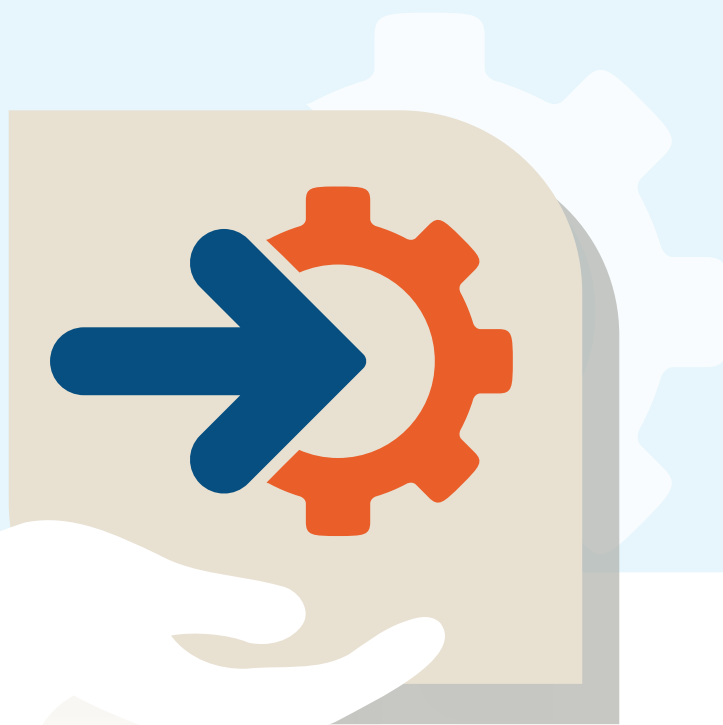


EVALUATION OF A GENERAL HEALTH INTEGRATION FRAMEWORK IN COMMUNITY BEHAVIORAL HEALTH: *Findings and Recommendations*



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Frequently Used Acronyms

AAP	Access to Prevention/Ambulatory Health Services
AHC-HRSN	Accountable Health Communities Health-Related Social Needs
AMA	American Medical Association
ASC	Unhealthy Alcohol Use Screening and Brief Counseling
BH	Behavioral Health
CCBHCs	Certified Community Behavioral Health Clinics
CMS	Centers for Medicaid & Medicare Services
CQM	Composite Quality Measure
EHR	Electronic Health Record
GHI	General Health Integration
GMC	General Medical Conditions
HEDIS	Healthcare Effectiveness Data and Information Set
LC	Learning Collaborative
NCQA	National Committee for Quality Assurance
NQF	National Quality Forum
PCP	Primary Care Provider
PCPI	Physician Consortium for Performance Improvement
PHQ	Patient Health Questionnaire
SDOH	Social Drivers of Health
SMI	Serious Mental Illness

Executive Summary

People with serious mental illness (SMI) (e.g., recurrent depression, anxiety, bipolar illness, psychotic disorders), have a decreased life expectancy of 15 to 20 years because of untreated or undertreated modifiable risks such as tobacco use, hazardous alcohol and substance use, obesity/overweight and chronic medical conditions such as diabetes, hypertension, asthma and cardiac disease. By supporting community behavioral health (BH) clinics (i.e., those providing mental health and/or substance use treatment services) to deliver pragmatic evidence-based interventions that allow greater access to evidence-based general health care, patient outcomes can be improved.

Although national and state-specific evidence-based integration models have been demonstrated to work well when properly implemented, community BH clinics need practical guidance on the steps they can take to build models that integrate general health care, enhanced referral and treatment. We seek to frame these efforts with a focus on common general health prevention and chronic conditions.

Greater access to general health care in BH settings will be needed because most of these patients are at greater risk for morbidity and mortality from inequities in social drivers of health (SDOH) contributing to a higher prevalence of chronic health conditions. To address these issues, a team led by Montefiore Care Management Organization, in partnership with the [National Council for Mental Wellbeing's Center of Excellence for Integrated Health Solutions \(CoE-IHS\)](#), developed and evaluated a continuum-based [General Health Integration \(GHI\) Framework](#) within a learning collaborative (LC) format to guide community BH clinics as they advance their integrated care practice and to inform policymakers on the successful scaling of this work and its sustainability.



The GHI initiative was extremely beneficial to us and will 100% help us over the next 12 months. Although the initiative has formally ended, we are still meeting regularly and focusing on the framework and our goals. We plan to continue this. Hearing from experts and other providers was extremely helpful to us in our growth. Hearing both success stories and barriers- especially barriers.”



GHI Framework Evaluation and Learning Collaborative

From April 2021 to April 2022, Montefiore and the National Council led a LC to evaluate the utility and effectiveness of the GHI Framework among 19 community BH clinics across 11 states. Eighteen of the participating clinics were Certified Community Behavioral Health Clinics (CCBHCs) with one or more types of funding structures ([see Table 1 for clinic and CCBHC designation list](#)).

The CCBHC model was designed to provide person-centered, coordinated and integrated comprehensive outpatient mental health and substance use care to all individuals and their families, regardless of where they live or their ability to pay. Services must be coordinated and integrated across the health care system, along with other social service sectors, to meet individuals' full range of needs and CCBHCs must proactively engage with un- and under-served populations to reduce unmet need for care. Care coordination, community outreach and data collection and analysis are fundamental to the model, enabling CCBHCs to work effectively across sectors and leverage both individual and population data to help clients achieve improved outcomes.

Person-centered, recovery-oriented care is at the core of CCBHCs' services and operations, with expectations that they ensure that care is driven by the people being served and their families. The model also advances clinics' ability to collect and report on performance and cost data on the extent and cost efficiency and clinical efficacy of their services to improve transparency and accountability around utilization, costs and outcomes. The LC sought to evaluate the experience of organizations and providers using the GHI Framework, integrating quality measures reporting, peer-based learning among participants and technical assistance from the project team.



The GHI project helped us to commit the time to figuring out how to report on this data and how to dig into our system to learn what the data was actually telling us. We were able to dedicate the time to set up reporting mechanisms in Tableau that we will be able to use in the future to easily pull the data we are looking for. We feel more confident in being able to report on this data.”

Clinics were required to complete a baseline assessment of their integration stage (from preliminary to advanced) for each evidence-based domain and subdomains using the GHI Framework and to reassess at 12 months. Clinics were surveyed on the use of a set of structural metrics associated with key domains of the GHI Framework listed in **Appendix E**, such as having formal collaboration agreements with primary care and providing training to staff on trauma-informed care approach. In addition, sites were asked to report on nine quality metrics monthly that impact the general health of clients, as listed in **Table 2**, such as access to ambulatory care, tobacco screening and follow-up and diabetes screening for clients on antipsychotic medication.

To support their efforts reporting these quality metrics, participating organizations in this learning collaborative attended monthly webinars and optional discussion-based sessions for 12 months, supplemented with individualized consultation and technical assistance calls, as needed. This structure gave participants access to expert consultation and guidance to address their individual questions and efforts, as well as learnings and resources from other participating organizations through an open, peer-to-peer learning format.



Key Findings

The GHI Framework is an effective clinic self-assessment and planning tool to advance integration. The clinics' stage of integration on the Framework correlates strongly and significantly with quality performance at baseline and over time and the GHI Framework demonstrated good concurrent and predictive validity.

During the LC, most organizations made significant progress toward higher stages of integration by advancing at least one stage in most domains and subdomains of the Framework. The care team and systematic quality subdomains demonstrated the highest percentage of clinics reporting improvement, which relates to many clinic's ability to integrate more care team members involvement in GHI and invest in resources to improve data collection, benchmarking and clinical workflow. As expected, there were variations in quality performance among clinics due to variation in quality infrastructure among the sites, as well as the relative ease or difficulty to routinely track measure performance (such as HBA1c for diabetes control), especially for measures requiring complex calculations (e.g., depression response/remission at six months, which requires individual patient episode date tracking).

Despite these challenges, our findings suggest that the GHI Framework, combined with technical assistance, was effective at helping community BH organizations make significant progress on general health integration while improving quality reporting and performance among a diverse group of BH clinics across the U.S.



Conclusions and Recommendations

Among participating organizations, integration progress as measured by the Framework and improvement on reporting and performance of quality measures supports the effectiveness of the GHI Framework combined with technical assistance for advancing integration for community BH clinics, particularly CCBHCs.

Based on our project's results and participants' experiences and observations, we have revised several aspects of the original GHI Framework, mostly improving wording consistency and clarity in the domain and subdomain stages. Our new version, GHI Framework 2.0, appears in **Appendix A**.

