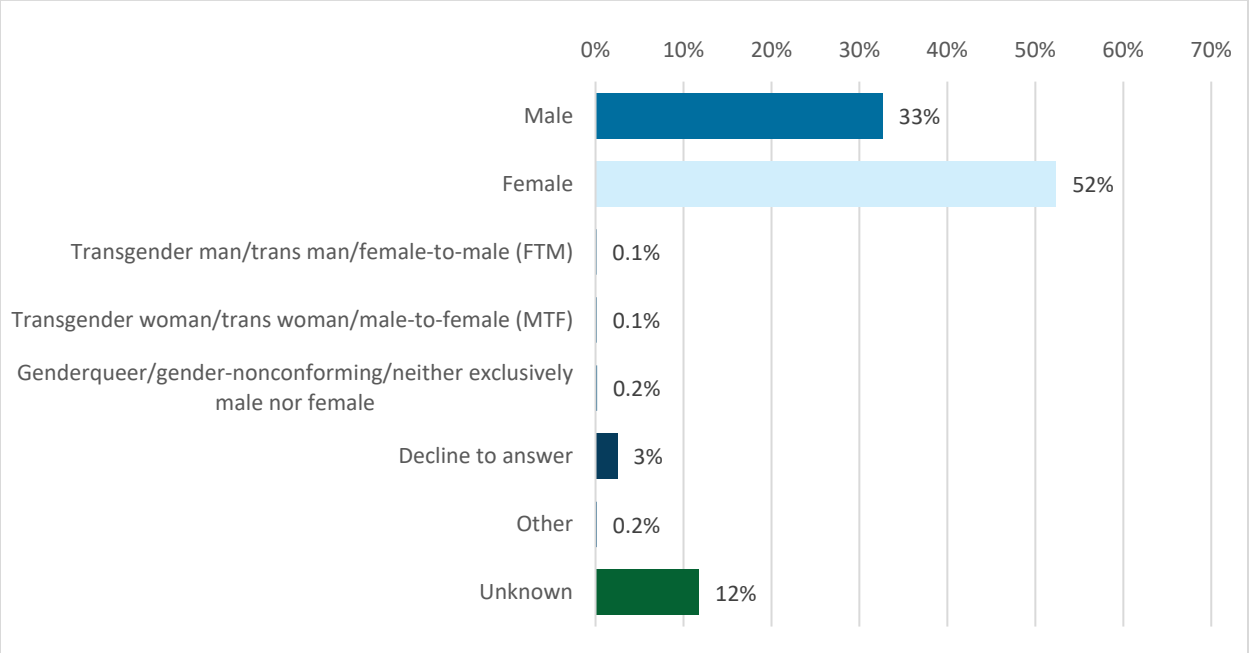
Language	Cross-site percentage of patients who speak the language	Cross-site range for patients who speak the language	Cross-site percentage of physicians who speak the language	Cross-site percentage of NPs, PAs, and CNMs who speak the language
English	81%	0–95%	65%	65%
Spanish	17%	0–71%	15%	15%
Chinese	2%	0–50%	5%	3%
Tagalog	5%	0–38%	1%	5%
Vietnamese	0.3%	0–4%	0.2%	0%
Korean	2%	0–38%	4%	4%

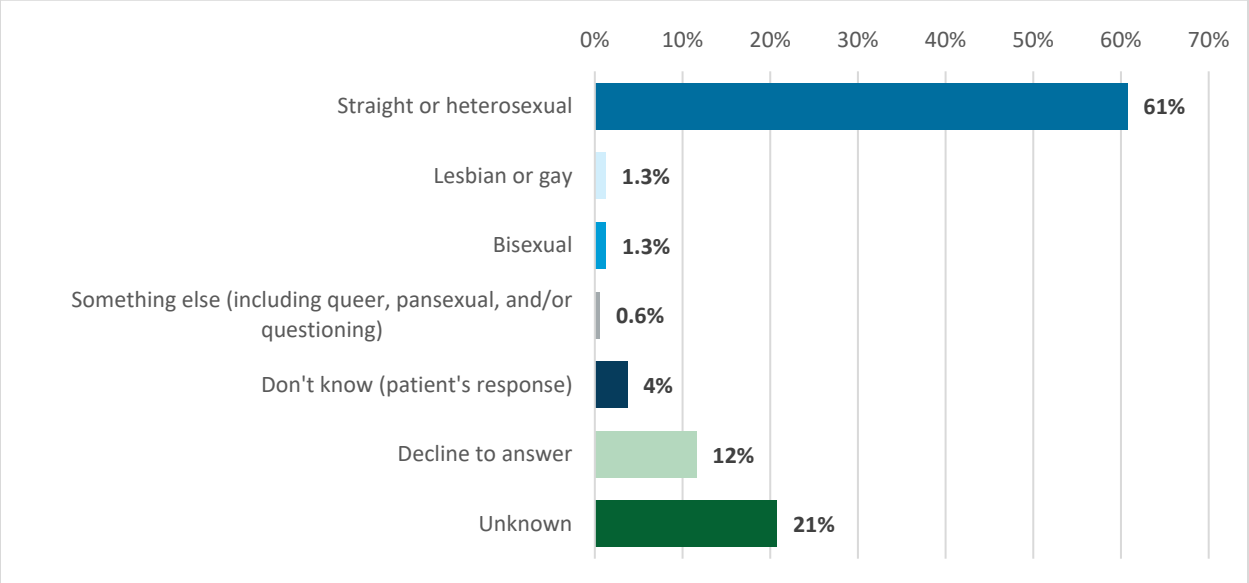
*Language categories in this table indicate the patient's or provider's primary language. However, how sites reported language information varied. Some sites reported any and all languages spoken, while others reported a primary or preferred language.

A majority of patients at ABHE-PC CHCs identified their gender as male or female and their sexual orientation as straight or heterosexual at follow-up (Figure 26). Less than 1% of patients overall identified as another gender (approximately 0.6% of patients reported being transgender man, transgender woman, gender-queer, or other), and a little more than 3% identified as having a sexual orientation other than heterosexual. However, a significant number of patients — between 15% and 33% — did not report this information or declined to answer.

[§§§] Sites could report more than 40 patient languages, but a language is only included in this table if at least one site reported 1% of patients or more speak the language.

Figure 26. ABHE_1 Patient Gender Identity and Sexual Orientation at Follow-Up (*N* = 13)





It is challenging to assess the extent of provider concordance with patients' SOGI data. About half of physicians (48% at baseline, 66% at follow-up) and nurses (51% at baseline, 54% at follow-up) on average identified as male or female, and an average of 10% of physicians and 6% of nurses identified as straight or heterosexual at baseline. However, at follow-up, more than 90% of providers had an Unknown sexual orientation and 70% to 80% of these provider types had Unknown gender identity. The Unknown proportion is high because most sites did not collect this information on their providers. As the authors show in this section, rates of

mental and behavioral health issues in non-cisgender and non-heterosexual minorities tend to be higher than for the general population.

Rates of Mental and Behavioral Health Conditions in Participating ABHE-PC Sites

Teams submitted counts of the number of patients who were seen within the six-month UMS assessment window who had a diagnosis of any mental illness or select mental illnesses that could be treated in primary care settings. ABHE-PC teams and their sites remaining in the final UMS analysis showed reported rates of mental and behavioral health conditions that were similar to national averages (see Table 33). For example, the authors' analysis shows that about 26% of ABHE-PC site patients had a mental health diagnosis during the baseline period, a rate slightly higher than the average of 21% among US adults in 2020.[27] The rates of common substance use diagnoses, such as diagnoses of alcohol and tobacco use, were also lower than the national averages. ABHE-PC sites were less likely to screen for other types of social or interpersonal issues. Only seven teams could report intimate partner violence at all three time points; human trafficking was not reported.

Table 13. ABHE_2 Average Percentage of Patients with Any Mental Illness or Substance Use Disorder Diagnosis (*N* = 11)

Mental health and substance use disorder diagnosis	Baseline average percentage of patients per organization	Follow-up average percentage of patients per organization
Any mental illness	25.9%	27.6%
Depression and other mood disorders	10.9%	13.6%
Anxiety disorders, including PTSD	13.4%	13.8%
Attention deficit and disruptive behavior disorders	1.5%	2.4%
Other mental disorders	8.9%	7.8%
Substance use disorders		
Alcohol-related disorders	1.6%	2.2%
Tobacco use	2.3%	3.0%
Other substance-related disorders (excluding tobacco use)	3.7%	4.4%
Other		
Human trafficking	–	–
Intimate partner violence (*n* = 7)	0.03%	0.02%

– Not collected.

Diagnosis of any mental illness. Rates of any mental illness increased overall and across all demographics from baseline to follow-up. Rates of diagnosed mental illness or substance use disorder among certain racial or ethnic or non-heterosexual or non-cisgender subgroups

appeared to be higher than the overall rate (Table 34). For example, patients who identified as Hispanic, Black, Pacific Islander, or transgender had higher rates of mental illness than the overall rate (the authors note that patients who identified as Non-Hispanic White also had higher than average rates of mental illness). The higher rates of mental illness among some of these racial, ethnic, and gender minorities were in some cases likely due to small sample sizes.[****]

Mental health or behavioral health services received. The average rate of patients with any mental illness increased by 2 percentage points from baseline to follow-up and the proportion that receive behavioral health or mental health services decreased from 9.1% at baseline to 4.8% at follow-up. While the proportion of the population in need who were receiving services decreased, the number of services per patient who received services increased from 3.9 to 4.9 services received.

When the authors compared the rates of mental illness to the percentage of patients who received mental and behavioral health services by race and ethnicity and gender identity or sexual orientation, results show that not all patients were receiving treatment for their conditions. Some patients may have received services elsewhere (particularly patients who had serious mental illness or substance use disorder). However, previous analyses of the California Medicaid population have shown that access to mental and behavioral health services falls short of prevalence and that there are racial and ethnic disparities in access to mental health services.[28] Because the authors did not analyze patient-level data, this analysis only shows the average percentage of patients receiving mental and behavioral health services among the stratified groups. The authors cannot comment on the specific types of mental or behavioral health services that patients received, whether they were aligned with the patients' diagnoses, or whether they were clinically appropriate for the conditions being treated.

[****] Patients who identified at baseline as Hispanic comprised 30% of all patients in the study; those who identified as Black comprised 2% of patients; those who identified as Pacific Islander comprised 0.5% of patients; and those who identified as transgender comprised 0.1% of patients in the study.

Table 14. Patients with Any Mental Illness or Substance Use Disorder Diagnosis, by Gender Identity, Race, Ethnicity, (*n* = 9–11), and Services Received (*n* = 8–10)*

Mental health and substance use disorder diagnoses	Baseline				Follow-Up			
	Average percentage of patients per organization…			Average number of MH/BH services	Average percentage of patients per organization…			Average number of MH/BH services
	with any mental illness	with any SUD† diagnosis	Who received MH/BH services	Across org / per person	with any mental illness	with any SUD* diagnosis	Who received MH/BH services	Across org / per person
Any mental illness	**25.9%**	**5.3%**	**9.1%**	**3,158/3.9**	**27.6%**	**6.5%**	**4.8%**	**4,227/4.9**
Hispanic	27.2%	5.9%	9.2%	1,107/3.1	34.8%	9.3%	4.4%	1,618/4.4
Non-Hispanic	29.0%	5.4%	8.7%	1,887/3.3	31.8%	7.4%	6.6%	2,753/4.4
American Indian or Alaska Native	29.7%	6.3%	8.1%	39/3.0	35.7%	11.7%	7.0%	154/7.0
Asian (Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, or other Asian)	18.3%	1.7%	8.1%	451/3.0	21.9%	3.1%	13.3%	561/7.3
Black or African American	28.2%	6.1%	9.4%	132/3.3	39.9%	9.2%	4.1%	247/14.1
Pacific Islander (Native Hawaiian, Guamanian or Chamorro, Samoan, or other Pacific Islanders)	36.9%	4.0%	8.2%	17/2.3	42.5%	5.0%	5.0%	32/3.9
White	34.4%	8.4%	9.3%	1,601/3.5	41.8%	11.8%	4.7%	2,363/5.1
More than one race	26.0%	7.0%	12.2%	197/3.8	66.0%	27.1%	4.3%	139/4.8
Male	26.5%	3%	9.0%	1,027/2.6	28.8%	10.4%	4.1%	1,256/3.7
Female	23.6%	2%	9.9%	1,772/3.5	30.1%	5.5%	5.0%	2,319/4.8
Transgender man/trans man/female-to-male (FTM)	29.6%	3.9%	18.4%	6/3.5	61.1%	7.7%	4.9%	12/5.1
Transgender woman/trans woman/male-to-female (MTF)	53.0%	1.3%	26.3%	3/4.7	51.8%	7.8%	3.4%	15/3.3

Mental health and substance use disorder diagnoses	Baseline				Follow-Up			
	Average percentage of patients per organization…			Average number of MH/BH services	Average percentage of patients per organization…			Average number of MH/BH services
	with any mental illness	with any SUD† diagnosis	Who received MH/BH services	Across org / per person	with any mental illness	with any SUD* diagnosis	Who received MH/BH services	Across org / per person
Genderqueer/ gender nonconforming neither exclusive male nor female	38.9%	6.0%	13.6%	6/9.8	66.5%	6.9%	3.0%	34/3.0
Lesbian or gay	58.9%	4%	11.7%	69/3.4	45.4%	12.1%	5.4%	83/5.6
Bisexual	39.4%	8.5%	11.1%	107/4.5	58.3%	13.3%	4.2%	162/4.1

Note. BH = behavioral health; MH = mental health; SUD = substance use disorder.

**n* varied across overall estimate and stratified estimates.

†Includes alcohol use disorder and any other substance-related disorders (excluding tobacco use disorders).

Charts showing rates of mental illness and depression over time are presented in the section that follows.

Figure 27. Rates of Any Mental Illness by Gender Identity

Due to small sample sizes, all gender identities other than male and female are presented in one bar group, showing a 10-percentage point increase in any mental illness from baseline through follow-up. This increase in identification is also seen in rates for females and less so in rates for males over time.

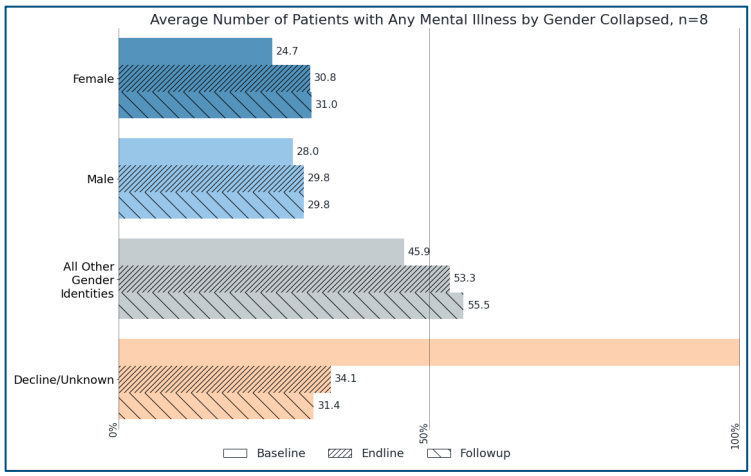


Figure 28. Rates of Depression by Race

Identification of depression increased across almost all race categories, though increases among American Indian, Alaska Native, and Native Hawaiian and Pacific Islander people were more variable due to underlying small sample sizes.

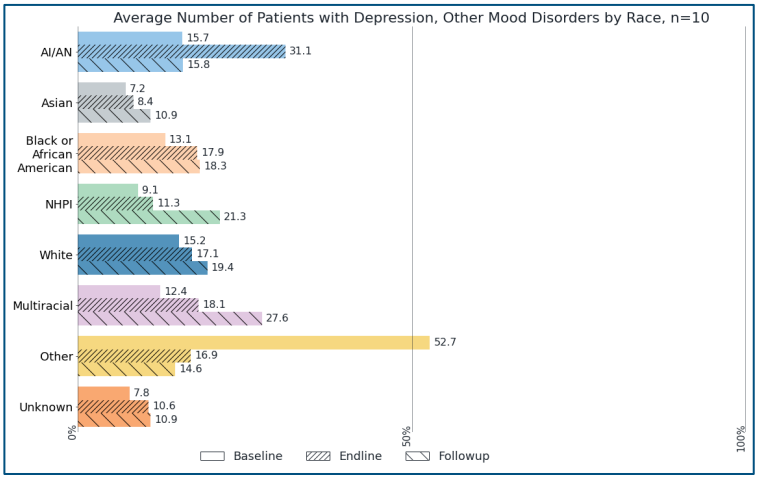
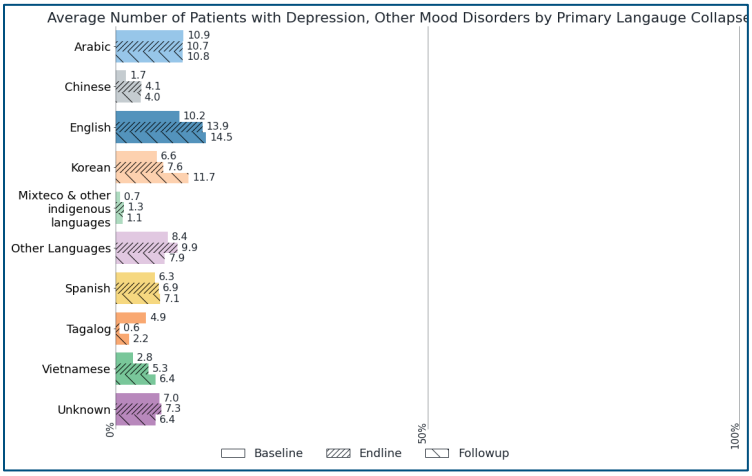


Figure 29. Rates of Depression by Primary Language

English-speaking patients had the highest rates of depression at endline and follow-up. Identification of depression in those who spoke other languages improved for those whose primary language was Chinese, Korean, Spanish, and Vietnamese.



On average, a little more than two-thirds of patients at ABHE-PC learning collaborative participating sites with depression were screened for depression symptoms using the PHQ-9 tool during the baseline period. Some sites screened fewer than 20% of patients (Table 35); almost 70% were screened at follow-up. Regular screening is needed to assess the severity of patients' depression symptoms and to track depression remission. Almost all (12) CHCs reported PHQ-9 screening data, and 11 CHCs were able to use that data to track depression remission. Most of the sites that were unable to track depression remission had difficulty identifying patients' initial PHQ-9 scores (the measure specification requires sites to establish a "lookback period"). Because 10 teams identified depression screening and treatment as one of their ABHE-PC learning collaborative goals, screening patients using the PHQ-9 or another validated tool, documenting depression scores in the EHR, and tracking scores over time to enable reporting were important opportunities for quality improvement. Improvement in both

screening and remission in the more limited number of reporting organizations indicates that improvement in screening rates can be achieved through concerted, planned efforts to improve workflows.

Table 15. Depression Utilization of the PHQ-9 Tool (ABHE_4, *n* = 12) and Depression Remission at 12 Months (ABHE_5, *n* = 11)

Measure	Baseline		Follow-Up	
	Cross-team average rate	Cross-team range	Cross-team average rate	Cross-team range
Use of PHQ-9 tool	62.8%	19.6%–93.2%	69.5%	34.1%–95.1%
Depression remission at 12 months	15.6%	0%–45.2%	19.7%	2.1%–48.9%

Figure 30. Rates of Depression Screening by Race

Race. Patterns in depression screening varied by race, potentially due to variation in the proportion of the patient population classified as Unknown over time. Cross-team average screening rates decreased among Asian (14 percentage points), and White and Black people (3 percentage points); AI/AN, NHPI, Multiracial, and Other race screening rates increased over time.

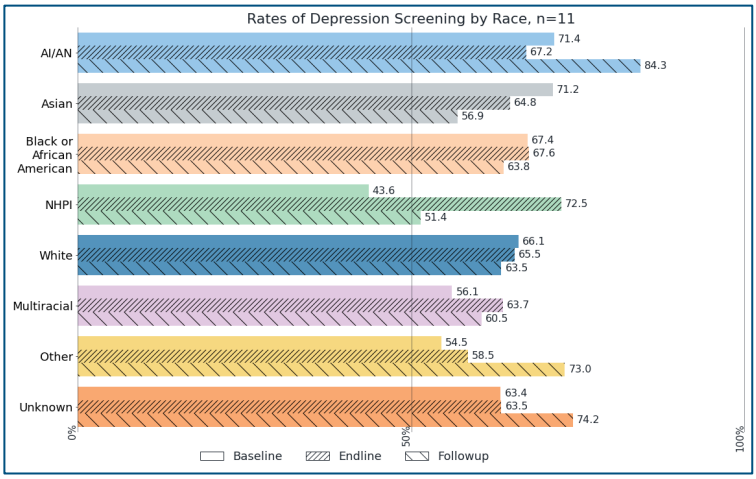


Figure 31. Rates of Depression Screening by Ethnicity

Ethnicity. Differences in PHQ-9 screening rates are presented by demographic and over assessment periods. Screening rates for Latino/Latinx populations were slightly higher than in non-Latino/Latinx populations, and rates show improvement at follow-up.

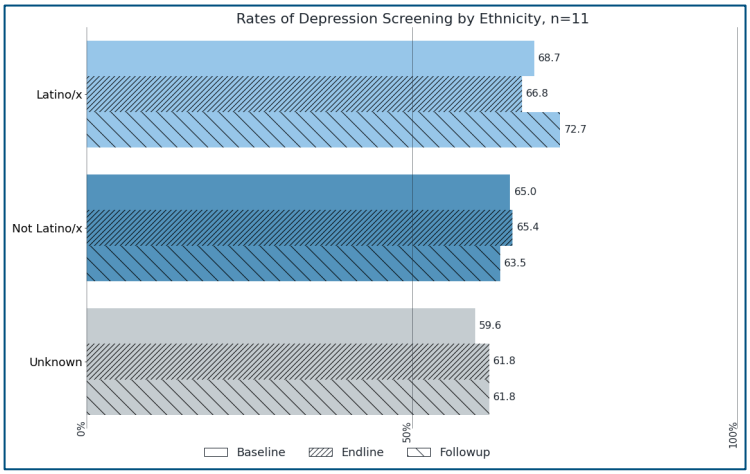


Figure 32. Rates of Depression Screening by Language

Language. Patients whose primary language is English were more likely to be screened at all time points, indicating that mismatched language congruency between providers and patients may continue to affect screening rates for those who do not speak English as a primary language. Screening rates among Spanish-language patients were lower than rates among Latinx patients, which suggests important variation within this subpopulation, perhaps related to immigrant status, generation of citizenship, or country of origin.

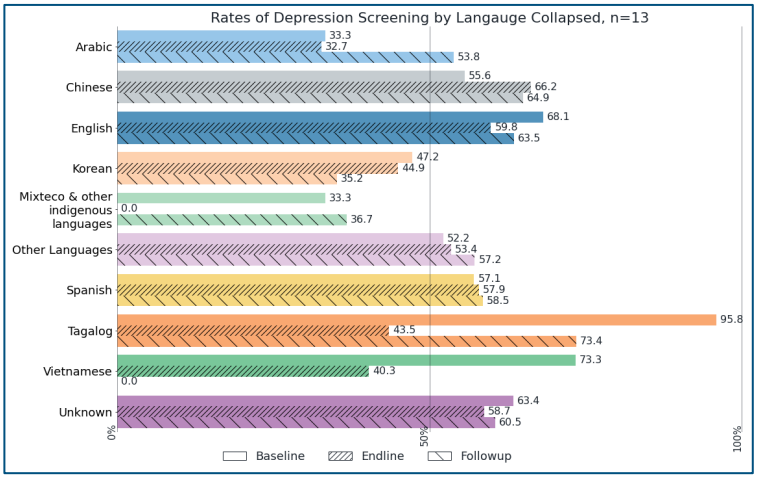


Figure 33. Rates of Depression Screening by Gender Identity

Gender Identity. Other Gender Identities (encompassing people who identify as female-to-male, male-to-female, Queer, or Other) had lower screening rates than females and males at baseline, and showed increases in screening at each subsequent wave, surpassing rates for males and females at follow-up. This trend could be indicative of the focus some teams placed on (a) improving the process for collecting gender identity data (reclassifying patients correctly from unknown and non-response categories), and (b) improving rapport and connection and screening in this particular population.

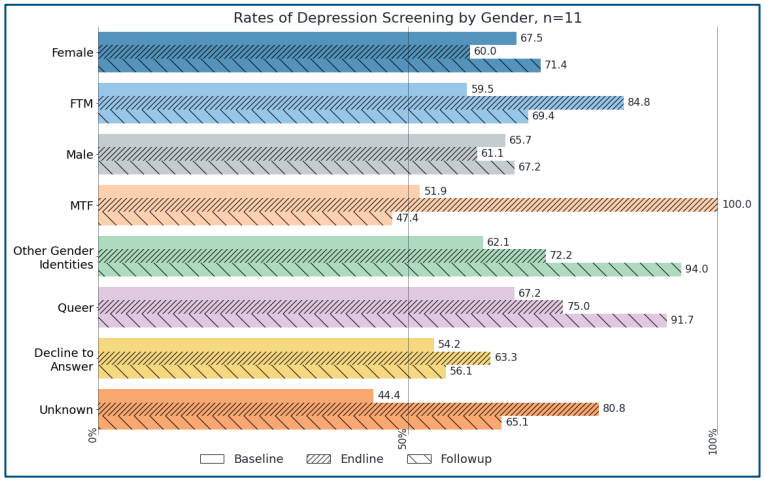


Figure 34. Rates of Depression Screening by Sexual Orientation

Sexual Orientation. Non-heterosexual patients had screening rates lower than heterosexual patients at baseline and showed an increase in screening rates at each time point.

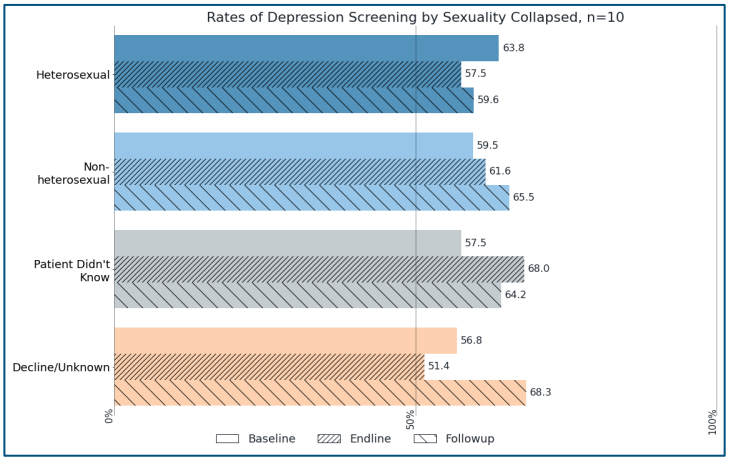


Figure 35. Rates of Depression Remission by Gender Identity

Non-cisgender patients' improvement in remission rates did not appear to increase at the same rate as that of cisgender patients.