The LC findings clearly articulate strategies for success in advancing integration such as having strong executive support, partnerships with primary care and partnerships with social service providers, developing a strategic plan using the baseline Framework assessment and having and building upon a quality improvement program. However, significant obstacles to GHI remain.

While the GHI Framework offers operational guidance for providers to increase general health care integration into BH care, we also spotlight external policy considerations that can encourage integration efforts, including decreasing regulatory barriers for co-locating primary care services, addressing workforce shortages, improving reimbursement and incentives for general health integration, improving access and utilization of technology support and improving and simplifying quality measures that assist clinics in assessing their impact.

Moving forward, it is critical for payers and policymakers to work with BH clinics and providers to further develop and strengthen financial and policy incentives that support movement toward increased GHI in community BH settings, such as the CCBHC model.



Introduction

Mental health and substance use disorders are the leading cause of disease burden in America.^{1,2,3} Total health expenditures due to the co-occurrence of medical, mental health and substance use challenges were estimated to be \$406 billion in 2017.⁴ Most of the costs associated with comorbid conditions stem from a lack of services integration, leading to poor health outcomes and high economic costs. Effective behavioral health (BH) and general health integration can lead to improved patient outcomes and substantial savings. Certified Community Behavioral Health Clinics (CCBHCs) have been shown to reduce emergency department visits and hospitalizations among serious mental illness (SMI) individuals in several states across the U.S.⁵

The CCBHC model was designed to provide person-centered, coordinated and integrated comprehensive outpatient mental health and substance use care available to all individuals and their families, regardless of where they live or their ability to pay. Services must be coordinated and integrated across the health care system, along with other social service sectors, to meet individuals' full range of needs, including primary care screening requirements and CCBHCs must proactively engage with un- and under-served populations to reduce unmet need for care. Care coordination, community outreach and data collection and analysis are fundamental to the model, enabling CCBHCs to work effectively across sectors and leverage both individual and population data to help clients achieve improved outcomes. Person-centered, recovery-oriented care is at the core of CCBHCs' services and operations, with expectations that CCBHCs ensure care is driven by the people being served and their families.

The model also advances clinics' ability to collect and report on performance and cost data on the extent and cost efficiency and clinical efficacy of their services, improving transparency and accountability around utilization, costs and outcomes. CCBHCs can be financially supported through the CCBHC Medicaid Demonstration, through Substance Abuse and Mental Health Services Administration (SAMHSA)-administered CCBHC grants or through independent state programs separate from CCBHC Medicaid Demonstration. CCBHCs participating in the CCBHC Medicaid Demonstration Program or Independent State Adoption (State Plan Amendment) receive Medicaid payment through a daily or monthly clinic-specific prospective payment system (PPS) rate and clinics are reimbursed based on the expected demonstration cost of services. Grantee clinics receive grant funding to supplement, but not supplant, other traditional funding sources in order to provide all CCBHC services and activities as required by the model.

With this issue in mind, we developed a continuum-based framework, [Advancing Integration of General Health in Behavioral Health Settings](#),⁶ that incorporates guidance to integrate general health screening, prevention and treatment for clients receiving services in community BH clinics, especially CCBHCs. Greater access to general health care in BH settings is needed because most of these clients have greater risks for morbidity and mortality from poorer access to general health care, inequities in social drivers of health (SDOH) and higher prevalence of chronic health conditions. The target audiences of the General Health Integration (GHI) Framework are providers to support implementing and scaling GHI services in their integrated settings and policymakers to help them sustain GHI efforts from a state-level.

We have intentionally named this tool a GHI Framework to challenge the traditional divide between BH and non-BH conditions, including improved integration of substance use care as part of the process. We seek to create a mindset that considers all chronic conditions when integrating services within the broad category of improving general health, whether BH or otherwise.



Challenges to GHI

General health conditions are often not adequately detected or treated in BH settings due to limited use of general health screening tools, staffing shortages, inadequate training on general health condition management and poorly established relationships between BH and primary care providers (PCP).^{7,8} Poverty, limited health literacy, discrimination, co-occurring substance use, cognitive impairment and environmental factors (e.g., distance to health care, language differences) may create additional access barriers for individuals with serious mental illness (SMI).^{9,10} Without regular primary care, adults with SMI often have more emergency department visits and potentially preventable medical hospitalizations because chronic conditions are not well controlled.¹¹

There is an urgent need to foster a multidisciplinary team approach from within the BH system to improve access to general health care at the organizational or community level.^{12,13} To achieve this, community BH clinics require assistance to build capacity to deliver pragmatic interventions that facilitate access to quality medical care through improved linkages, patient education and self-management, critical risk factor screening and early detection, monitoring of chronic illness indicators and embedding direct provision of medical services in BH settings, when feasible.¹⁴ These efforts must leverage innovation and use emerging technologies that have the potential to break down the siloed systems of medical care and BH services.

Larger policy issues further complicate integration efforts, including complex policy barriers related to billing, reimbursement, quality reporting and challenges related to state or federal certifications.¹⁵ There is also lack of clarity on payer billing requirements and reimbursement rates for general health services provided in community BH settings, as well as few incentives for GHI quality measures as part of value-based payment (VBP) models. Opportunities such as the CCBHC model, offer a national standard of criteria that raise the bar for BH service delivery and provide a foundation for integration of behavioral health and primary care.

To support practical implementation and address these challenges, we believe an intentional step-by-step approach to GHI, combined with improved policies and payment mechanisms, will position community BH organizations to align their efforts on GHI with their existing state integration initiatives.



An Evidence- and Continuum-based Framework

Responding to these challenges, our project team, with support of the New York Community Trust and the National Council of Mental Wellbeing, developed and published a [Framework](#),¹⁶ designed to help individual BH organizations achieve effective evidence-based GHI.

The Framework describes eight major domains and 15 subdomains of integrated care:

1. Screening, referral to care and follow-up

- 1.1 Screening and follow-up for preventive interventions and general medical conditions.
- 1.2 Facilitation of primary care referrals and follow-up.

2. Evidence-based care for preventive interventions and common general medical conditions

- 2.1 Evidence-based guidelines or treatment protocols for basic and targeted preventive interventions
- 2.2 Evidence-based guidelines or protocols for treatment of general medical conditions.
- 2.3 Use of medications by BH prescribers for preventive and general medical conditions.
- 2.4 Trauma-informed care.

3. Ongoing care management

- 3.1 Longitudinal clinical monitoring (outcomes and side effects) and engagement for preventive health and/or general medical conditions.

4. Self-management support that is adapted to culture, socio-economic and life experiences of patients

- 4.1 Promote patient activation and recovery with adaptations for literacy, economic status, language, cultural norms.

5. Multi-disciplinary team (including patients) with dedicated time to provide general health care

- 5.1 Care team.
- 5.2 Sharing treatment information with PCP, case review, care plans and feedback.
- 5.3 GHI integrated care team training.

6. Systematic quality improvement

- 6.1 Use of quality metrics for general health program improvement and/or external reporting.

7. Linkages with community and social services that improve physical health and mitigate environmental risk factors

- 7.1 Linkages to housing, nutrition and other social services.

8. Sustainability

- 8.1 Build process for billing and outcome reporting to support sustainability of integration efforts.
- 8.2 Build process for expanding regulatory and/or licensure opportunities for increased general health services.

Our continuum-based Framework lays out a visual roadmap of preliminary, intermediate (levels I & II) and advanced stages by domain. This format combines a clinic level self-assessment with a planning approach to allow significant flexibility to set goals and advance integration in an intentional and progressive manner. The Framework offers concrete implementation steps by domain to help clinics plan for and achieve their integration goals within their current resource and staffing capacity.

The Framework allows clinics to identify their integration status within each domain. In the preliminary stages, a clinic is primarily providing non-integrated care but can start their integration journey by deciding which domains they are ready to advance. Moving along the continuum, toward the intermediate stages, the activities described in each domain indicate the progressive use of evidence-based integration practices. Finally, the advanced stages describe a population health-focused level of integration.

While it is important for organizations to strive for fidelity to evidence-based GHI practices to ensure quality and efficacy, these practices are often difficult to implement for smaller organizations. The Framework’s step approach meets community BH organizations where they are – recognizing that there is latitude in choosing initial domains of focus and how far to advance specific components of integration.

The Framework can help organizations prioritize investments in time, training, workforce, technology and other resources necessary to implement GHI and improve patient care. It also recognizes that achieving the most advanced stage in each domain might not be the ultimate target for every organization. Our perspective is that clients in need of general health care in BH will benefit from implementing many of the intermediate stages, even when co-located primary care treatment is not available.