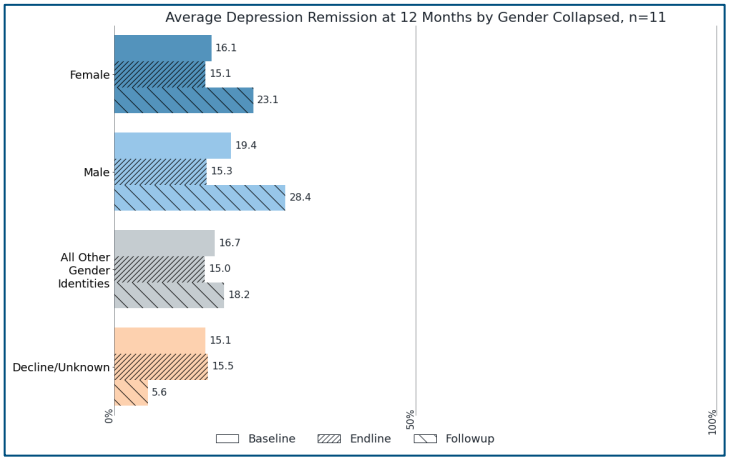
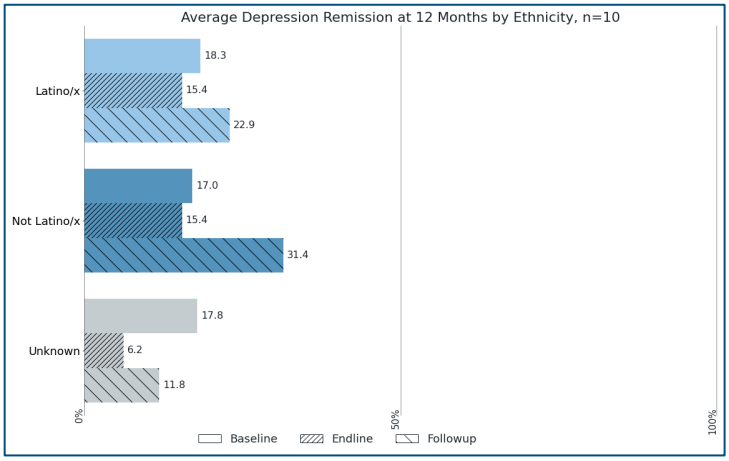


Figure 36. Rates of Depression Remission by Ethnicity

Latino/Latinx patients saw a 4 percentage-point increase in depression remission, but increases were much greater in patients who were not Latino or Latinx. Note that differences across demographic groups are not always possible as the number of teams that could stratify a measure at all waves varied within a measure. For example, 10 teams submitted data by ethnicity for depression remission, but 11 teams reported stratifications by gender identity.



The authors sought to measure the rate at which patients attended mental or behavioral health appointments as scheduled. "No-show" appointments can signal a need for additional patient outreach, particularly for patients who may be struggling with stigma or who are not ready to engage in mental or behavioral health treatment. Seventy percent of ABHE-PC organizations and related sites that remained in analysis were able to report this measure, and two additional organizations were able to report the measure at follow-up, though they are not included in reporting below as they do not have baseline comparison data.

This measure can be difficult to collect because not all sites specifically track the reasons why an appointment was not completed (e.g., appointments may be canceled by the patient or provider, the patient may not show up, or the appointment may be rescheduled). Across ABHE-PC sites that did report this measure, the authors found that, at baseline, a little more than one-third of patients who made a mental or behavioral health appointment did not show up. This finding was consistent through follow-up (see Table 36). Discussions with some ABHE-PC sites confirmed that failing to show up is not uncommon for behavioral health patients. However, this rate may be higher than the actual rate due to the fact that sites had to manually identify this information in appointment records. Going forward, sites may wish to implement processes for tracking appointment disposition in their EHRs or scheduling software.

Table 16. ABHE_10 Behavioral Health Appointment Encounter Status

Measure	Baseline		Follow-Up	
	Number of orgs reporting	Cross-org average	Number of orgs reporting	Cross-org average
Patients who canceled or did not show up for a mental/behavioral health or SUD appointment	9	35.3%	9	34.7%

ABHE-PC teams reported on days waiting for a behavioral or mental health appointment (Table 37). The California Department of Health Care Services established a requirement for health plans and systems to be able to provide behavioral or mental health care services within 10 days of referral.

Among teams that reported the number of days patients waited for care at baseline and follow-up, the number increased by 10 days on average. One of the six CHCs reporting at baseline and follow-up met the California standard of 10 days in all three waves, one met the standard only at endline, and one-third met the standard only at baseline. Among those teams that reported data at either baseline or follow-up or both, the number of days stayed roughly the same, while the cross-CHC average for the number of days waiting decreased from 23 to 22 days.

Table 17. Days Waiting for Care (ABHE_11)

Measure	Baseline		Follow-Up		Requirement for California Medicaid population*
	Number of orgs reporting	Cross-org average (range)	Number of orgs reporting	Cross-org average (range)	
Days Waiting for Care (Limited to teams with baseline and follow-up data available)	6	20 days (6–35 days)	6	30 days (2–64 days)	10 days
Days Waiting for Care (All teams, regardless of data availability across waves)	7	23 days (6–38 days)	9	22 days (2–64 days)	10 days

Measures of Physical Health Among ABHE-PC Sites

ABHE-PC sites reported two standard clinical quality measures to establish a baseline level of performance for primary care. Two common chronic conditions — diabetes and high blood pressure — are common in the adult population, especially among racial and ethnic priority populations. To place teams' performance on these measures in context, the authors compare them to California Medicaid plans' performance because the patient populations are similar (Table 38).

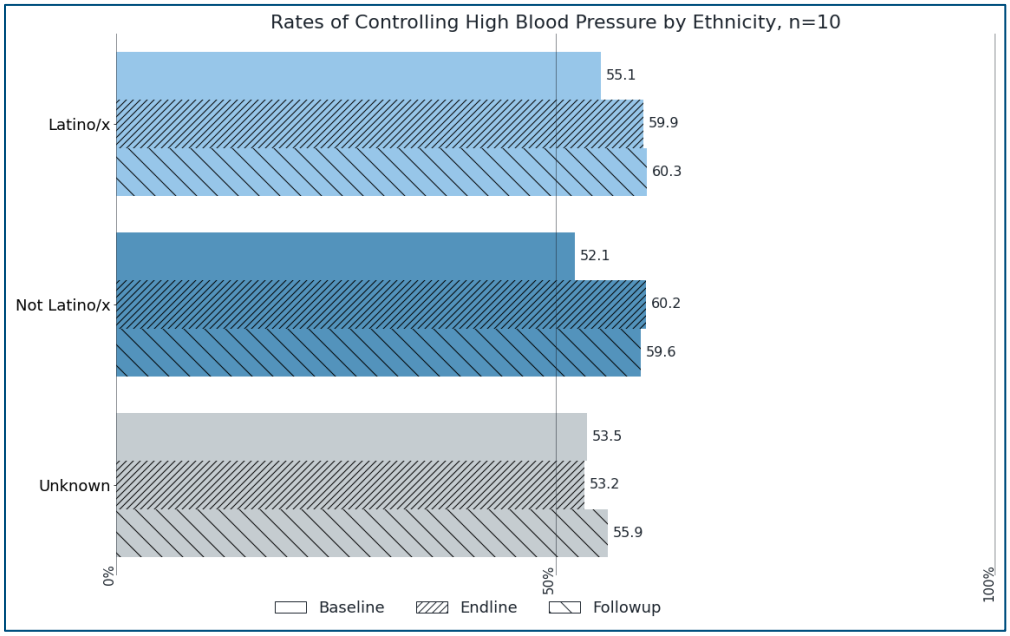
Table 18. ABHE_6 Controlling High Blood Pressure

Measure	Baseline		Follow-Up		Average rate for California Medicaid population*
	Number of orgs reporting	Cross-org average	Number of orgs reporting	Cross-org average	
Controlling high blood pressure	12	55%	13	62%	61%
Diabetes poor control: Hemoglobin A1c >9.0%	12	44%	13	32%	37%

*Medicaid and CHIP Scorecard. Data as of federal fiscal year 2020. Available at https://www.medicaid.gov/state-overviews/scorecard/comprehensive-diabetes-care/index.html

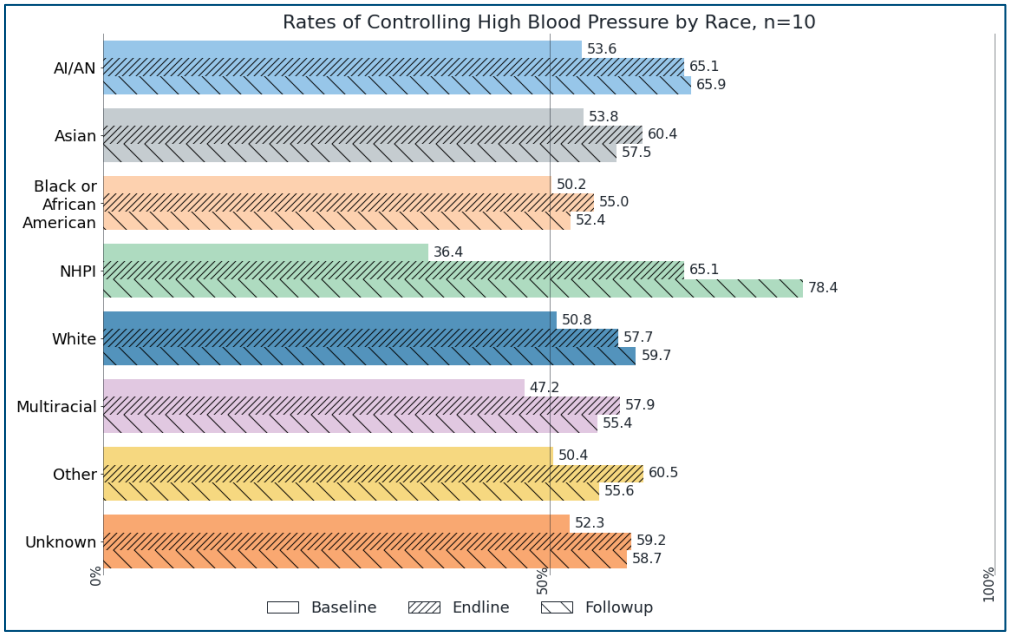
About half of patients at ABHE-PC sites with high blood pressure had well-controlled high blood pressure at baseline, which is about 6 percentage points lower than the California Medicaid rate. As Figure 37 shows, in those teams that could stratify by ethnicity, improvements were seen in both Latino/Latinx and non-Latino/Latinx populations.

Figure 37. Rates of High Blood Pressure by Ethnicity



The greatest improvement was seen in groups with smaller populations, such as American Indian/Alaska Native and Native Hawaiian/Pacific Islander subgroups with 12 and 40 percentage point increases from baseline to follow-up (Figure 38). Notably, Black populations did not see a sustained increase in controlling high blood pressure.

Figure 38. Rates of Controlling High Blood Pressure by Race



The diabetes measure is an inverse measure, meaning that a lower score is better. ABHE-PC sites performed slightly worse (7 percentage points higher) than all Medicaid plans on this measure when averaging across all teams' reported rates. At follow-up, the rate of poor diabetes control was decreased to below Medicaid rates and the greatest improvements were among patients who were not Hispanic (16 percentage-point decrease), Asian (18 percentage-point decrease), More than one Race (8 percentage-point decrease), and Other race (13 percentage-point decrease) (Figure 39).

Those whose primary language was not English had one of the greatest improvements in poor control, shifting from 41% with poor control at baseline to 21% with poor control at follow-up. The highest rates of poor diabetes control at follow-up that were above the Medicaid comparison were among people who identified as follows (with the order from highest to lowest prevalence of poor control) showing how improving services further could help majority populations as well as those with greater disparities:

- White
- Mixteco primary language
- Hmong primary language
- Don't know sexual orientation, transgender
- Bisexual
- Black
- Hispanic ethnicity
- Unknown gender identity
- Male gender identity
- Lesbian or gay
- American Indian/Alaska Native
- Male assigned at birth
- English primary language
- Straight or heterosexual
- Other race

Figures 39 and 40 show rates of poor diabetes control by race and primary language.

Figure 39. Rates of Poor Diabetes Control by Race

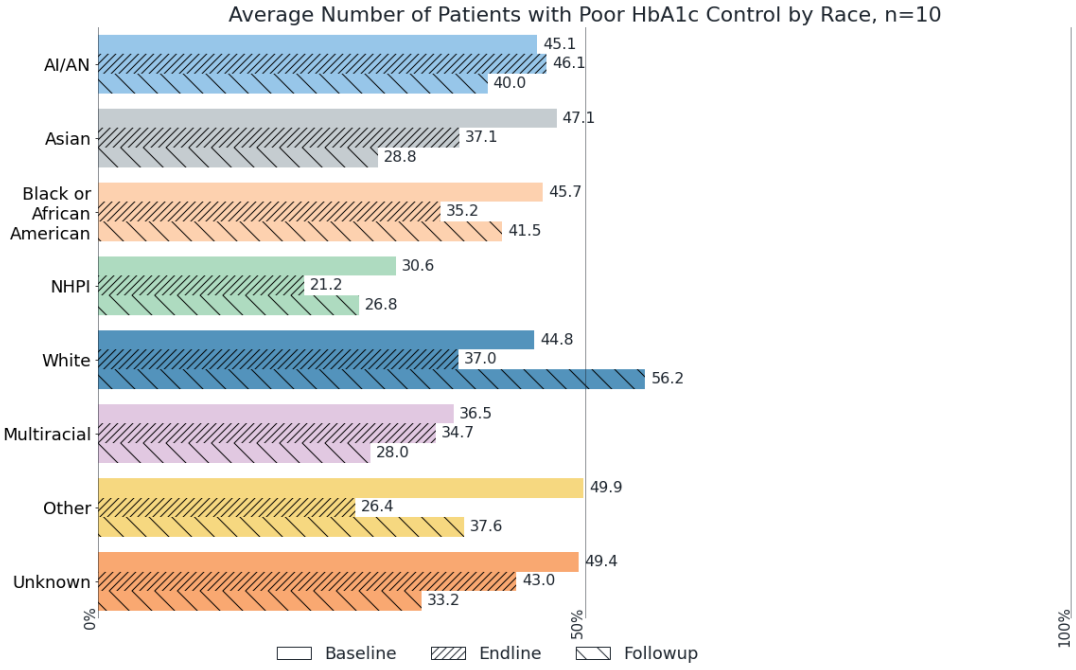
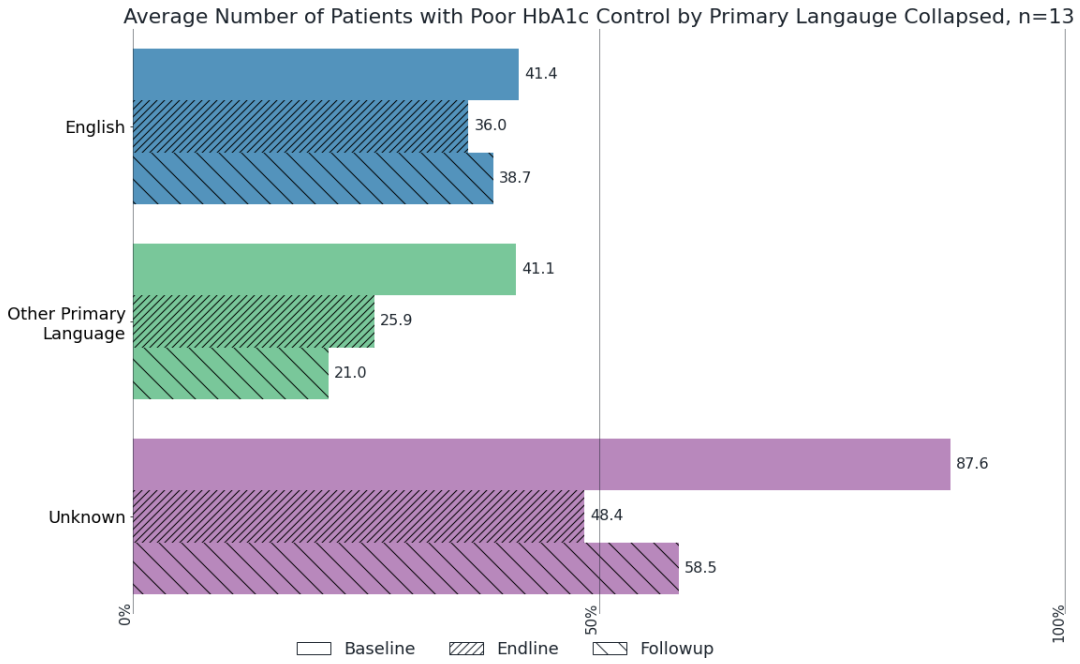


Figure 40. Rates of Poor Diabetes Control by Primary Language



Performance on these measures suggests opportunities for improving the care provided for chronic conditions, especially among patients who identify as members of a racial or ethnic minoritized groups. To continue their focus on improving behavioral health integration, sites could continue to conduct subanalyses of these measures to monitor patients who take drugs for mental illness that can have metabolic impacts or affect blood pressure.