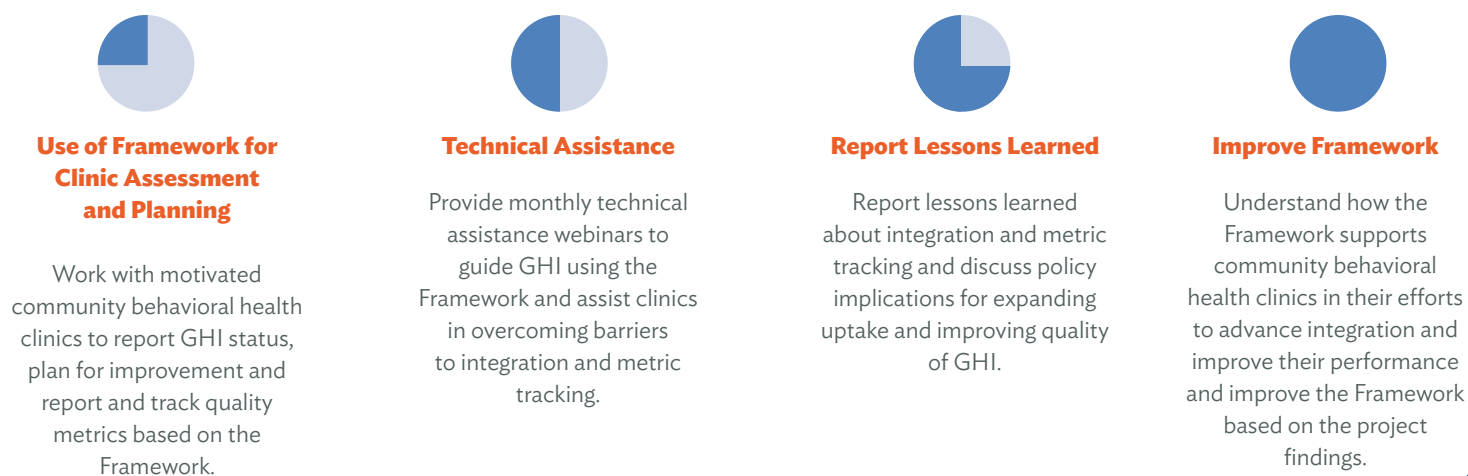
With the conclusion of the 12-month LC, we were able to assess the Framework’s validity and update the initial Framework to incorporate the project’s results and participants’ experiences and observations (see Appendix A, GHI Framework 2.0).



GHI Framework Evaluation Learning Collaborative

The 2020 release of the GHI Framework garnered support and recognition from many practitioners and policymakers nationally. However, it needed to include an understanding of how the framework is utilized in real-world organizations over a significant period of time. Therefore, we created a learning collaborative (LC) to assess the utility and validity of the Framework in a group of community BH organizations that achieved CCBHC status or have experience implementing whole person care in their organization, focusing on four main objectives (Figure 1).

Figure 1. GHI Framework Evaluation LC Objectives



The LC participants included 19 community BH clinics across 11 states (Figure 2). Eighteen were CCBHCs, a special designation provided by the Substance Abuse and Mental Health Services Administration (SAMHSA) to provide a coordinated and comprehensive range of mental health and substance use services.¹⁷ Overall, the participating organizations serve a total of 63,000 clients, 60% insured by Medicaid Managed Care, 25% Black/African American and 19% Hispanic/Latinx (see Appendix B for full list of clinic characteristics).

Table 1. GHI Framework Evaluation Learning Collaborative Participants

ORGANIZATION	STATE	CCBHC TYPE
Abbe Center for Community Mental Health	IA	CCBHC-2022 Cohort 7, IA
BestSelf Behavioral Health	NY	Demonstration Clinic
Center for Human Development	MA	CCBHC-2018 Cohort 2 and CCBHC-2020 Cohort 3
Centerstone of Tennessee	TN	CCBHC-2022 Cohort 7, IA
Centerstone of Indiana	IN	CCBHC-2022 Cohort 7, IA
FMRS Health Systems, Inc.	WV	CCBHC-2022 Cohort 7, IA
Four County	IN	State-Certified
Gandara Center	MA	CCBHC-2022 Cohort 7, IA
Hegira Health, Inc.	MI	CCBHC-2021 Cohort 5, ARP and 2022 Cohort 7, IA
Hamilton Center, Inc.	IN	CCBHC-2022 Cohort 7, IA
High Point Treatment Center	MA	CCBHC-2020 Cohort 3
Institute for Community Living, Inc.	NY	CCBHC-2021 Cohort 5, ARP
Lutheran Family Services	NE	CCBHC-2022 Cohort 7, IA and PDI
Mid-South Health Systems, Inc. / Arisa Health	AR	CCBHC-2020 Cohort 3
Northeast Treatment Centers	PA	CCBHC-2022 Cohort 7 PDI/Demonstration Clinic
Sabine Valley Regional MHMR dba Community Healthcare	TX	CCBHC-2022 Cohort 7, IA and State-Certified
Saginaw County Community Mental Health Authority	MI	Demonstration Clinic
Washington Heights Community Services, New York State Psychiatric Institute	NY	N/A
Westchester Jewish Community Services	NY	CCBHC-2022 Cohort 7, IA and PDI

Methods



Site Selection

In partnership with the National Council for Mental Wellbeing, the Montefiore-led project team promoted the LC opportunity to community BH clinics and CCBHCs nationally. We provided a webinar to explain the goals and purpose of the collaborative and sent out promotional emails through the National Council network of CCBHCs to invite potential applicants to apply. CCBHCs were prioritized because of the requirement to provide primary care screening and monitoring services.¹⁸ The promotion highlighted the opportunity for technical support to advance integration using the Framework in addition to a \$5,000 stipend for the contributions of participating organization to assessing the utility and validity of the Framework, including participation in the learning collaborative, data collection and evaluation efforts.

We received 74 applications and 42 were selected for more in-depth review based on meeting eligibility requirements that included:

1. Have CCBHC recognition, be in the process of pursuing CCBHC status or have strong assets to advance integration.
2. Have an electronic health record (EHR) in use for at least one year with the ability to collect and report designated GHI quality measures.
3. Serve at least 1,000 clients annually with mental health and/or substance use diagnoses, with the ability to identify high-risk clients with comorbid general health conditions.
4. Commitment to establishing a multi-disciplinary team with executive leadership supporting GHI efforts and a designated clinic change champion to lead integration adoption.
5. Prior experience implementing integration quality improvement projects.

Applicants were asked to submit a survey of their organization's ability to collect and report the general health quality measures that were requested on a monthly basis. Upon review of the survey results and based on applicants' strength of their application response, 22 organizations were invited to join the collaborative. These selected applicants were a mix of urban, suburban and rural community BH organizations across the United States. We obtained signed agreements from all 19 organizations. Organizational champions and implementation teams included a mix of BH providers, licensed social workers, clinic managers and/or directors and, when available onsite, registered nurse and/or care manager.



The Framework as a Quality Improvement Tool

To prepare clinic staff for change, we presented the GHI Framework in a kick-off meeting, including its eight domains and 15 subdomains and the integration stages of each. Project goals, a timeline and guidance on using the Framework as a self-assessment tool and an active measure of progress were provided. Each organization went on to use the Framework as a guide to identify goals for each domain based on existing strengths, while setting priorities for how best to advance GHI.



Technical Assistance

The project team led monthly webinars to share best practices and presentations on a variety of topics important to integration efforts (see [Appendix C](#) for a listing of webinar and office hour topics).

In addition, the team provided monthly office hour webinars with interested sites to discuss progress on the Framework domains, provide technical assistance support, troubleshoot reporting on quality metrics and discuss strategies to overcome policy and implementation obstacles to integration.



Baseline and Endpoint Quality Measure Data Collection

Quality of care measures were selected for monthly reporting to align with measures used in the national CCBHC programs (see [Appendix D](#)). Participating sites reported tracking measures monthly during the LC, including performance for calendar years 2020 (baseline) and 2021 (project year).

The national quality measures used in the collaborative are listed in [Table 2](#) with all abbreviations and table notes in [Appendix E](#).

Table 2. Quality Measures Used in the GHI LC

METRIC NAME AND DEFINITION* Note: All clients in the numerator are a subset of those in the denominator.	MEASURE IDENTIFIERS*	CCBHC OR OTHER REQUIRED REPORTING
Access to Prevention/Ambulatory Health Services (AAP) <i>Denominator:</i> All adults ≥20 years served during the measurement year <i>Numerator:</i> Primary care visit during measurement year	Stewarded by National Committee for Quality Assurance (NCQA -AAP)	HEDIS
Diabetes Screening for People with Schizophrenia/Bipolar Disorder (SSD) <i>Denominator:</i> All adult clients 18-64 years with schizophrenia/bipolar disorder, on an antipsychotic during the measurement year <i>Numerator:</i> Diabetes screening test during measurement year	National Quality Forum (NQF) #1932 Stewarded by NCQA (SSD)	CCBHC for State reporting, HEDIS
Tobacco Use: Screening & Cessation Intervention (TSC) <i>Denominator:</i> All adults ≥18 years served during measurement year <i>Numerator:</i> During measurement year... <ul style="list-style-type: none"> ■ Screened at least once for tobacco use ■ Screened negative or, if positive, received cessation intervention (counseling or medication) 	NQF #0028 PQRS #226 Stewarded by AMA & PCPI® Foundation	CCBHC for Clinic Reporting
Unhealthy Alcohol Use Screening and Brief Counseling (ASC) <i>Denominator:</i> All adults ≥18 years with two or more visits in measurement year <i>Numerator:</i> During measurement year... <ul style="list-style-type: none"> ■ Screened at least once for unhealthy alcohol use using a systematic screening method (AUDIT/-C or NIDA-Quick Screen) ■ Screened negative or if positive received counseling ■ Positive screen: AUDIT (>/= 8), AUDIT-C (>/= 4 men, 3 women) or NIDA-Quick Screen Alcohol item (>/= 2 days in past year 5+(men)/ 4+(women) drinks in one day) 	NQF #2152 PQRS #431 Stewarded by the AMA & PCPI® Foundation	CCBHC
Unhealthy Drug Use (UDU) <i>Denominator:</i> All adults ≥18 years served during measurement year <i>Numerator:</i> Screened for unhealthy drug use using a systematic screening method (validated tool, e.g., NIDA Quick screen) during measurement year	NQF #2597	Medicare Core Set, USPSTF Recommendation

<p>Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%) (SMI-PC)</p> <p>Denominator: All adults 18-75 years with SMI and diabetes served during the measurement year</p> <p>Numerator: No HbA1c lab value or value >9.0% during the measurement year</p>	<p>NQF #2607 Stewarded by NCQA (SMI-PC)</p>	<p>HEDIS</p>
<p>Screening and Treatment Monitoring for Depression</p> <p>Denominator: All adults ≥18 years served during the measurement year</p> <p>Numerator: Received Patient Health Questionnaire-9 (PHQ-9) assessment quarterly during the measurement year</p>	<p>Adapted NCQA #0712 Stewarded by Minnesota Community Measurement</p>	<p>HEDIS</p>
<p>Depression remission at 6 months</p> <p>Denominator: All adults ≥18 years served 6 months prior to or during the first 6 months of the measurement year with a positive depression screen (PHQ-9 ≥10) and diagnosis of depression/ dysthymia</p> <p>Numerator: All clients with a PHQ-9 <5 at 6 months after screening positive for depression (+/- 30 days)</p>	<p>NQF #0711 Stewarded by Minnesota Community Measurement</p>	<p>CCBHC</p>
<p>Screening for Social Needs</p> <p>Denominator: All adults ≥18 years served during the measurement year</p> <p>Numerator: Standardized screen (e.g., AHC HRSN) or at a minimum housing and food insecurity assessed during measurement year</p>	<p>-</p>	<p>CCBHC NOMS (housing only), CMS (new for hospitals in 2023)</p>

* Measure definitions shown in some instances are simplified versions of full technical specifications for measures detailed by measure steward, to support reporting by programs



Baseline and Endpoint Framework Status Data Collection

A baseline survey at project kick-off allowed participants to provide information on organizational characteristics: describing staffing and existing BH service workflows, assessing their ability to provide survey data and identifying their motivations for participation.

Organizations completed a baseline GHI assessment with the Framework prior to starting the LC and provided feedback on the use and clarity of the Framework.

After 12 months, organizations completed a final assessment using the Framework and provided feedback on their experience using the Framework throughout the project period.

In addition, organizations completed a structural metrics survey by domain describing workflow process and infrastructure improvements with supporting documentation. The list of structural metrics and requested support for attestation are listed in **Table 3**.

All surveys were collected using Survey Monkey and findings were exported into Microsoft Excel.

To have a standard for comparability across sites, we converted the Framework ratings for each stage into an anchored four-point scale of level of integration: Preliminary (score 1), Intermediate I (score 2), Intermediate II (score 3), Advanced (score 4). The total GHI Framework score is an average of the item scores.

Table 3. List of Structural Metrics and Requested Support for Attestation

GHI SUBDOMAIN ALIGNED WITH METRIC	STRUCTURAL DESCRIPTION	REQUESTED DOCUMENTATION
Screening, Referral to Care and Follow-up	Established collaborative agreement with at least 1 primary care clinic (internal or external)	Collaborative agreement with a minimum outlined expectations for engagement and communication between behavioral health and PCP
Screening, Referral to Care and Follow-up	Clinic use of health information or health data-base outside of organization	Attestation to use of HIE, payer claim database, external lab and/or none
Evidence-based Care and Ongoing Care Management	Utilize patient follow-up tracking tools for at least 2 preventive care services (e.g., annual PCP visit, flu/COVID-19 immunizations, mammogram) and/or general medical conditions (e.g., HbA1C, blood pressure/hypertension)	Example of follow-up tracking tool(s)
Self-management Support	Provide patient access to treatment and prevention information, handouts, action plan or portals to review/ download information for at least 2 prevention targets	Example of education material patient and/or patient handout and/or of self-management action plan template
Self-management Support	Utilize Self-efficacy for Managing Chronic Disease 6-Item Scale (SEM-CD), Patient Activation Measure (PAM) and/or other tool to assess patient engagement in care	Example of patient engagement tool
Multi-disciplinary Team with Dedicated Time to Provide General Health Care	Provide training for clinical staff on team-based* care for preventive care and/or general medical conditions. *Defined as composition of individuals involved in the care team, including the patient, which facilitate shared care planning and communication about shared clients across team members and disciplines. Team may include clinical/executive lead, registered nurse, psychiatrist, primary care clinician (NP, PA, MD, DO), if available, quality improvement designee)	Example of at least 1 training (e.g., on-line webinar, seminar, lunch and learn) on preventive and/or general medical. Include: topic covered and training dates. If available, de-identified list of attendees (include clinical role and/or discipline)
Multi-disciplinary Team	Provide training for staff on trauma-informed care	See above
Systematic Quality Improvement	Chosen benchmarks for performance on the LC monthly reported quality metrics for at least 3 quality metrics	Name the 3 metrics chosen and their corresponding benchmarks
Linkages with Community and Social Services	Administration of social needs screen (e.g., food, housing, financial, childcare) during intake and/or as part of a patient’s annual assessment. At minimum, screening measure must include food and housing security	Example of social needs screening tool for at least food and housing security
Sustainability	Clinic bill for general health integration services	List the revenue and/or incentives received for GHI within the measurement year 2021
Sustainability	Clinic receives quality incentives for GHI services?	List the GHI procedures or quality measures and the resultant amount reimbursed (e.g., tobacco screening receives \$25/screen)



Data Analysis

Criterion validity of GHI Framework: Correlation analysis was conducted for GHI Framework total scores and the quality-of-care composite measure (CQM) at baseline, i.e., concurrent validity. See the section on Performance of CQM. In addition, the correlation between baseline GHI Framework scores and CQM scores on one-year follow-up was examined (predictive validity). Sites that reported performance on quality measures both at baseline and one-year follow-up were included in this analysis (n=15 sites). The correlation coefficient [®] was calculated in Excel.

Testing impact of the GHI LC: GHI Framework of Integrated Care Scores: All sites reported GHI Framework scores at baseline and endpoint. One-tailed t tests for statistical significance, calculated in Excel using paired two sample for means, examined the hypothesis that GHI Framework scores would be higher at the LC endpoint.

Proportion of Quality Measures Reported: The number of quality measures (out of nine project measures) that participating sites were able to report during the first vs. last of 12 monthly reporting periods in the GHI LC. One-tailed t tests were used to examine the hypotheses that sites would be able to report more quality measures at the end of the GHI collaborative than at baseline.

Performance on CQM: Composite performance scores were calculated for sites that were able to report non-zero numerators on quality measures for baseline and for the follow-up year. The CQM was calculated as the average performance of the measures reported by each site, for measures that the site reported both at baseline and one-year follow-up (2020 and 2021). Measures reported by fewer than a third of the sites (six or fewer) were excluded from the analysis. For each site, only measures reported at two time points were included in their composite scores. One-tailed t tests, calculated in Excel using paired two sample for means, examined hypothesis that performance on the CQM scores would be higher at the LC endpoint.