A summary of data collection capacity and improvement over time is listed in Table 39.

Table 39. UMS Summary of CHC Reporting Capacity and Outcomes from Baseline to 1-year Post Implementation (*n* = 14)

Measure	Capacity to report measure, at least 1 stratification	Overall change	Indications of equity advancements
Clinical Providers, Enabling Staff	• **Measure: Improved** Increased from 13 to 14 • **Stratification: Stayed the same** 13, both waves	• **Improved** — 3 CHCs increased their Licensed MH staff ratio — 9 CHCs increased the number of enabling staff (6 increased by 1.5x) — 6 CHCs increased SUD provider ratio	• **Mixed** — 2 CHCs increased % of nonwhite providers, staff — 6 CHCs increased % non-English-speaking providers, staff.

Measure	Capacity to report measure, at least 1 stratification	Overall change	Indications of equity advancements
Mental Health and Substance Use Disorder Diagnoses	• **Measure: Decreased** 13 to 12 • **Stratification:** Stayed the same 12, across waves	• **Stayed the same** Any Mental Illness, Depression, and Anxiety identification increased one to two percentage points	• **Improved Identification** – Rates higher than national averages for priority pops at follow-up. – Any mental illness driven by English-preferred; Spanish-preferred decreased, however, Latinx and Black increased 5 and 11 percentage points. – Depression increased, >5 percentage points for Black, lesbian or gay, bisexual.
Behavioral Health Care Utilization	• **Measure: Improved** 12 to 13 • **Stratification: Improved** 11 to 13	• **Improved** – Number of patients receiving BH services increased 7% – Number of services increased 41% – Services per patient receiving BH increased from 2.8 to 3.7	• **Improved** – Proportion of bisexual receiving services increased 41%, lesbian gay increased 57%; Black increased 26% – Total number of services for Black increased 113%. – Ratio of services per BH patient increased for Spanish-speaking, Black and Latinx (80%, 68%, 28%); only Black rate exceeded the average.
Depression Utilization of the PHQ-9 Tool (NQF 0712e)	• **Measure:** Stayed the Same 13, across waves • **Stratification: Improved** 11 to 13	• **Improved** – Cross-CHC average – Increased from 62% to 69%	• **Mixed** – **Race:** On average, White screening rates went down. Unknown population with largest increase. AIAN and PI increase, but small populations. Black and Asian decreased. – **Gender identity other than male or female:** Increased 12 percentage points.
Depression Remission at Twelve Months (NQF 0710e)	• **Measure: Improved** 12 to 13 • **Stratification: Improved** 11 to 13	• **Improved** – Cross-CHC average – Increased from 16% to 22%	• **Stayed the Same** Non-Latinx drive improvement white, unknown race increase SOGI‡

Measure	Capacity to report measure, at least 1 stratification	Overall change	Indications of equity advancements
Controlling High Blood Pressure (NQF 0018)	• **Measure: Improved** 12 to 13 • **Stratification: Improved** • 11 to 13	• **Improved** – Cross-CHC average – Increased from 55% to 61%	• **Stayed the Same** – Black disparity remains in both rate and level of improvement. Spanish-speaking stayed the same, and in line with follow-up rate. SOGI‡
Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%) (NQF 0059)	• **Measure: Improved** 12 to 13 • **Stratification: Improved** 11 to 13	• **Improved** – Cross-CHC average – Decreased from 44% to 33%	• **Mixed** – Non-English-speaking drove decrease; Black showed improvement but of lower magnitude and higher than average and white at all time points. SOGI‡
Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (NQF 0004)	• **Measure: Improved** • 6 to 9 • **Stratification: Improved** • 6 to 9	• **Mixed** – Cross-CHC average – Initiation of treatment increased 27% to 33% – Engagement decreased from 27% to 14%	• **Unable to Assess**
Closing the Referral Loop: Receipt of Specialist Report	• **Measure: Improved** 6 to 9 • **Stratification: Stayed the same** 6, all waves	• **Improved** – Cross-CHC average proportion closed – Increased 52% to 64%	• **Unable to Assess**
Engagement - Behavioral Health Appointment Encounter Status	• **Measure: Improved** 10 to 12 • **Stratification: Improved** 9 to 12	• **Stayed the same** – Cross-CHC average proportion cancelled or no-show: 35%	• **Undetermined** Strong decreases in white and unknown race indicate other, smaller populations fared worse however stratification availability across time points is low.

Measure	Capacity to report measure, at least 1 stratification	Overall change	Indications of equity advancements
Days Waiting for Mental/Behavioral Health or Substance Use Appointment	• **Measure: Improved** 7 to 10 • **Stratification: Improved** 4 to 6	• **Stayed the same** – Cross-CHC average number of days waiting decreased from 26 to 24 days. 3 of 6 CHCs reporting baseline and follow-up met CA standard of 10 days at one or more time points.	• **Unable to Assess**

– Measures that only had half of CHCs reporting at baseline resulting in poor ability to generalize and in some measures, low patient counts.

‡ Large proportion of population "Unknown", not reported.

Drivers of Positive Outcomes Related to Access to Care and the Care Process

Tables 40 and 41 show the qualitative comparative analysis (QCA) results of analyzing the relationship between baseline and program activity causal conditions and the access to care and care process outcomes. A few baseline conditions strongly or moderately co-occur with positive outcomes related to access to care and care process outcomes. As an individual condition, high baseline Access to Care CAT score strongly or moderately co-occurs with all outcomes related to days waiting for care and depression screening rates except screening rates for Latinx patients. The baseline percentage of behavioral health staff also co-occurs with access to care and care process outcomes; however, this pattern only holds for the decreased days waiting for care, overall depression screening rate, and the depression screening rate for Latinx patients. Note that the baseline percentage of behavioral health staff is the most parsimonious explanation for decreased days waiting for care. A high baseline Integrated Care Team and Care Delivery CAT score strongly co-occurs with meeting the state standard for days waiting for care.

Regarding program activity conditions, increased enabling staff strongly and moderately co-occurs with all access to care and care process outcomes except meeting the state standard for days waiting for care, both as an individual condition and in combination with other conditions. Other program activity conditions that commonly co-occur with access to care and care process outcomes include leadership consistency, an intervention focus on improving screening and care delivery, and coaching attendance. Each of these causal conditions strongly or moderately co-occur with at least four access to care and care process outcomes as individual conditions or in combination with other conditions. Program activity conditions that co-occurred with access to care and care process outcomes selectively include an intervention focus on a priority population and increased CAT scores. For example, an intervention focus on a priority population only strongly or moderately co-occurs with meeting the state standard for days waiting for care, overall depression screening rate, and the depression screening rate for lesbian or gay patients and only in combination with other conditions. Increased CAT scores for the primary drivers of Integrated Care Team and Care Delivery and Community Partnerships only strongly or moderately co-occurred with the depression screening rates for patient subpopulations (Black, Latinx, Spanish, and lesbian or gay). There are two parsimonious conditions that strongly co-occur with Access to Care and care process outcomes: (1) increased Community Partnerships is the most parsimonious explanation for achieving depression screening rates for Black patients that is above the average for participating health centers; (2) high coaching attendance combined with an intervention focus on priority population strongly co-occurs with meeting the standard for days waiting for care.

Table 40. Relationship between Baseline Conditions and Access to Care and Process Outcomes

Baseline Conditions	Access to Care and Care Process Outcomes													
	Decreased Days Waiting		Met Standard for Days Waiting		Depression Screening Improved — Overall		Depression Screening — Black		Depression Screening — Latinx		Depression Screening — Spanish		Depression Screening — Lesbian or Gay	
	Indiv	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*
Organization Size														
Base % BH Staff		S			M				S					
Strategic Leadership and Organizational Commitment — Baseline														
Data-Driven Systems — Baseline														
Access to Care — Baseline	S		M		M		M				S		S	
Integrated Care Team and Care Delivery — Baseline			S											
Patient Activation and Self-Management — Baseline														
Community Partnerships — Baseline														
Total — Baseline														

Note. Indiv = Individual causal condition's relationship with outcome; In Comb = Causal condition's relationship with outcome in combination with other conditions; S = Strong relationship (≥.75 Consistency AND ≥.50 Coverage); M = Moderate relationship (≥.75 Consistency AND ≥.25 Coverage).

Table 41. Relationship between Program Activity Conditions and Access to Care and Care Process Outcomes

Program Activity Conditions	Access to Care and Care Process Outcomes													
	Decreased Days Waiting		Met Standard for Days Waiting		Depression Screening Improved — Overall		Depression Screening — Black		Depression Screening — Latinx		Depression Screening — Spanish		Depression Screening — Lesbian or Gay	
	Indiv	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*
Leadership Consistency		M						M		M		M		
Focus of Systems Change: Improve screening and care delivery		M						M		M		M		
Focus of Systems Change: Focus on a priority population				S		M								M
Focus of Systems Change: Prioritize teamwork														
Increase in enabling staff	S	M			S	M	S	M		M		M	S	M
Increase in proportion of care team licensed behavioral health														
Coaching attendance				S			S	M	S	M	S	M		M
Leadership attendance at learning sessions														
Total CAT — Increased								**M**		**M**		**M**		
Strategic Leadership and Organizational Commitment — Increased														

Program Activity Conditions	Access to Care and Care Process Outcomes													
	Decreased Days Waiting		Met Standard for Days Waiting		Depression Screening Improved — Overall		Depression Screening — Black		Depression Screening — Latinx		Depression Screening — Spanish		Depression Screening — Lesbian or Gay	
	Indiv	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*	*Indiv*	*In Comb*
Data Driven Systems — Increased														
Access to Care — Increased														
Integrated Care Team and Care Delivery — Increased							S	M		M				M
Patient Activation and Self-Management — Increased														
Community Partnerships — Increased								S				M		M

Note. Indiv = Individual causal condition's relationship with outcome; In Comb = Causal condition's relationship with outcome in combination with other conditions; S = Strong relationship (≥.75 Consistency AND ≥.50 Coverage); M = Moderate relationship (≥.75 Consistency AND ≥.25 Coverage).

Team Member Experiences Implementing Quality Improvement

Facilitators of Success

ABHE-PC teams reported several factors that were related to their success in implementing the program. Most teams spoke to leadership buy-in being instrumental in their success. Other common themes that arose were having a primary care champion, staff willingness to engage both on the ABHE-PC team itself and with the implementation of change ideas, and CCI implementation support. Although common themes surfaced, responses varied across teams given each CHC's particular circumstances and needs.

Leadership Buy-In

Expectation and culture setting. Teams spoke to the value of leadership buy-in and involvement in their implementation work. Engaged leaders were responsive to the data generated by the program and helped set the expectations and culture for integration within the CHC. Leaders who championed the ABHE-PC learning collaborative were able to further integration by bridging the gap between disparate departments and had the power to dedicate time to integration efforts in team and clinic meetings. This ensured timely communication and action by teams, and also encouraged buy-in from staff, making implementation more effective. Having a team and CHC commitment to improving the care provided to patients was an integral component of success.

> *"So one of the things we realized in this work is that you really can't succeed at it without having players in all the different parts of the health center bought in and doing it together. And so we have very strong leadership from the front office and call center operations lead who believes strongly in this, has a passion for advocacy and also is willing to devote staff time and training to it. Similarly, our primary care team wanted to create time for us to practice having hard conversations and exploring where people were getting stuck."*

Primary Care Champion

Primary care buy-in on BH-led teams. Several teams — which were led by behavioral health providers — discussed how essential having a champion from the primary care team was to their success. In order to have true integration, the primary care team needed to be aligned with the behavioral health care team, and a champion from that team helped to elicit buy-in with new processes.

> *"The two medic providers at the [clinic] site really helped kick things off because we felt like they were also personally invested in a sense where the relationships they have with their medical patients, it drove them to increase their interest and advocacy on the medical side for integration."*

By contrast, in some cases, teams noted not being able to move forward as effectively when their team was not multidisciplinary because they did not have the engagement of other staff to implement changes in workflow beyond their department. For example, one team that was represented solely by behavioral health providers remarked that it was most successful with the changes where they had full control (e.g., implementing a trauma screening for their behavioral health population).

Staff turnover. CHCs experienced unprecedented staff turnover, specifically in primary care, during the ABHE-PC implementation time frame. In addition, medical champions served as a constant presence and reinforced the changes in processes with new staff coming in.

Staff Engagement and Cross-Department Collaboration

Multidisciplinary teams. Beyond the primary care and behavioral health partnerships required for the success of the ABHE-PC learning collaborative work, multidisciplinary teams were seen as an asset. Although not common among ABHE-PC teams, in cases where teams had the buy-in of other departments such as operations, population health, and case management, the result was more perspectives being represented in the ideation and design of process changes. As a result, those staff could then disseminate the change processes back to their departments more effectively. This also helped to facilitate a better understanding of what each department within the CHC did, which in turn helped build mutual respect.

Frontline staff and end-user buy in. Other teams spoke about the importance of having frontline staff and end-user buy-in when creating the workflows and implementing their change ideas. One team noted that its coach was helpful in reminding them to continually check in with their frontline staff on the rollout of their tests. One team brought on a patient colead to its ABHE-PC team, which it felt strengthened their approach and ensured that the team was creating changes that would be responsive to patients' needs.

Existing rapport. Further, prior working relationships across departments helped teams to come to this work more easily. One team noted the utility in piloting its changes at a clinic site where departments were colocated and already had rapport with one another. Another spoke to the prior collaborative relationship between a behavioral health department and the population health department, which facilitated a natural working relationship during the ABHE-PC learning collaborative.

> *"So it's not like we got a grant and then had to establish a working relationship at the beginning.... Doing integrated care, I work so closely with [population health department] and have for years. And we've been partnering on a number of integrated behavioral health initiatives. So this became another exciting new project to work on together. I guess the point is that we had that infrastructure built pre-project if that makes sense."*

Data

Increased staff data capabilities. The data requirements of the program (UMS, quarterly dashboards, QI processes) meant that teams were pulling and engaging with potentially much more data than they had previously. While this was not without challenges (see Challenges), it also in some cases led to ABHE-PC team members feeling empowered to request, run, and analyze patient data to assess whether their changes were helping to move patients toward their desired outcomes and make adjustments as necessary.

> *"…the one thing that I've never had in my entire career was reliable data and a way to actually really go in and pull data that actually told us things… And so, having the actual ability to know what is really going on and not having to have, I love data but I'm not good at it. I'm good at coming up with maybe some weird questions to ask the data, but not actually the organization of it...But having somebody that can just go and get that information so that you can actually act on it has been absolutely amazing."*

Enhanced relationships with QI departments. For some teams, working across departments to meet the requirements of the ABHE-PC learning collaborative meant that they were able to forge and strengthen relationships with others, especially their data analytics teams, that they may not have otherwise had as much motivation to engage with. Teams were able to work with their analytics and QI departments to home in on data, especially around equitable outcomes, that they were previously unable to capture. They were able to identify solutions that were feasible for frontline staff to implement, and for back-of-the-house staff to extract and analyze.

> *"I think having our staff who are in analytics at the table to tell us, "If you put data here, it can or cannot be captured and it can or cannot be used," was also really essential. I think, again, we've run into this wall of we've moved into a new platform, the answers to those same questions have changed and will continue to change. But I would say that their participation was really essential to help us understand what was being tracked in the system at a baseline."*

CCI or CHCF Implementation Support

Funding. At a high level, simply having the grant funding provided protected time for staff to come together and brainstorm ways to enhance their integration efforts.

> *"I think there were several things that I felt were very helpful, just receiving the grant for assist, like protect time to be able to meet to discuss these issues. So it's rare that you're going to get a small work group together, with line staff too, to be able to move forward and improve and implement new practices. Well, maybe not rare, but I feel like I am not in those situations a lot."*

Program structure. Teams appreciated that the ABHE-PC implementation team designed a flexible approach that worked for each unique ABHE-PC CHC within certain parameters. For

many teams, site visits were an integral part of being able to see effective integration in action. Further, teams found the road map to be an effective tool initially to organize themselves. They also found the quarterly reflections to be useful for gauging their progress throughout implementation. The monthly coach check-ins were instrumental in helping teams troubleshoot their challenges and in providing both feedback and ideas on how to move forward with each CHC's unique circumstances.

> *"I think there was definitely a point towards the beginning where I think we felt shot down, but persistence just kept us going, bringing our challenges to the monthly coaching meetings. Our coach giving us ideas on us taking that idea and then developing it based off of what we see and what we have."*

Challenges to Implementing Systems Changes

ABHE-PC teams faced several challenges when implementing changes to advance equitable behavioral health integration at their clinic sites. Some of these challenges were amplified by the COVID-19 pandemic and its resulting consequences. Most teams noted that the shortage in the health care workforce was a primary barrier in implementing their work. Relatedly, a majority of teams also noted that staff turnover impeded their progress in working to advance integration. Other common challenges included having limitations around data, a lack of clarity around the program goals and requirements, and structural barriers in Medi-Cal billing policies.

Staffing-Related Barriers

Workforce shortages. Workforce shortages affected all CHCs during the ABHE-PC learning collaborative implementation period. The lack of fully staffed teams across CHCs meant that staff were stretched thin, required to wear multiple hats and perform more than their normal job functions, and were thus less available to put their energies toward integration work. Teams noted that primary care providers, (i.e., physicians and medical assistants) were particularly understaffed. In one case, a team commented that this made it more difficult to truly integrate departments, because the primary care providers were spread thin and unavailable to take on the additional work required of integration. Behavioral health departments were similarly affected, with teams relaying that it was a challenge to recruit licensed clinicians, and especially to positions that were less than full-time. Case management positions were also understaffed, requiring some behavioral health providers to step in and fill those roles, taking them away from clinical work. Given the limited bandwidth many teams had as a result of these workforce shortages, some teams ultimately questioned the purpose of pushing forward with ABHE-PC learning collaborative implementation.

Overcoming challenge: To address resistance to the ABHE-PC learning collaborative in the face of staff shortages, one team noted that it was necessary to frame the importance of behavioral

health integration against the backdrop of COVID-19 and service shortages. This included explaining that this work was ultimately an investment in the care of patients that would lead to more prevention and fewer health needs.

Staff turnover. Teams commented on the impediments of staff turnover both CHC-wide and specifically within ABHE-PC teams. Increased staff turnover CHC-wide meant that staff constantly had to shift their work to address this turnover and orient new staff, which left them with limited bandwidth to prioritize their integration work. Several teams experienced staff turnover on their internal ABHE-PC teams during implementation, causing disruption and delay in their rollout. The original integration champions left the CHCs on a few teams, and a few teams also struggled with a lack of consistency in core ABHE-PC team members throughout the duration of the project. This made it difficult to prioritize integration work within their CHCs.

In some cases, new staff had to manage the implementation of interventions that someone else had designed. These interventions were at times determined to not be feasible by subsequent leads. For one team, this was because the previous leaders had been administrators rather than providers and were not aware of workflow nuances. The new staff then had to catch up and identify change ideas they felt were more feasible to implement in the time remaining in the program. In a few cases, staff who were originally supporting members of the ABHE-PC team had to step into the leadership roles when the original team leads left. This required shifting their responsibilities and prioritizing program work, despite having full loads already.

Turnover in CHC leadership was also a barrier for a few teams. This turnover led to gaps in leadership and in direction for the ABHE-PC project team, challenges with new leadership buy-in, and new leadership questioning the ABHE-PC learning collaborative interventions already underway. One team commented that its new Chief Medical Officer (CMO) had to prioritize their own onboarding and running the CHC and did not have enough time to work on additional projects. Another team noted that it was hard to maintain the change ideas it was in the process of implementing when those changes were not yet solid and the new leadership brought new ideas.

Overcoming challenge: One team (led by primary care providers) reported that it tried to address the turnover in team members by consistently having meetings with the behavioral health department and recruiting staff to help with the project.

Increased staff burden due to ABHE-PC learning collaborative implementation. Teams also spoke about the challenges of balancing their ABHE-PC participation and other requirements of the program with their full-time jobs at their CHCs. While they believed in the work and in the program and appreciated all they were getting out of the experience, that did not mitigate the fact that they were still responsible for their day-to-day work, especially for providers, and that

the program was time-intensive in nature. This led to some teams having difficulty in soliciting provider involvement on their ABHE-PC team. Although providers were interested in participating, it was hard for them to take time out of their schedules to participate in the learning sessions, coaching calls, and even internal ABHE-PC learning collaborative meetings.

> *"On one hand, the requirements, the quarterly reflections, the monthly meetings, the larger group, things that we did, the education that we received there, the conversations that were initiated, super helpful and I have absolutely no complaints about it, but it was a heavy lift when you think about I've still got a job to do and a caseload that I need to manage. And I can remember once specifically, I had someone that I was initiating a site code on, and then there was this larger group meeting that was happening at the same time. So I'm logged in on the Zoom, but I can't participate because real life is happening. And that happens for clinicians. I'm by and large not in charge of my day. Once it gets rolling, it gets rolling. So those were some of the challenges. I think it's just the fact that folks wear multiple hats, and I'm not really sure how to fix that. You kind of have to do both at the same time."*

Overcoming challenge: One team commented that in order to not add to staff burden and workload, it facilitated intentional team meetings to review pain points in integration efforts that they could troubleshoot while they had staff in the room. As much as possible, they did the work of integration within the team meetings and were intentional about not asking staff to take on tasks outside of the meetings in recognition of their already full workloads.

Organizational Barriers to Meeting ABHE-PC Data Requirements

Data requirements of program. When applying for the ABHE-PC learning collaborative grant, not all teams involved with grant application process fully understood the data requirements, nor what their CHC could do. These teams quickly learned that just because data were being captured, that did not mean the data were easily extractable or data extracts were available in the format the program was requesting.

> *"In the beginning of this grant, we were given an Excel spreadsheet to ask if we can report on certain metrics. It was real easy for me to say yes to a lot of things because we enter that data in the system. And in my small mind, that's not data-related, I'm thinking this information can be pulled because it's entered. And it wasn't until I had an in-depth conversation with the hands and eyes in NextGen who were like, "This data is laborious to pull out and stratify." And it was very eye-opening to what limitations we had on being able to report. And I was very empathetic to this team when they explained what they have to go through to pull ... What seems simple to me was not so simple because of, again, our limitations with our current EHR system."*

Further, several teams experienced limitations on collecting, accessing, and using the data required for the program. Teams cited EHRs, lack of data staff, and differences in reporting requirements (e.g., not all teams were FQHCs) as primary limitations in extracting data. Newer

CHCs in particular did not necessarily have the framework for data analytics fully realized within their CHC yet, nor did they have staff who could readily understand the data.

Data stratification. Teams called out the UMS as a particularly challenging deliverable, noting that it required a significant amount of time for their data analytics teams to complete, and the demographic stratifications also proved challenging for some EHRs. This pulled these teams away from other work, and data analysts were not always available to the ABHE-PC teams due to their competing priorities in providing data for work on other programs or grants.

> *"However, that data person is inundated with pulling data for a bunch of other reports for other departments as well. So we have to be in line each time we need to pull any data... But when it comes to the UMS dataset, the baseline, and also this upcoming end line, the endpoint one, that was a real challenge, both how, I guess, the data points were framed versus some of just the way that our organization operate, we may not have the complete set of data."*

Overcoming challenge: Some of the teams that commented on the burden of data extraction also noted that there were successes in engaging with their data analytics and QI teams to collaborate on pulling the data. They also noted that internal capacity was built in such a way so that by the end of the program, teams were able to pull some of the data and analyze it themselves.

Challenges with Medi-Cal Billing Policies

Same day visits. In terms of systemic challenges in carrying out behavioral health integration, teams named billing policies as the primary barrier. The site visit to Cherokee Health Systems, in Knoxville, Tennessee, was illuminating for many teams and inspired them to think about ways to further enhance their integration efforts. However, several teams also spoke to the challenges that arose when trying to implement the behavioral health consultant model that Cherokee presented in their CHCs in California. Current Medi-Cal policy does not allow for CHCs to be reimbursed for same-day medical and behavioral health appointments, which prevented these teams from being able to bill for the second service in a warm handoff (usually a warm handoff from primary care to behavioral health).

Prior to working on the ABHE-PC learning collaborative, one team was inspired by the Cherokee model and implemented a behavioral health consultant model in its clinic. The team engaged in this approach for about a year until it discovered that it was not getting reimbursed for this work.

Overcoming challenge: Teams that tried to integrate warm handoffs between primary care and behavioral health as part of their integration model had to balance warm handoffs with scheduling future appointments in order to be able to bill for behavioral health services.

Creating sustainable positions. Teams reported that being able to fund positions that are not reimbursable, and therefore require piecing together funding from other sources was a barrier. Grant writing and administration to acquire funding to implement these models takes time and resources that are not necessarily available at the CHCs. In some cases, CHCs are taking on the risk of adding these positions to their overhead costs without aligning them with current funding structures because they believe in the work and believe that the policies may soon change.

One team spoke to the enthusiasm it had for implementing a care management model, but also noted that it needed to determine how it could sustain that position.

> *"And the barrier there isn't the desire to want them [care coordinators], we want them, it's been working with our managed care plans to understand how do we sustain this position? What is billable? What is not billable? Because the need is there but funding is always the issue. So, how do we work together so that we can bring on these supports that are well needed so that our case managers don't feel so stretched out and asked a lot of and bring in another layer of care coordination?"*

Integration planning itself is not reimbursable. More broadly, teams highlighted the barriers around obtaining buy-in for integration planning activities because they were also not reimbursable. Although the ABHE-PC grant provided time-limited funding to do some of this work, it was not an ongoing funding stream. As a result, participating CHCs had to get buy-in from the institutional culture to attribute value to the work of integration that took place outside of billable appointments.

> *"I think funding is what gets in the way of a lot of integration activities that we want to do. Because it's not necessarily appreciated at the level of billable hours and stuff, like I was saying with the warm handoffs. So, I think it's the same with meetings. People want to be in using their time in time where they're actually making money for the agency. And so, taking two hours to have an integrated meeting across departments to hash out some of these problems has value, but not financial value for the agency necessarily. Or it probably has financial value for us in the long run. But people aren't seeing it because it's not bringing in money in the immediate."*

Supports Needed to Overcome Challenges

Data Technical Assistance

One-on-one support for UMS. Teams had a common request for further technical assistance and support for data extraction and reporting. Although office hours and webinars were offered for the UMS in particular, teams expressed a desire to have additional one-on-one support to address the nuance of extracting data for each CHC. Teams also noted differences in capacities

and abilities to extract the data in the way that was requested of the program and would have appreciated having input in the design to determine whether what was proposed would be feasible for them.