Synthesis of Results



Clinic-reported Structural Metrics

Clinics were asked to attest to the use of structural metrics (see Table 3) that support evidence-based workflows aligned with key Framework domains. More than 50% of clinics attested to using a collaborative agreement with primary care clinics or policy and procedures, follow-up tracking tools, training in integrated and trauma-informed care and workflows for screening for SDOH at intake. Clinics provided specific documentation of these workflows that include examples of tracking tools, patient engagement support materials, quality improvement benchmarks and training modules for integrated care. These structural metric improvements were associated with either baseline subdomain strengths or with subdomains that had significant advancement.



Validation of the GHI Framework and Impact of the LC

We had several hypotheses related to the Framework and impact of the LC:

1. The GHI Framework will demonstrate good criterion validity.
 - a. Concurrent validity: GHI Framework Scores at baseline will be correlated with site quality of care composite measure performance at baseline.
 - b. Predictive validity: Clinic's GHI Framework Scores at baseline will be correlated with their quality-of-care composite measure performance on one-year follow-up.
2. Programs participating in the GHI LC will have improved general health care integration, capacity to track and report on quality measures and performance on quality-of-care measures.
 - a. GHI Framework scores will increase between baseline and one-year follow-up assessment.
 - b. The number of quality measures that sites will be able to report will increase from first reporting month to last reporting month of the GHI collaborative.
 - c. The overall quality of behavioral, preventive and general medical care will increase between the baseline and one-year follow-up.



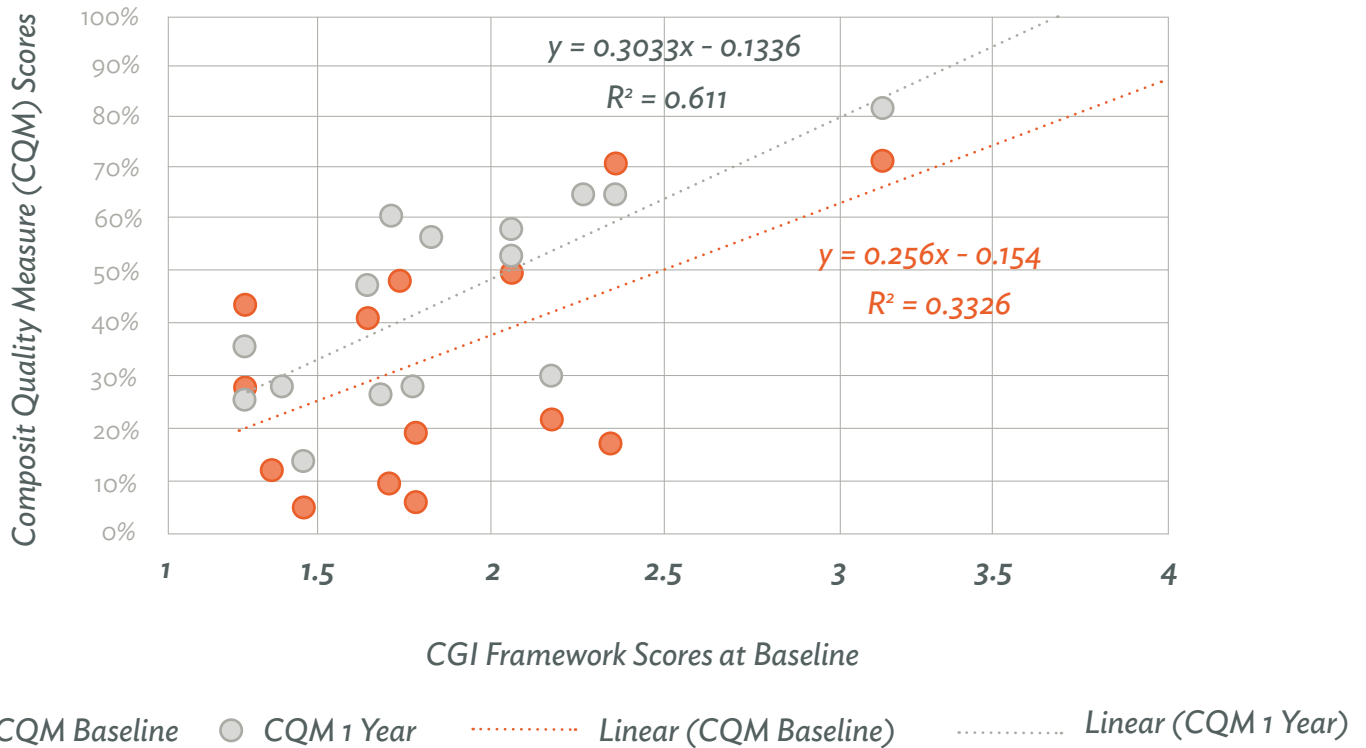
Results

Criterion Validity of GHI Framework. The correlation between GHI Framework scores at baseline and the CQM performance at baseline was .577 ($p=.024$), indicating good concurrent validity. The correlation between baseline GHI Framework scores and CQM performance was 0.782 ($p=0.001$) on one-year follow-up, suggesting high predictive validity. (See Table 4 and Figure 2).

Table 4. Criterion Validity Testing of GHI Framework

CRITERION VALIDITY TESTING	GHI FRAMEWORK	COMPOSITE QUALITY MEASURE PERFORMANCE	CORRELATION COEFFICIENT (R)	T STATISTIC	P
Concurrent Validity	Baseline	Baseline	0.577	2.545	0.024
Predictive Validity	Baseline	1 year follow-up	0.782	4.519	0.001

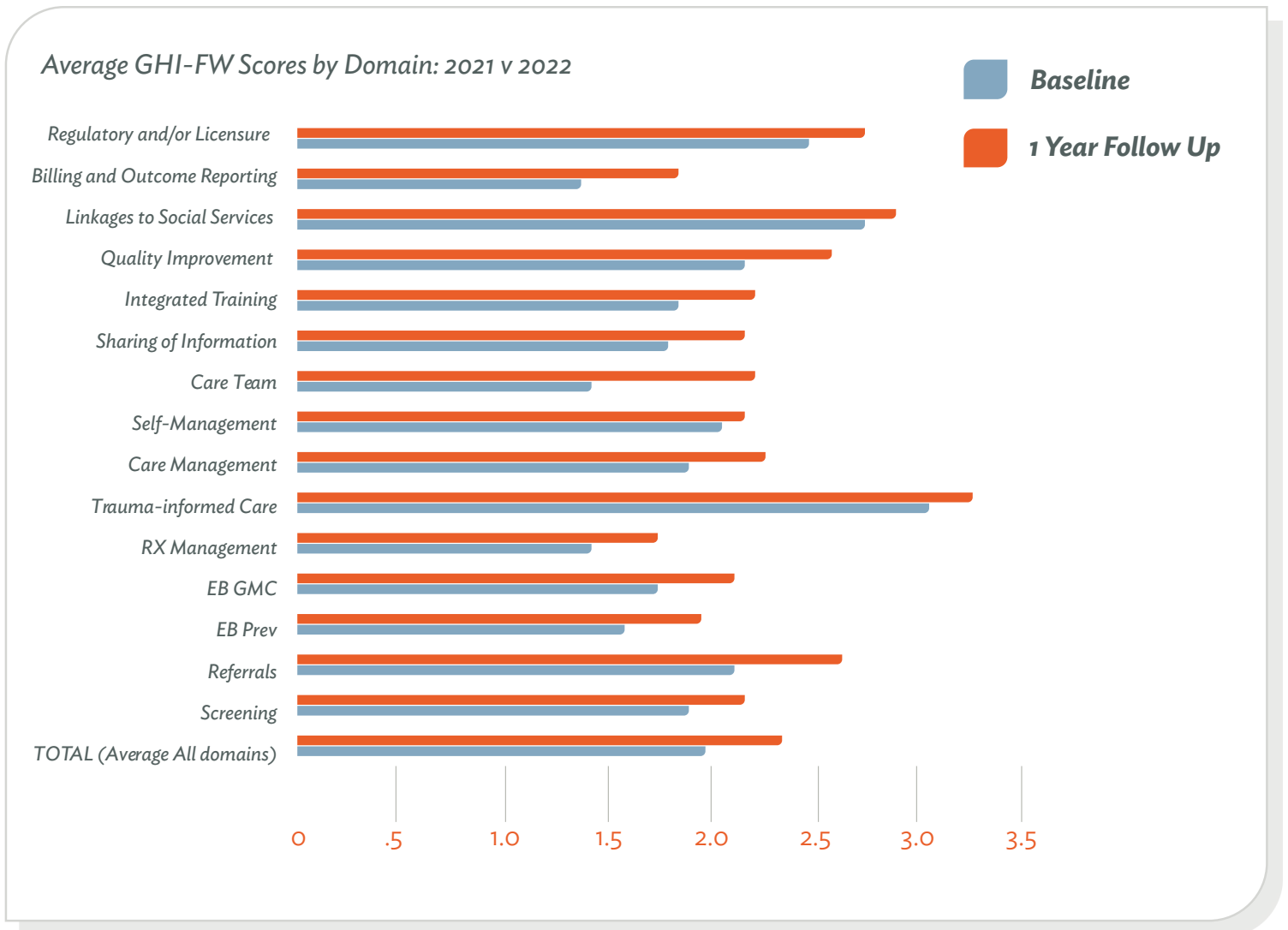
Figure 2. Relationship Between Participating Site Scores on GHI Framework at Baseline and CQM Performance at Baseline and One-year Follow-up



Impact of GHI LC on GHI Framework Integrated Care Scores

On average, item scores increased between baseline and one-year follow-up, with the largest increases in items related to the care team, followed by primary care referrals/engagement, billing and outcome reporting and quality improvement (See Figure 3). Sites significantly improved their total average Framework score by 12% ($p < .001$). It should be noted that we could not account for ceiling effects, observed for some sites with higher average total scores at baseline and for some subdomains where higher baseline scores were associated with smaller increases, i.e., sites that were advanced in some subdomains at baseline and could not improve any further.

Figure 3. Average GHI Framework Total and Item Scores at Baseline and One-year Follow-up (19 sites)



Change in General Health Integration Status Results

At 12 months, clinics made substantial progress toward higher stages of integration (see Appendix F). Most clinics improved by at least one stage in most of the domains and subdomains of the Framework. The subdomains with the highest percentage of clinics reporting improvement were care team (47%), systematic quality improvement (47%), ongoing care management and referrals (37%), screening, evidence-based care for general medical conditions (GMC) and preventive care, sharing treatment information, integrated care training and billing/outcome reporting, each with 32% of sites indicating advancement.

Key Clinic Baseline and Endpoint GHI Assessments: Strengths and Opportunities for Advancement

The subdomains that showed the greatest strength at baseline with 50% or more of clinics starting at intermediate II or advanced stages are social service linkages, self-management supports, trauma-informed care and regulatory licensure. Concurrently, the subdomains that showed the largest opportunity for advancement at baseline were care team, systematic quality improvement, ongoing care management and primary care referrals. It is noteworthy that these subdomains had the highest percentage of clinics moving from preliminary stage to intermediate II and advanced stages at 12 months.

Impact of GHI LC onsite capacity to report quality measures

Significant increases in reporting on quality improvement (QI) measures were observed between the first and last reporting month of the GHI LC ($p < .001$). The three substance use-related screening measures (tobacco SC, unhealthy drug use and alcohol Screening and Counseling) had greatest increases in reporting and were among the top four most highly reported at baseline and the top three most highly reporting in final reporting periods (see Appendix G). The least frequently reported measures were depression remission at six months and SMI diabetes – poor control, followed by diabetes screening.



It should be noted that certain quality measures were ultimately excluded from the quality analysis due to lower numbers of sites that successfully reported these measures; this was due to different factors among these two measures. For diabetes control, the measure required significant efforts to obtain laboratory values for the HbA1c and that was a challenge for most clinics, due to having minimal access to laboratory values (e.g., lack of routine health information exchange [HIE] data sharing, significant effort required to obtain and record lab values from other providers) or not having data in an analyzable format in their electronic health records (EHR) (requiring individual patient look-ups, manual data extraction and re-entry). It was easier for clinics to obtain data on whether a lab was drawn than to have the value of the lab. Clients with missing lab values are assumed to be in poor control in this measure – a new realization to many clinics. Finally, following up on an abnormal HbA1c and re-organizing team efforts to impact these clients beyond navigation to a PCP, such as implementing treatment plan changes, incorporating self-management activities into routine therapy and obtaining documentation for follow-up HbA1c labs, required significant culture change that was still an aspirational goal for approximately half of the clinics at the one-year mark.

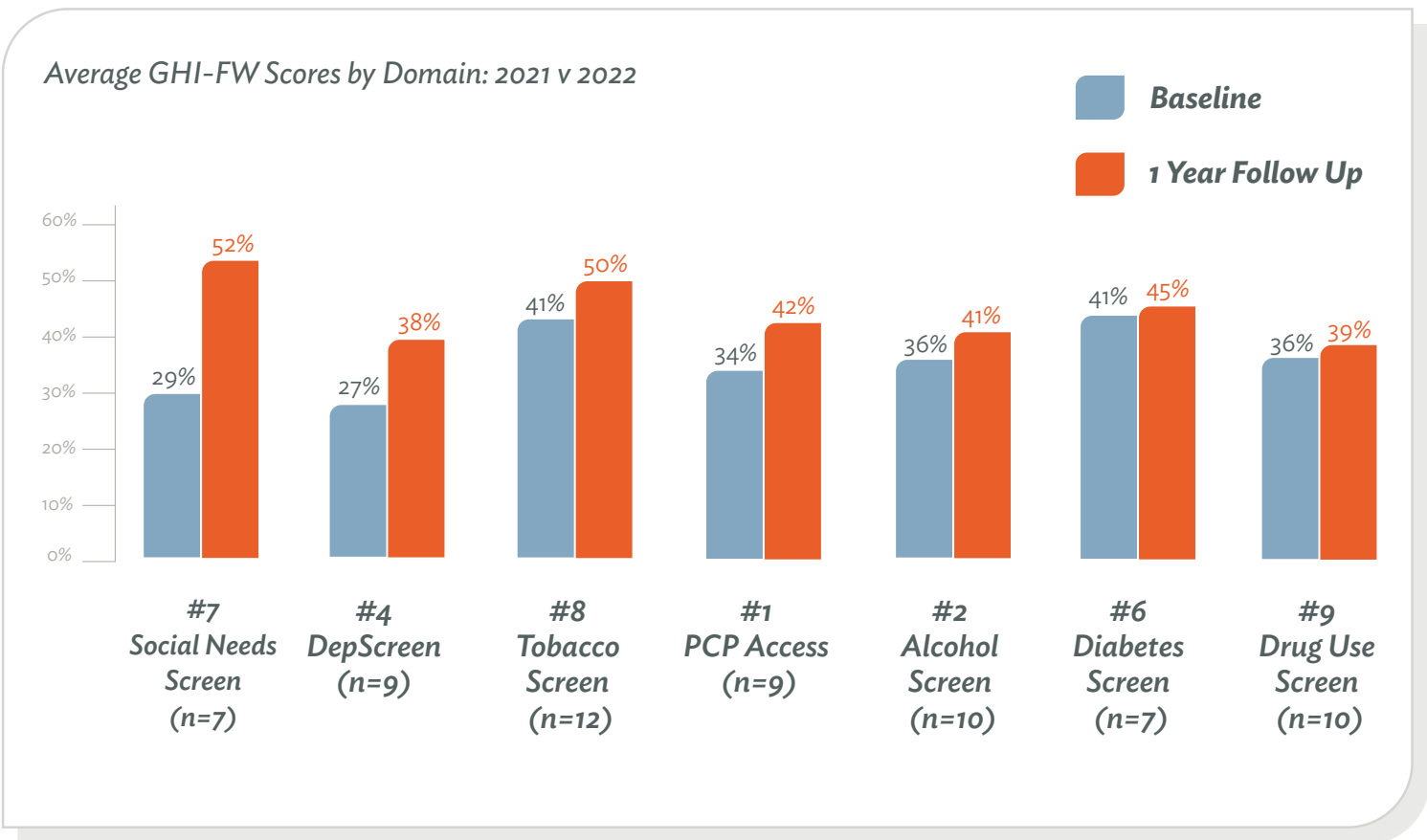
Clinics described challenges with the complexity of calculating depression remission rates according to the required episode timeframes. Given the chronic nature of depression diagnoses, it was difficult to establish when the episode measurement

period began (i.e., the point at which a PHQ-9 was greater than 10 or when the diagnosis was established even if the PHQ-9 was below 10) and tracking the scores over six months, the required duration of the measure. Sites would need to track individual clients across multiple individual time periods, which is not practical to do manually and not all site's EHRs were capable of doing it automatically. The few sites that were able to report on this measure usually had additional data analytic resources on site with the ability to extract custom data sets from the EHR or an alternate database.