> *"But definitely with the UMS dataset, if there ever is a round two, and we do require that large data pool, a more thorough crash course on how to pull certain data and I guess giving grantees the opportunity to look it over and give our feedback on whether or not our structure allows us to pull that data, that'd be very helpful. So I think with looking at the UMS data for the endpoint one, there are some that I know exactly how to grab the data for and there are some that I'm thinking we're definitely going to run into the same hardships that we had previously."*

Given the differences in the requirements for the quarterly dashboards and the UMS, teams would have appreciated more support in understanding the relevant conditions for each.

> *"[Improvement Dashboard Subject Matter Expert]'s help was instrumental in the success of our team and our ability to provide the data that was needed and required…Having a cheat sheet or visual of the data extraction that clearly stated or showed the dates or date range to be looked at would have helped. It would have also reduced the number of calls and check-ins with [him]."*

Resources for internal continuous quality improvement. Further, the internal quality improvement work that required administering surveys and analyzing results was burdensome for some teams that were less familiar with engaging in quality improvement processes. This took time away from their other work. These teams suggested that having access to resources (e.g., sample surveys) that they could have used to help facilitate quality improvement processes would have been more efficient. In addition, not all teams were equipped with the resources and capacity to know how best to display results to communicate findings back to their communities.

Program Structure

Earlier and more frequent peer sessions. Teams also suggested that other changes to ABHE-PC learning collaborative implementation would have helped mediate some of their challenges. Several teams noted that the peer-to-peer networking sessions were helpful, and that having those sessions earlier in the process would have helped them to facilitate relationships with other teams earlier. This also would have allowed them to help each other troubleshoot as they engaged in their ABHE-PC learning collaborative change work.

"Another thing that I think was very, very helpful was, which I know I think really had one or two sessions this way, was where we had a meeting with other agencies. It was just the agencies and us and we're sharing like, "This is what we're doing, this is what works for us, this is what doesn't." Like a peer-to-peer session, I think would be extremely, extremely helpful because not only can we share our successes and what's working for us, but we could also share, "You know what's not working for us?" And how we navigate them, because we might be going through the same things and one agency might be navigating it very different than we are, and I think that would've been very, very helpful. A lot more of those meetings would've been very helpful."

Schedule of deliverables. There was a high burden of reporting on ABHE-PC teams due to the large number of deliverables for the program. Several teams noted that they were missing a "master schedule" that placed all program components and deliverables on a single, high-level timeline so that teams could more fully understand what was required of them and when, and understand the journey the program was taking. Additionally, one team commented that, given the varying nature of CHCs participating, there might be equity considerations in the deliverables for the grant, as some CHCs might have had fewer resources to accomplish all of the tasks than others.

"In thinking of this concept of equity, right, and applying that to maybe other federally qualified health centers that don't have the same amount of resources or staff to do this kind of project, also creating space for that conversation in terms of could there be deliverables that are either less of them or are tailored in some way to reflect the capacity of the organization so as not to completely shift responsibilities of a department for X number of weeks, and just thinking about the cost of that when thinking through future deliverables."

Lessons Learned

Teams reported that they learned lessons about process (e.g., protecting staff time, creating manageable changes, asking for help). They also learned about the importance of staff and patient engagement (e.g., making sure the staff were involved and that the patients who were served by the CHCs had seats at the table), that peer engagement with other CHCs is invaluable, and that, while difficult, having accurate, extractable data is essential to success.

Process of Implementing Change Under the ABHE-PC learning collaborative

Allocate protected time for project work. Teams reported that it was important to protect staff time for work on the project. Although this was not an easy process for all of the roles within a CHC, in order to have meaningful participation in an initiative like the ABHE-PC learning collaborative, teams noted that it was important for the core team members to be afforded the time to participate. More broadly, the financial resources put toward strategizing about, planning for, and implementing change within an organization was worth it. Although it may

have been hard to justify the required staff time to meet regularly with a workgroup in the moment, in the end, allocating time for integration work yielded results.

> *"And it may feel like it's not, like it's a waste of time in a way, but that commitment to coming every week and sitting down and doing the hard work, and having the conversations, that it really is worth, it helps patients long-term. That's what we're going for. We're going for helping patients together. And we have found that it's worth it. It's built respect in the clinic, and we can help patients more quickly in so many good ways."*

Determine feasibility for program implementation. Teams also noted the importance of not overextending themselves, and of taking a step back to ensure that they were working on implementation of manageable, doable pieces of work. Some teams began the program with lofty goals, and through the help of their coaches, they scaled back so that they could engage in PDSA processes to determine whether tweaks needed to be made. By the end of the learning collaborative, they recognized that they did not have to solve everything all at once and could have more success and satisfaction by implementing changes that could be executed successfully.

Identify supports and resources. Some teams reported that that they learned to ask for help when needed. Given the varying degrees of resources and capacities across teams, these teams expressed relief when they reached out to the program implementation team (CCI) for help in explaining tasks or in making accommodations in order to be able to complete tasks.

> *"I think I would focus on speaking up and communicating. I think if something seems confusing, like say it's confusing, just be upfront and be like, "This isn't computing for us." I think we did that a bit, but we could have done it a little more as far as some of the confusion around the aim statement and some of the documents and stuff there at the beginning."*

Staff and Patient Engagement

Staff buy-in is important for successful implementation. Several teams remarked on the importance of involving the staff who would be doing the work from the start of the planning and design process. This way, they would be able to set appropriate goals and create manageable projects with buy-in from those doing the work.

> *"I always say that without participation, there's no commitment. It's really challenging to get people to commit to ideas that they were not part of that. So that's why it's true, I really worked really hard with my team to bring them to the table, even before we apply for grants sometimes. So there's a very clear vision about why are we applying for this? What is our intention? What [are] the goals, and the project that we are going to do exactly. And everyone gets energized by bringing their own ideas. So maybe one piece of advice is, try to give a seat at the table to everyone who should have a seat at the table during the different processes."*

Teams also spoke about the lessons they learned about making sure those who are at the table have an appropriate level of commitment to do the work because those who are not as invested in the outcomes will not be as effective in implementing the work.

> *"Well, you have to form a working group that is representative of the project. And then you really have to be committed… the composition of that working group, I don't think necessarily should be based just on title, but should also be based on commitment and belief, believing in the project."*

Ensure sufficient communication about interventions. It is important for CHCs to be realistic about capacity. Engaging the relevant staff and making sure that they have a seat at the table will help to manage expectations in the future. For those staff who are not involved, it is important that the team communicate to them effectively about the changes. Although the ABHE-PC team may be very familiar with the reasons for workflow changes, those not directly involved in planning need to understand what is changing, and why.

> *"So just being really dedicated to continuing that communication at all levels of the agency and also explaining all the whys. Why are we changing this workflow, even though it seems so obvious? How could we not change the workflow? This has to happen. But sometimes we need to remember that just because we've had five meetings about it, the line staff who actually have to do the work, they haven't. So they really need to have it explained, this is why we're doing this and how is this going to benefit our patients. So that's been important."*

Patient involvement provides perspectives that are important in developing and refining the program. Several teams also acknowledged the importance of patient involvement and noted how conducting patient interviews at the beginning of the ABHE-PC learning collaborative implementation served to inform their resulting work. Some teams embraced the importance of the patient perspective and were building it more intentionally into the work they were doing moving forward.

"Doing those initial patient interviews really served as a compass for the trajectory of this program. We found it so valuable that we incorporated ongoing efforts to hear our patients into our aim statement, into the work we did by creating a community advisory council of patients that are compensated for their time and could provide meaningful feedback on an ongoing basis towards the work that we do. That's just been really critical as we approach any idea or potential change to first know what we don't know and actually understand how is this felt and experienced on the ground by the people that we serve and maybe our conceptions of what the need is may not be accurate. I think that that was a really valuable learning experience and something that we want to continue to apply moving forward."

Peer Networking

Learning from others' experiences. A few teams commented on the importance for them of consulting with other CHCs about their integration process and progress. Even though they were not necessarily tackling the same issues, or using the same approaches, they learned from one another and found support in sharing their respective experiences.

"So I think that that has been the most meaningful takeaway is, and then again, really, really impactful for me and I know other members of our team to just hear about the shared struggles and shared challenges, but then also about the really cool pivots and innovation that other teams made… And I think ABHE created an environment where we can have very candid conversations because we're kind of all in the struggle together."

Data

Data-driven process. The importance of data was noted by several teams. This was mentioned in terms of the importance of capturing accurate and complete data in the EHR so that they could extract and calculate meaningful measures to demonstrate progress. Teams spoke about learning the importance of using and being able to interpret these data. They also noted that it was important that they continue their own capacity building around data so that they could engage in this work. Further, they reported that it is essential to document processes, especially in regard to data extraction, so that these processes can be replicated.

"I think the importance of utilizing data, and for me personally, that it's not really as scary as I thought. It was actually this project that I think showed me that…in the past I was always like, well, this is data stuff, so we need somebody else to figure that out and then just let me know what the results are. So being able to understand that we can all do it, even though maybe not all to [QI staff person]'s level, but we don't have to be quite as afraid, that's been important. Then how valuable it is to be able to extract data, not just to be able to input all the data into our EHR, but to extract it in a meaningful, usable way, I think that's been something that we have struggled with, but during this time, we're able to get a lot of that information."

Scaling and Sustainability

Although teams generally reported that the program was long and comprehensive enough to set them well on their way toward enhanced and equitable integration, they were also cognizant of the barriers to continuing this work after the end of the program.

In order to sustain and scale this work, teams reported needing the following:

- Additional funding
- Capacity and dedicated time
- More cross-departmental involvement and motivation CHC-wide for integration
- An ABHE-PC 2.0, or a similar structure to be able to continue to develop their ideas and changes

Program Duration

Length of program sufficient to start enhancing integration work. Although no team reported that it felt like it was done with the work it had started as part of the ABHE-PC learning collaborative, the majority of teams found 20 months to be enough time to build a foundation on which to continue to engage in integration and CQI work. While the program duration may have initially felt long, teams reported feeling like the time elapsed quickly. Within this time frame, teams were afforded the opportunity to meaningfully explore what changes they could make to enhance integration, and then begin to test those changes and make adjustments as necessary.

> *"So I think the 20 months was a great safety zone to kind of, for lack of a better word, how I describe innovation is throwing things at the wall and seeing what sticks in a safe and guided way though. So I think that that's what the 20 month did, but certainly I think we've made some really good changes and we've been able to really narrow it down so that it doesn't feel so big so that we can do something. But the ideas that I'm describing are really, really big, and so I think slow and steady and consistent progress and then evaluating and being open to changing or tweaking or throwing it out and saying, this is not working. Let's try something new. That's what the 20 months has given, at least me, is the courage to do that and that I was able to do it in such an incubator so that I was protected."*

Full, equitable integration out of scope of program. Although most of these teams acknowledged that the program duration was not long enough to feel like they had succeeded in full, equitable integration of their primary care and behavioral health care teams, they felt that they came away from the program with the tools to keep implementing small changes that will eventually roll up into larger systemic shifts within their CHCs.

"Our work began to be deeper as opposed to wider, which I think is a good thing. But it also shows that there's more work to be done in some of these other areas. I think that the 20 months that we participated in the program allowed us to, in meaningful ways, begin that shift in our culture and our practices and the way that we think and the way that we approach problems and the way that we incorporate PDSAs into our process to further those areas of equity."

Having the program conclude when it did allowed teams to step back and reflect on their work and accomplishments and to identify the ways in which they wanted to carry the work forward. As the program was coming to a close, teams reflected on what would be needed to (a) scale the work more broadly across their CHC, and (b) sustain the work without the funding and technical assistance supports provided by the implementation team.

Scaling

CHCs reported their intentions to scale their ABHE-PC-related behavioral health integration work. This involved expanding their implemented changes to additional or all clinic sites within their CHC, and also addressing other issues by engaging in additional CQI processes.

Expanding implemented changes. Those looking to scale up the changes they made spoke about expanding screeners beyond the behavioral health department or to all clinics and implementing morning huddles in all clinics. In these cases, these teams felt comfortable with the idea of scaling up because they had a template for introducing the change in process from their pilot and could use those same tools as they spread the processes more broadly. Further, one team noted that it was important to communicate with other clinics or teams about the fact that these changes had already been tested, had been found to work, and are now being implemented on a broader scale.

"I think one thing that can help is communicating the expansion of the grant to other sites by communicating with the clinic managers and the front office or back office leads, letting them know that, 'Hey, we're trying to implement this. This isn't really something new. We've been maybe doing it already, and if any workflows are impacted, let us know how we can try to streamline this service or this warm handoff delivery.'"

Scaling and strategy still being considered. Some teams were still collecting and analyzing the data for their implemented changes and were not ready to fully consider whether and how to scale.

> *"I think we sort of did the initial part of a lot of the changes. We implemented enhanced care management across all of our sites, that's definitely happened. The fact that the implementation occurred, has been done, but we're still working on the changes. We implemented the depression screenings to happen at every visit or every other visit, but we're still analyzing a lot of the data. I think a lot of the changes were put into place, but we're still continuing to either monitor or now be able to use the data from those changes to guide further decision making in what changes need to happen."*

Implementing additional changes. Other teams spoke about scaling in terms of trying different changes and implementing additional processes to get at other areas of equitable integration. Noting that their CHC had done a lot of messaging work to patients around the importance of primary care, one team wanted to use the same messaging to discuss the importance of behavioral health care. A couple of teams commented that they were preparing to move to bigger clinic sites, where there would be additional opportunities to further integrate their behavioral health and primary care teams through colocation. The transition would also potentially allow for the letting go of old practices that do not serve integration efforts.

A couple of teams spoke about the different health topics they were interested in addressing next, including trauma-informed care, hypertension, and SUD services. A few teams spoke about hiring additional staff, including schedulers, providers, and navigators. It was also noted, however, that several teams were able to consider these expansions to their work because they had already received or were in the process of applying for additional grant funding to continue and scale their work.