Impact of the GHI LC on quality-of-care measures

Site performance on the CQM was significantly higher on one-year follow-up than at baseline ($p = .011$). Overall, performance measures were significantly higher at follow-up, with the greatest increase in performance in the screening for social needs measure, followed by depression screening and tobacco screening (see Figure 4). Exploratory analysis examining differences between baseline and one-year follow-up for individual measures, where the number of sites reporting varied from seven to 12 sites, found significant differences for tobacco screening and counseling ($p = .042$, $n = 12$) and depression screening ($p = .007$, $n = 9$) with an increasing trend for social needs screening ($p = .058$, $n = 7$) and access to preventive/PCP care ($p = .093$, $n = 9$). As previously discussed, the SMI diabetes – poor control measure and the depression remission measure SMI were excluded from analysis due to insufficient number of sites reporting them.

Figure 4. Average QI Measure Performance by Metric (19 sites) at Baseline and One Year



The Framework in Practice



Use of the Framework

The Framework was well received by participating clinics' leadership and staff, who saw it as a flexible, effective tool that broadened their understanding of the integration process by breaking it down into practical steps. It was helpful for establishing and refining goals and organizing the implementation process so they could advance GHI at a manageable pace, setting priorities appropriate to clinic needs. Moreover, our analyses supported reasonable concurrent and predictive validity of the Framework as a quality performance assessment and tool.



The monthly measures helped us highlight challenges and establish improvements with quality measurement and benchmarking. The data provided us with an opportunity to further identify the needs of our consumers e.g., primary care, documentation of A1C testing etc."



Monthly reporting forced us to look at our data on a regular basis instead of on a yearly basis like we had done in the past. it was also the reason that we were able to spend money on creating dashboards which has tremendously affected our data."

Survey responses indicated that all sites made advances in their GHI clinics overall. Using the scoring convention described on [page 14](#), we found improvements in all domains, most notably in the development of multidisciplinary care teams and systematic quality improvement. Our findings suggest that the Framework, in combination with technical assistance, was effective at helping community BH organizations advance their stages of integration and improve quality reporting and performance.



We have an increased awareness in areas to improve upon to support health integration. [We have] a larger understanding on how to integrate general health metrics into our care. Participating in the initiative has increased awareness and our culture is shifting toward implementing the necessary changes. [We] recognize the complexity of culture shifts and the time it takes to adopt the changes in service delivery to whole person health. [During this project, we] identified our need to improve billing processes to make services more sustainable.”



Assets for Success

We observed that sites with some key resources tended to have greater integration advancement and greater quality performance at baseline and endpoint. These included:

- Dedicated quality teams and/or dedicated quality improvement specialists.
- Availability of data analysts onsite to support collection and reporting of quality measures.
- Fourteen of the 19 participating clinics attested to using tracking tools (e.g., patient follow-up) that collect and monitor outcome data for aggregation and analysis.
- Ability to report on quality improvement by sharing information about a clinic’s performance and resource needs across the team.
- Inclusion of a diverse group of clinic staff in GHI planning meetings, with regular progress updates and opportunities for feedback by the entire team to establish greater accountability.
- Use of collaborative agreements or policies and procedures to support integrated teams to establish communication structures and define roles and responsibilities, especially when collaborating providers and staff are working externally.
- Presence of an onsite champion for GHI to bolster staff buy-in, promote GHI implementation and reduce resistance to change.
- Commitment to GHI by medical and executive leadership and providers to help ensure appropriate resources are provided to support implementation.





Framework 2.0: Feedback-based Revisions

A primary aim of the project was to improve the Framework by incorporating “on-the-ground” clinic feedback based on the experiences of the community BH and CCBHC sites. LC webinar discussions and technical assistance office hour calls during the project provided additional informal input on how the Framework could be improved, with clinics identifying unclear verbiage, overlap between integration stages and confusing quality metric definitions and tracking errors that resulted in challenges to monthly quality metrics reports. These suggestions were captured by hand or in webinar recordings to inform quantitative analysis and Framework revision.

From our surveys and LC technical assistance we identified several areas for improvement to the Framework. Generally, we attempted to make wording more consistent between domains and integration stages. A list of the most relevant revisions to the Framework appears in **Table 5**.

Table 5. Framework Revision Highlights

ALL DOMAINS WERE REVISED TO IMPROVE CLARITY AND BETTER DISTINGUISH BETWEEN COMPONENT STAGES OF INTEGRATION FROM PRELIMINARY THROUGH ADVANCED STAGES.	
DOMAIN	REVISION
Case finding, screening and referral to care	For the referral subdomain the advanced stage of integration was refined to emphasize navigation and engagement strategies.
Evidence-based care for preventive interventions and common GMCs	For evidence-based guidelines or treatment protocols for basic and targeted preventive interventions, the advanced stage of integration was refined from using a systematic referral and tracking system to a more generalized recommendation for the use of standard workflows for follow-up and management of positive results.
Multidisciplinary team (including patients) used to provide care	<p>The care team subdomain was revised to include family caregiver as an intermediate II and advanced level inclusion only. The subdomain also expanded to include descriptions of how the team should function at each integration stage.</p> <p>For sharing of treatment information with PCP, case review, care plans and feedback, the advanced stage removed the recommendation that an organizational culture include open communication channels, since this is difficult to measure and assess.</p>
Sustainability	The advanced level for expanding regulatory and licensure was revised to focus on the maintenance of integrated care licensure or certifications.

Takeaways

The GHI Framework was shown to be an effective self-assessment and planning tool to advance integration. The quality analysis demonstrated that the Framework is strongly and significantly correlated with quality performance at baseline and over time. This result should give clinicians, behavioral health organizations and payers/regulators confidence that the Framework used as a clinic assessment does accurately reflect integration status and capacity for quality improvement and performance.

The GHI Framework also works well as a planning tool. With technical assistance, most sites advanced their integration status during the LC and specifically advanced in domains and subdomains that necessitated multiple workflow improvements such as in screening for preventive/GMCs and referrals/engagement to primary care, evidence-based care, care management and patient self-management, among others. Moreover, advancement in sustainability of their integration investments occurred, a critical focus for all the sites.

Although these sites were selected based on high motivation and demonstrable familiarity with GHI, our previous pilot work strongly suggests that the Framework will also function well with other types of clinics, especially those who are CCBHCs or intend to apply to become one.[19][20] It will be important to specifically support the data collection and analysis infrastructure of these clinics if they are to translate their GHI work into demonstrable value that can be shown through successful process and outcome measures, which supports potential success in value-based programs.



Lessons for Behavioral Health Clinics in Integrated Care Settings

Despite the impact of the COVID-19 pandemic on workforce turnover and workflow adjustments, sites were able to tackle many common integration challenges, including lack of buy-in or familiarity with GHI concepts, undefined policies and procedures to address medical conditions, weak external referral partnerships, inconsistent patient follow-up, insufficient funds or workflow structures for peer and/or care manager, EHR shortfalls, limited access to labs, siloed communication and inadequate support for data collection and analysis.

Participating clinics used several strategies that demonstrated how the principles defined in the Framework directly influenced their expansion of GHI:

- Systematic screening of all clients by using general health screening forms with added questions on SDOH administered at intake, during annual wellness visits and follow-up of clients diagnosed with GMC by monitoring condition at every visit.
- Providing integrated care and trauma-informed training that is culturally competent and delivered on a regular basis to new and existing staff including peer wellness training.
- Improving care management by using general health tracking tools such as spreadsheets and registries to monitor patient follow-up and general medical screeners.
- Increasing awareness of the need for and use of quality metrics aligned with health plan reporting requirements and setting goals for additional reporting in the future.
- Adopting GHI billing as a critical pathway to integration sustainability.
- Enhancing self-management support by engaging clients on general health needs and providing take-home materials about their general health condition, preventive health such as tobacco cessation and prescribing needed medications.
- Scheduling regular time for case reviews and conferencing to discuss complex clients with growing multi-disciplinary care team.
- More consistently getting patient consent and sharing information – including laboratory results – between both onsite and offsite providers, to inform patient care plans.



Policy Implications of the GHI LC

This project shows that advancing GHI work in BH settings benefits from using this Framework; however, peer-based learning and technical assistance similar to what was made available through this project will be helpful to successful scaling of this work and its sustainability. Large but early change efforts mean providers will probably be at very different levels of sophistication. With different incentives in funding and regulation in different states, a uniform, practical, graduated guide like this becomes a pathway for individual program improvement efforts as well as large systemic change.



The learning collaborative was dynamic. Nationally recognized leaders were at our disposal. The learning and insight(s) from participants were very valuable. Facilitators were outstanding.”