Teams also reported on additional work they want to engage with after having been inspired by their work on the ABHE-PC learning collaborative. Some of these desires for future changes and improvements to their processes included:

- Expand their team to bridge gaps in care
- Use their EHR to monitor and track patients who have been screened and potentially create a registry
- Bring on additional community supports as resources for care managers
- Add additional departments, including optometry and pharmacy
- Have behavioral health providers educate primary care providers on types of support and evaluative services offered for LGTBQ patients

Sustainability

Although many teams reported that they did not have a formal sustainability plan, most teams reported that they had successfully implemented their initial change ideas, and those were in maintenance mode toward the end of implementation. Teams had more skills to continue to engage in CQI to identify and implement other change ideas.

Implemented changes now part of routine processes. This included implementing screening (e.g., for depression, SUD, and trauma), formalizing referral workflows from primary care to behavioral health, collecting SOGI data in the EHR, introducing enhanced care management, and changing the behavioral health care model. Some teams felt that these changes were successfully implemented during their time in the ABHE-PC learning collaborative and would be carried into the future.

CQI skills acquired to lend to future enhancements. A few teams spoke about the CQI skills and processes that they acquired by participating in the ABHE-PC learning collaborative, which would allow them to continue to identify and assess changes and demonstrate results to their leadership. They were more equipped to use data to help inform their future decisions, including data from PDSAs, UMS and the improvement dashboards, as well as from the patient feedback opportunities.

> *"One thing I can think of is continuing to make a conscious effort of using the data to drive our changes, whether it's cost saving or addressing the need for more clinicians at the sites outside of the two participating sites that were in ABHE, but addressing the shortage in mental health services right now, bringing in more clinicians that meet our target populations for this grant and outside of this grant as well, too."*

Although teams felt that there were barriers to continuing the work they started during the grant period, they were also aware that they were more equipped to use the tools and data they were already collecting to build the case for change.

Some integration challenges are likely to continue after the end of the program. Some teams reported that there were still challenges with integration across primary care and BH teams, especially for those who did not have cross-department representation on their ABHE-PC team. In these cases, teams reported that the grant period ending was a barrier, and they would no longer have the formal support of protected time and funding to continue this work within their clinics.

> *"The one that I'm a little concerned about is the integration part. As far as holding meetings and having integrated meetings, it seems like we're a little one step forward, two steps back sometimes. And then sometimes the opposite, two steps forward, one step back. So, that's the one that I think might be the trickiest to maintain or expand upon. Because it's easy to fall into old habits of just like, "I'm just going to see my patients today. Let's not worry about having an extra meeting or this and that." So, that's the one I want to pay the most attention to keep fire under."*

Commitment to integration workgroup. Conversely, a couple of teams spoke about their sustained commitment to the ABHE-PC team and planned to continue to meet as a team to continue the work. Another team noted that it was considering transitioning its dedicated meeting time to an office-hours type capacity where it could consult with providers about what they were seeing in their priority population.

> *"We're talking about do we want to use the ABHE time as a consultative slot where anyone can come in and actually just use that time to explore what's happening with particular patients and cases or to listen in and learn from their colleagues. So that's I guess another piece that I think will sustain the work, but it's again, putting it in one place and having us really stay the course is going to take some effort."*

Team Recommendations for Funders and Program Staff

Given their actual level of integration coming into the program, teams recommended that future programming re-evaluate the program's requirements given the capacity and capabilities of CHCs, and also fund a longer implementation period. Further, given their actual level of data capabilities coming into the program and behavioral health data capabilities industry-wide, teams asked for better integration of the purpose of data collection in the program, and more flexibility in participation.

The work and deliverables required for the grant should be reassessed. Several teams were stressed and at times overwhelmed by the additional work required for the program, especially around the UMS data collection, and a few almost walked away.

> *"I think being really thoughtful about what data people are being asked to collect, how that does or does not align with the existing data that people are collecting and their capacity to collect anything else is essential. Because there were points in the project early on when our organization, people on the team talked about leaving the project because they were stretched so thin, and their capacity was so limited and they felt like they were being set up for failure."*

More opportunities to engage in the work. At the same time, teams commented that the funding was invaluable, and it created space for them to do the work, and they recommended having more opportunities to engage in the work in this way.

> *"I think that we need more, not just leave, but I think that we need more opportunities like ABHE to continue to do the work because... I think that to provide the support that we need to be able to provide trauma-informed care and to provide the trainings and any other types of support just because I think that ABHE was such a great opportunity to be able to start the work here at [CHC] I think that we need more programs like it because I think that I do see the momentum and I do see the changes."*

Second round or longer implementation. However, the program duration (20 months) was not sufficient to measure progress, and teams suggested that an ABHE-PC 2.0 or a longer implementation period (e.g., 3-5 years), would lead to more measurable change.

> *"And if we're trying to make something sustainable and it's not just about testing something briefly, really think about a longer time course like as three years or five years, but something where we can really dig in because I think we want to continue to do the work and the rate limiting factor for us is money. That feels really important."*

Increased clarity on quantitative data components. Teams would have liked additional clarity on how the UMS and dashboard data fit into the full scope of the program and more supports to better rationalize the need to learn or adapt how to pull data they had not pulled previously. They also requested more clarity in how they would receive the results of the data after follow-up so that they can understand their changes, including how they relate to the other teams in the learning collaborative.

> *"I think definitely the aims, dashboard, and evaluation measures really felt fragmented. We didn't really see where it synthesizing came together… Another area where I'm curious, I know that we're going to continue to provide the UMS measures going through 2024. We'd love to see that data synthesis, the organizational level, but also how it compares to others. We're curious to what level of, not transparency, but what level of interaction we'll have with the data you all synthesize as experts in data."*

Increased flexibility in program participation. Some teams recommended additional flexibility or individualization in terms of how they participated (e.g., less or more frequent coaching sessions based on current need, flexibility on program requirements based on CHC capacity). Another team recommended that future programming consider how to more clearly define a common goal(s) across teams, and then select common measures to reduce the amount of variability between teams working together in the learning collaborative.

"The advice I would give to the organization is to let the agency [CHC] set the tone. So, for us, sometimes we felt like we didn't need to meet every month with our coach. And sometimes we maybe felt like we needed to talk to them twice in a month if we were getting really good feedback or if the working relationship felt really effective. So, maybe thinking about being more flexible in the structure of the support."

Discussion and Considerations on Implementation of ABHE-PC

Summary of Program Implementation and Engagement

RQ1: What information, tools, and supports did the ABHE-PC learning collaborative provide to participating community health centers?

The ABHE-PC learning collaborative offered a comprehensive set of resources and engagements around equitable care and systems development in primary care, sharing information and a number of tools and supports to participating CHCs. This included eleven learning events, site visits to two practices who are leaders in equitable behavioral health and care integration, monthly tailored coaching sessions, an online learning community (the Program Club), and tailored dashboards to track trends in participating health centers' measures over time. In addition, the evaluation team has provided technical assistance to teams to collect and report data on clinical process and clinical outcome measures requested in the UMS. This technical assistance has occurred through open office hours as well as one-on-one conference calls and email communications. Information, tools, and supports provided by the ABHE-PC learning collaborative focused on models for quality improvement strategies, opportunities for improving patient engagement and staff culture, data-driven practices, management, and workflows, and developing care teams. Site visits with their cohort and facilitated by CCI and practice managers, allowed team members to see what equitable integrated behavioral health looks like in practice, building enthusiasm and vision for additional improvements they can make to their practices in the future.

RQ2: To what extent did the information, tools, and supports provided by the ABHE-PC learning collaborative provide model strategies for how to advance equitable and integrated behavioral health care?

The ABHE-PC learning collaborative supports were aligned with the principles of integrated behavioral health care. The ABHE-PC learning collaborative promoted wide participation in learning activities within participating health center teams and encouraged CHCs to convene discussions with patients to gain a sense of their experiences and priorities. Learning activities covered content on principles foundational to equity such as active listening and dignity. These

events were facilitated in ways that made space for people to share their lived experience of the learning concepts. The content structure allowed teams to select and apply aspects of the concepts that were most relevant to their diverse settings and goals. For more detailed discussions on narrow aspects of care redesign, CCI grouped the teams into peer-learning hubs for sharing of best practices, pain points, and related strategies and solutions.

RQ3: What ABHE-PC learning collaborative information, tools, and supports did participants use to advance trauma-informed, equitable, and integrated behavioral health care in their organization?

There was variation across CHCs; however, overall participation in the ABHE-PC learning collaborative offerings is consistent with the expectations CHCF provided to selected CHCs. At least one person from each participating health center participated in each ABHE-PC event. In addition, each participating health center had at least one registered user of the Program Club; these users are logging in to the site multiple times to access resources. Finally, despite initial delays in part due to a surge of COVID-19 during the planning period, CHCs submitted requested planning activity documents to the implementation contractor to guide curriculum and coaching activities. Twelve of the 14 teams found the peer engagement component of the program, specifically the site visit, most beneficial while 12 teams also found the coaching component valuable. Six teams noted that more general networking with peers was valuable, while three rated the online webinars and learning sessions as most valuable.

Summary Findings for the Outcome Assessment

Health Center Systems Changes

RQ5: What changes across the health system (including centralized organizational changes, leadership and staff training activities, data systems, community engagement initiatives, and practice-level clinical care changes) do participants make as a result of their participation in the ABHE-PC learning collaborative?

Results for the baseline CAT scores showed that on average ABHE-PC teams had the most room for improvement in the *Senior Leadership and Organizational Commitment, Data-Driven Systems,* and *Patient Activation and Self-Management* primary drivers. Teams scored highest on average on the *Access to Care* and *Integrated Care Team and Care Delivery* primary drivers. Teams consistently scored themselves low on these secondary drivers:

- *Listening to the Voice of All Patients*
- *Developing a Culturally Intelligent Workforce*
- *Integrated Care Registries Support Equitable PHMI*

- *Adopting TIC Best Practices*
- *Data Analysis and Measures Reporting Accelerate Reductions in Health Inequity*

Most teams did not select *Senior Leadership and Organizational Commitment, Data-Driven Systems, or Patient Activation and Self*-Management as primary drivers underlying the change ideas they planned to test during their Plan-Do-Study-Act quality improvement iterations. Rather, the teams selected a topic central to their personal job responsibilities, primarily *Integrated Care Team* to define their work, and then through the added structure from the learning collaborative activities (regular meetings with coaches, cross-division training and huddles for normalizing, prioritizing, and monitoring integrated, population-based behavioral and primary care activities), they realized improvements across all primary drivers. Improvement in CAT scores continued through one-year post implementation across all secondary driver measures, to varying degrees. Additionally, artifacts documenting tested and implemented care management activities submitted quarterly to the implementation contractor show how teams integrated a variety of changes into their organization's processes and culture. Improvements in these artifacts conform teams activities in:

- patients' and staff informing behavioral health equity efforts through advisory boards, and peer navigators;
- systematically supporting staff via training, goal setting, and time to participate in community and health equity work;
- training on and assessment of trauma and practices to reduce secondary trauma in staff;
- developing relationships with
- strengthening leadership within and associated with the team to bolster
- increased stratification of data based on REL/SOGI characteristics; and
- use of stratified data to monitor progress and inform improvement strategies.

Results from a Qualitative Comparative Assessment analysis comparing baseline CAT scores to improvement showed that baseline capacity is more strongly associated with positive outcomes related to access to care than improved capacity over time, although in general it does not often explain positive outcomes.

Increasing enabling staff was a key driver of positive improvement in access to care and care process outcomes, including for minoritized patient subpopulations, both as an individual strategy and in concert with multiple program activities.

Learning system engagement in coaching sessions is a key driver of positive outcomes for access to care and care process outcomes. Increased integrated care team and delivery and increased community partnerships are particularly important for positive depression screening rates for Black patients.

Sustainability was reached through success in multiple domains of integrated behavioral health, but gaps in capabilities remain.

In their aims statements, 10 teams included their intent to center their work on drivers related to screening for mental or behavioral health conditions, substance use disorder, or social determinants of health. Notably, *Screening for Mental Health Conditions* is the secondary driver on which teams scored highest overall on the baseline CAT. Improvement on this driver for these teams would encompass consistent use of evidence-based screening tools (e.g., PHQ-2, GAD-7, ACES-Q), wide acceptance by staff of annual behavioral health screenings, and assurance that staff have the skills and knowledge necessary to conduct mental health screenings. Teams went on to address these topics through a number of angles over baseline.

Conversely, only four teams included foci at baseline within the lowest scoring primary driver, *Senior Leadership and Organizational Commitment*, and only two teams included foci related to *Data-Driven Systems*, also a low-scoring primary driver. Teams scored relatively low on secondary drivers related to *Data-Driven Systems*: *Integrated Care Registries* and *Data Analysis and Measures Reporting*. Experiences in distilling data for UMS reporting indicate that there still are a number of barriers to extracting stratified data for the tracking of patient needs and utilization. Tracking the workflows and gains in efficiencies from enhanced screening, referral, and patient access to care will be particularly difficult. Notably, six teams chose to focus on areas related to *Patient Activation and Self-Management*.

If teams focus on areas in which they already consider themselves to be higher performing, they may continue to have gaps in other capabilities. Without an intentional program implementation focus on these remaining areas, teams may not see much measurable improvement.

AIR also tracked whether systemic improvement in the composition and characteristics of their providers occurred. Availability of mental and behavioral health providers varied across sites. Consistent with the Stepped Model of Care, most sites have few clinicians at the top of the specialization and licensure continuum, such as psychiatrists and clinical psychologists, with an average ratio of mental health providers (psychiatrists and licensed psychologists) to physicians low and below targets used to compare teams on staffing (ratio of 1.1 licensed behavioral health staff to physician ratio) across both time periods and stable (baseline 0.10 (range 0-6);

follow-up 0.08 (range 0-1.96)). However, there was an increase in the availability of less specialized mental and behavioral health providers who could provide services for less severe but common mental and behavioral health concerns, with an increase across all teams in the number of licensed clinical social workers and "other mental/behavioral health providers", from 316 at baseline to 412 at follow-up. Staff with credentials to provide substance use disorder services went from 7 at baseline (all at one organization) to 96 at follow-up (6 organizations), another important staffing improvement, and a display of likely senior management prioritizing hiring or training in these job classes.

Patient Needs, Access to Care, Care Experiences, and Self-Reported Health

RQ11: How have patient experiences changed during the implementation of the ABHE-PC learning collaborative?

Patient experiences in the CHCs suggest that the most prevalent need among the patients is for counseling or treatment for personal problems or emotional and mental health issues (70.9% at baseline, 83.0% endline). Social health needs are moderately common among survey respondents (44.4% at baseline, 46.0% at endline). Of note, 19% of baseline survey respondents reported that they needed counseling or treatment for a traumatic event, which is a particular area of emphasis for the ABHE-PC learning collaborative. This need increased to 25.0% and endline. The need for access to CHC services was reported as moderately common. About half of baseline and endline survey respondents reported that they were able to get all of the counseling, treatment, or medicine they felt they needed and that they always or usually receive their behavioral health and physical health services at the same location.

Survey respondents reported relatively positive experiences of care. Most indicated that their providers explained things in a way that was understandable (78%) and spent enough time with them (75%). However, the data suggest that some survey respondents perceive these services to have only a moderate influence on their well-being. Almost 20% of respondents indicated that the care they received over the last 12 months only helped them a little or did not help them at all at baseline, this decreased to just over 15% at endline.

CHCs appear to be doing well in providing care that is responsive to language, race, religion, ethnic background, or culture. Approximately 80% of respondents indicated this in the survey, and only 9% reported that they had been discriminated against, hassled, or made to feel inferior while getting care. However, at baseline only 53% of respondents indicated that they always felt comfortable reporting all of their physical health, mental health, or drug or alcohol treatment needs to providers. This suggests that there may be mistrust among the patients of participating CHCs that equitable care processes could reduce. Qualitative data from patients

and health center providers may yield valuable information on practices that drive these positive perspectives.

Clinical Process and Clinical Outcomes

RQ12: How have key patient outcomes changed during the implementation of the ABHE-PC learning collaborative?

Baseline UMS data indicate that rates of mental and behavioral health conditions are lower among ABHE-PC sites than the national average. It may be that that these lower rates are associated with lower rates of screening or hesitancy among patients to report these conditions. AIR staff will have a better sense of the comprehensiveness of the screening available at baseline once the Behavioral Services and Screenings assessments are completed in Q3 2022. Baseline UMS data also suggest that participating CHC patients fare worse than the state average for two physical health measures: controlling high blood pressure and diabetes care. This suggests that prioritizing the improvement of population health management strategies would be appropriate for participating CHCs.

Variation in the sites' reporting of stratifications for each measure and low numbers in several stratifications that sites did report make it difficult to assess trends in disparities of mental and behavioral health diagnoses by race, ethnicity, preferred language, gender identity, and sexual orientation. All participating health centers were able to provide stratified data for at least one measure. However, no CHCs were able to provide every type of stratification for each measure.

The race, ethnicity, and preferred language of participating health centers' patients appear to be diverse, which reinforces the value of improving stratifications of care process and clinical outcome measures by patient characteristics. For example, nearly half of participating health centers' patients indicated a Hispanic/Latino ethnicity. Thirty percent identify as Black, Native American/Alaskan Native, or Asian. Twenty-six percent of languages spoken by patients were languages other than English; Spanish was the most commonly selected non-English language. Stratifications for gender identity will likely be more challenging to improve and meaningfully use, as only about 2% of patients identify as having a gender or sexual orientation other than male, female, straight or heterosexual. While it is important to assess and address the needs of these patients – which stratification strategies support doing – reporting stratifications based on gender or sexual orientation may pose confidentiality issues, and assessing trends may be difficult given the resulting truncated reporting or missing data.

Early Insights Into Sustainability

RQ14: To what extent does the structure and operations of the ABHE-PC learning collaborative lend itself to scalability and sustainability? Which features of the program need to be strengthened to support scaling or sustaining the program?

Information gathered about the program at the beginning of implementation suggests a couple of insights about the scalability and sustainability of the ABHE-PC learning collaborative. First, the timeline for the ABHE-PC learning collaborative supports has been slightly delayed given the competing demands of health centers. The implementation partners and coaches use the materials CHCs share about their capabilities and plans to design learning system activities. CHCs' delays in sharing these materials delays the customization of learning and coaching opportunities. This suggests allowance for a slightly longer start-up period for future cohorts would be helpful.

Second, health centers required a fair amount of individualized support from the ABHE-PC learning collaborative implementation and evaluation staff. Such individualized support would require a considerable level of effort to scale. Lessons learned from the individualized support will be included in the toolkit, which may reduce the need for as much individualized support for future cohorts. Inclusion of partners that accept referrals for specialty care as required team members or activities for coordinating data collection with secondary EHR or behavioral health data management systems could be built into program activities to harmonize data stored across databases managed by primary care, behavioral health care, and referring agencies. As mentioned previously, identifying which drivers and topics were addressed by the various types of engagement offered in the program could also help formalize the program inputs needed for a success. However, it may be valuable to keep the next cohort to approximately 15 participating health centers (as in the current program) to test this hypothesis prior to scaling to ensure appropriate resources are allocated to support participating health centers.

Third, CHC teams indicated that they intended to maintain the changes over the course of the intervention, though none mentioned they had a written plan to monitor and build the work. Strengthening cross-division communication and coordination through structure team activities and care planning was beneficial to most teams. Some teams intend to use the CAT tool to expand to additional practices.

Key Learnings and Opportunities for Future Programming

Fourteen CHCs from across California are actively engaged in the ABHE-PC learning collaborative designed to provide equitable, integrated behavioral health care for their patient populations. Together, participating CHCs, most of which are large-practice organizations, include 33 sites originally at baseline, with 786 providers (including 164 behavioral health providers) serving 245,251 patients annually. Most participating CHCs are located in coastal areas of the state with high concentrations of mental health services and high numbers of Medicaid beneficiaries diagnosed with mental health conditions, and have had relatively consistent engagement with program content over the intervention (October 2021-May 2023).

Data collected across the evaluation presents a number of key takeaways and opportunities to consider for future programming.

Participating CHCs entered the ABHE-PC learning collaborative with lower levels of behavioral health integration than expected for this cohort.

CAT responses at baseline show that mental health is the primary activity implemented, and few teams address substance use disorder and social needs comprehensively at their sites. For example, few ABHE-PC CHCs offer SUD screening or treatment and provide screening for a limited set of social needs. In addition, teams are only choosing to address in their roadmaps a narrow set of one or two specific areas of integration originally targeted by the program. This means that CHCs will need additional time and support to achieve the broad aims of the program to integrate equitable practices across mental health, SUD, and social needs supports and outcomes.

Mental health screening and assessment was the primary improvement activity targeted by teams, and implementation artifacts, CAT outcomes and UMS outcomes demonstrate improvements from baseline to endline with continued improvements approximately one-year after the learning collaborative ended.

Baseline UMS data suggested that teams had room to improve screening and monitoring of mental health treatment outcomes, as indicated by PHQ-9 depression screening and 12 month depression remission outcomes. Ten of the 14 teams chose to address depression screening through different change activities within their priority population, with most indicating they would work on primary drivers Integrated Care Team and Care Delivery, and secondary driver Screening and Assessment and Management: Mental Health. That said, across all secondary drivers of equitable primary care, this driver scored the highest, with a team average of 7.34 out of 11, and 6 of the 14 teams scoring at an advanced level on the driver.

Over time CAT scored through endline and even into the period one year post-program. Teams improved in those drivers specifically mentioned in teams aims, and within those broader organizational management and leadership.

Baseline capabilities and interest around improving leadership support and data systems were low, but improved over intervention; these improvements support tracking, capability improvements, and sustainability.

AIR was surprised that CAT analysis revealed low levels of leadership support and buy-in at baseline, as this is a key driver of success and sustainability within organizations. In addition, data driven systems scored lower than anticipated given the recruitment criteria. In the current cohort, few teams chose to test change within these two primary drivers, perhaps because the ABHE-PC learning collaborative implementation team leadership is primarily focused in clinical roles, and less within organizational leadership in general and data systems specifically. In

addition, change in these primary drivers typically takes longer-term strategy and investment and may not be suitable to the small test of change approach used within this curriculum. Over implementation, these drivers were addressed through the activities built in to the intervention, with some of the greatest improvements in the CAT within Leadership and Data Driven capabilities.

Collecting stratified outcome data at the site level introduced additional data management challenges in stratification.

To sustain CHCs' efforts to advance equity and track the effectiveness of their interventions, teams will continue to need technical assistance with collecting and reporting data. Results from the analysis of the UMS and patient survey show that CHCs have difficulty in capturing REL and SOGI information consistently across outcomes. Tracking access to care through appointment wait times, referral coordination, and no-show rates was also difficult, though a number of teams developed the capacity to report these outcomes by follow-up. Separately, conducting small tests of change at the practice level is best monitored through practice- or site-level monitoring. Ability to seamlessly limit measures to the practice-level varied across teams. Data management was more complicated when, for example:

- patients were seen across facilities within an organization,
- telehealth was not linked to a primary practice within EHR systems, and
- patients first enter care through behavioral health rather than primary care systems.

These data management issues could improve as care becomes more integrated. Going forward, data management protocols will need to address these types of issues to consistently capture and compare site-level data across organizations.

Systematic underreporting may undermine data driven strategies to identify and address disparities.

A handful of EHR systems used only provide a limited list (e.g., top three) of diagnoses in standard reporting. Ensuring reporting includes a full list of diagnoses will be important to prevent underreporting. Relatedly, the survey indicated that a large portion of patients are not reporting all of their health concerns to providers. Together, these challenges could make it hard for CHCs to identify disparities in access, experiences, and outcomes. Cultural competency trainings like those developed by the ABHE-PC learning collaborative implementation team will be important for improving patient reporting.

Engagement in integrated behavioral health programming and outcomes overall could be improved by incorporating content on addressing staff turnover.

While turnover was an on-going issue in the healthcare sector, there were a number of aspects of the ABHE-PC curriculum that could mitigate this issue and support program sustainability. We recommend future programs consider renewing a focus on the secondary driver 'Training and Development of Staff' to reduce burnout, improve staff retention, increase provider to patient ratios, and improve patient experience through continuity of care. Specifically, we recommend a focus on instituting trauma-informed care approaches. This topic was addressed in early learning sessions through presentations and team-based work on engaging and listening to patients, but should also be addressed through improved processes and activities to minimize secondary trauma experienced by staff. Both components together will build a culture of equity in the health centers and could improve staff retention. UMS results show there are relatively few staff with mental health backgrounds at these sites, and those engaging in integrated care may be less familiar with strategies to cope with the experience of serving the additional patient needs and experiences that will arise through screening. While patients are overall satisfied and supported by the care they receive, their most frequent request at baseline and endline was for more appointment times and scheduling availability to receive more care, which will include hiring and maintaining a stable workforce.

Limitations and Implications for Evaluation

Capability Assessment Tool

Given that there were no direct observation activities, policy reviews, or quantitative validation activities conducted prior to the release of the CAT tool, inconsistencies in the scoring of the CAT across teams could occur. AIR and CCI developed processes to ensure that CAT tools are completed consistently within sites and with overlaps in staff completing the tool for each wave of data collection, if possible.

Universal Measure Set

In extracting data for the study, many teams found the activity of providing the full menu of stratification requests to be time consuming. Fulfilling requests for clinician and staff demographic data will require additional data collection by organizational divisions outside of the clinical division. Working with senior leadership on an appropriate, efficient approach for monitoring staff demographics could be an early win for many teams.

Researchers and program planners supporting population health development with behavioral health outcomes will want to advise teams to engage data managers and quality improvement staff in data collection activities early to ensure that they are able to meet evaluation deadlines. That said, the bench for data analysis is not deep at smaller organizations. If one or two data

management staff members leave the organization, there are often few staff left who have the skills or access to manage the data and develop new reports. These can be particularly cumbersome tasks for analysts in regions where all behavioral health care, especially specialty care, is stored in a separate EHR or data management system. Active, regular engagement of data managers is crucial throughout a data-based, equity-focused project, especially in the program planning phase. This is especially true for teams that develop reports prospectively and outside of their UMS, have a separate EHR for behavioral health services, or conduct scheduled tracking using spreadsheets outside of the EHR entirely.

Under these staffing and data capability circumstances, it will be best to collect data prospectively with teams, especially if they are testing changes at a practice level.

Patient Experience Survey

The implementation of the patient experience survey met with several challenges. Given that the teams were to disseminate the survey to the CHCs' eligible patient populations but had different capacities and different patient access points, the dissemination strategy was intentionally broad. Some CHCs were equipped to quickly send out mass texts through their EHR system, some devoted staff time to calling a sample of patients known to be receiving behavioral health care, and others handed out the provided fliers on-site at clinics. Despite the CHCs' different dissemination capacities, the response rates were reasonably high. The Omicron COVID-19 surge also generally stretched teams to capacity during the time of baseline survey administration, which likely reduced the effectiveness of the dissemination of the survey.

Notably, the survey was available via a single link and QR code, and about two weeks into implementation, it was discovered that a "bot" had attacked it. After discussion with survey subject matter experts (SMEs) at AIR, it was determined that having a live link to a survey that offers an incentive increases the likelihood that a bot will attack it. The survey was left open for several days while fixes (e.g., a "reCAPTCHA" button) were implemented, and then the survey was temporarily closed to try to maintain the integrity of the data. AIR engaged in an extensive data-cleaning process to determine a number of valid results and then reopened the survey several weeks later, providing each team that still needed to recruit patients with a link and QR code unique to their center. Although most teams at that point attempted to re-recruit, the momentum for completing the survey had passed, and teams were more focused on finalizing their UMS submissions and creating their aims statements and road maps. In the end, most teams had response rates well below the ideal 75-patient quota.

It should also be acknowledged that the final respondent sample is not representative across the participating CHCs, nor is it representative of the population served. The sample at baseline was heavily weighted toward one CHC, whose team had 25% of the responses, whereas half of

the teams had less than 2% each. Endline responses were more evenly spread out across CHCs. Additionally, the majority of the sample is White, non-Hispanic, cis-female, English speaking, and straight and thus does not represent the program's target population.

For the endline dissemination, the authors worked with teams to determine the most feasible approach for teams to ensure that the endline data collected were more valid, reliable, and representative.

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