Specific observations and suggestions arising from this project include:

- **Focus on sustainability planning efforts that optimize and expand allowable CPT codes** available within states and nationally to require broader coverage of GHI activities. [Assessing state coverage](#) for integrated care activities and provider-level billing practices will offer opportunities for states and clinics to maximize opportunities to financially support GHI activities and recognize demonstrated value. Providers should work with policymakers to identify sustainability pathways, including adopting the CCBHC model through Medicaid.
- **The CCBHC model presents an opportunity for a fundamental transformation of mental health and substance use care** in the United States and has significant potential to improve GHI strategies and improve the quality of care for individuals receiving behavioral health services. Providers should explore the options and opportunities available, in collaboration with their states, to becoming a CCBHC through SAMHSA grants and Centers for Medicare and Medicaid Services (CMS)-approved efforts.
- **Improved financing methods to support implementation and sustainability for integrated behavioral and general health integration are needed** because current and traditional payment approaches, such as CPT fee-for-service billing, do not offer a national-wide standard for financing integrated care activities such as care coordination, screening and care management. PPS models, such as the CCBHC Medicaid demonstration, offer a major shift to supporting anticipated costs to expand capacity and cover non-billable integrated care activities that may have historically been unavailable or relied heavily on grant funding. CCBHC demonstration states that made CCBHC permanent by submitting state plan amendments include Missouri, Minnesota, Nevada and Oklahoma. Moreover, increased support is necessary for VBP, including bundled payments that reflect demonstrated value, recognize and incentivize providers that can demonstrate GHI outcomes.
- **Quality measures for integrated behavioral health care must be streamlined to a cogent national set that demonstrates quality outcomes and aligned with payment methodologies.** Selection of clinical outcome measures should align with measurement informed care and potential revision of relevant outcome measures that minimize data tracking burden (e.g., the six- and 12-month depression remission measures, which currently require complex calculations that most sites are unable to track easily). Clinics should also work with their states to improve access to relevant databases such as health information exchanges (HIE) and support integration to EHRs that can routinely capture data (e.g., relevant laboratory data such as HbA1c, cardiometabolic screens).
- **Quality and data infrastructure funding along with technical assistance will be necessary** to support sustainable GHI workflows and quality measure collection and reporting which are aligned with PPS and VBP payment.

Conclusion and Future Directions

This project demonstrated the effectiveness of the GHI Framework paired with technical assistance for advancing GHI in community BH clinics. The Framework is shown to have both concurrent and predictive validity. The LC and use of the Framework led to improved GHI care and strengthened sustainability for the delivery of these services.

The LC findings clearly articulate strategies for success that can be applied by community BH clinics to bolster their integration efforts such as strengthening care team and systematic quality improvement, which relates to the ability of many clinics to integrate more care team members involvement in GHI and the investment in resources to improve data collection, benchmarking and workflow. Our ability to evaluate the Framework among a national collaborative of diverse clinics by geography, socioeconomic status and urban/rural settings illustrates the adaptability and generalizability of implementation opportunities for this tool. Strong clinic engagement in monthly technical assistance webinars and surveying their experience using the Framework for self-assessment resulted in positive feedback on the tool and informed improvements to the Framework. The resulting GHI Framework 2.0 revisions will help further improve consistency and clarity for future use.

The technical assistance provided was significant: monthly didactic and shared learning webinars on domain-based implementation practices, additional monthly office hours with a major focus on quality measure collection and quality improvement, one-on-one consultation between project leaders and sites for problem-solving. It is notable that this occurred among such a selected group, despite their relative success in EHR implementation and track record of QI. The shift to general health integration is as much a technical challenge as it is cultural. Policymakers and regulators promoting CCBHC efforts need to be cognizant of this effort given the requirement of primary care screening and monitoring in CCBHC programs and if a major goal of CCBHCs is to be well-positioned for future VBP.

We hope that other national initiatives that advance whole person care will use this Framework and report on their experiences and extend our findings by providing additional insights. But to fully measure and understand the impact of this clinic-based quality improvement GHI tool, we recommend large-scale and widespread implementation efforts.



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Appendix A. Framework 2.0: Revised and Expanded Guide to Implementing General Health Integration

KEY STAGES OF INTEGRATED CARE		INTEGRATION CONTINUUM			
DOMAINS	SUBDOMAINS	PRELIMINARY	INTERMEDIATE I	INTERMEDIATE II	ADVANCED
1. Screening, ¹ referral to care and follow-up (f/u).	<i>Screening and f/u for preventive interventions and general medical conditions² (GMC).</i>	No routine screening. Response to patient self-report of general health complaints and/or chronic illness.	Systematic screening for basic general health risk factors ³ and proactive health education to support motivation to address risk factors.	Systematic, screening and tracking of basic general health risk factors ⁴ as well as routine f/u for GMC with availability of in-person or telehealth primary care.	Analysis of patient population to stratify by severity of medical complexity and/or high-cost utilization for proactive outreach.
	<i>Facilitation of primary care referrals and f/u.</i>	Referral to external PCPs and no/limited f/u.	Written collaborative agreement with external primary care clinic that includes engagement and communication expectations between behavioral health and PCP.	Availability of onsite, co-located PCP or availability of off-site primary care telehealth appointments with assurance of “warm hand-offs” when needed.	Enhanced navigation and engagement strategies to onsite or closely integrated offsite PCPs, with data sharing and accountability for engagement.
2. Evidence-based (EB) care for preventive interventions and common general medical conditions (GMC)	<i>Evidence-based guidelines or treatment protocols for basic and targeted preventive interventions</i>	No/minimal availability of guidelines or protocols used for basic general health risks. No/limited training for BH clinicians risk factor screening.	Routine use of EB guidelines to engage patients on basic general health risk factor screenings with training for BH clinicians on screening frequency and result interpretation.	Routine use of EB guidelines for basic general health screenings with use of standard workflows for f/u and management of positive results.	Routine use of basic and comprehensive health risk factors with use of standard workflows for f/u and management of positive results.

¹ Individuals screened must receive follow-up by a trained BH provider or PCP (external or co-located).

² General medical conditions include, but are not limited to, diabetes, hypertension, hyperlipidemia, coronary artery disease, asthma, arthritis, gastrointestinal disease, tooth and gum disease.

³ Basic general health risk factor screenings include, but are not limited to: blood pressure measurement, HIV, colorectal screening (age appropriate), cervical cancer screening (age appropriate), overweight/obesity, tobacco use, alcohol and substance use (including opioid use), depression screening, presence of a primary care provider (defined as self-report of a usual source other than ED care with presence of one or more documented primary care visit during the past year).

⁴ Targeted general health risk factor screenings might include, but are not limited to: HbA1c, cholesterol, hepatitis B, hepatitis C, sexually transmitted diseases (STDs), tuberculosis, osteoporosis (age appropriate), intimate partner violence, mammogram (age appropriate), immunizations (age appropriate).

	Evidence-based guidelines or protocols for treatment of general medical conditions	No/minimal availability of guidelines or protocols for used for common GMC.	Routine use of EB guidelines on helping patients improve their GMC as part of fostering whole health. BH clinicians receive training on disease monitoring results.	Routine use of EB guidelines and workflows including monitoring relevant GMC measures and linkage/navigation to medical services when appropriate.	Use clinical decision-support tools (embedded ⁵ in EHR) with point of service guidance on active clinical management for BH providers and/or embedded PCPs for patients with GMC.
	Use of medications by BH prescribers for preventive and general medical conditions	No/minimal use of non-psychiatric medications by BH prescribers. Non-psychiatric medication concerns are almost always referred to primary care clinicians to manage.	BH prescribers routinely prescribes nicotine replacement therapy (NRT) and/or other psychiatric medications for smoking reduction.	BH prescribers routinely prescribes NRT/smoking cessation medications. May occasionally make minor adjustments to medications for GMC when indicated, keeping PCP informed when doing so.	BH prescribers can prescribe general medical medications with assistance and consultation of PCP. May also prescribe medications for alcohol use and opioid use disorders
	Trauma-informed care	Behavioral health staff have no/minimal awareness of effects of trauma on integrated health care.	Some staff education on trauma and impact on behavioral health and general health care.	Routine staff education on trauma-informed care model including strategies for managing risk of re-traumatizing. Limited use of validated screening measures for trauma when indicated.	Adoption of evidence-based trauma-informed care strategies, treatment and protocols by BH clinic for staff at all levels to promote resilience and address re-traumatizing and de-escalation procedures. Routine use of validated trauma assessment tools such as adverse childhood experiences (ACES) and PTSD checklist (PCL-C) when indicated.
3. Ongoing care management	Longitudinal clinical monitoring (outcomes and side-effects) and engagement for preventive health and/or general medical conditions	No/minimal f/u of patients referred to primary and medical specialty care.	Some ability to perform f/u of general health appointments, navigation to appointments and document clinical status.	Routine proactive f/u and tracking of patient medical outcomes and availability of coaching (in-person or using technology application) to ensure engagement and early response.	Routine use of tracking tool (e.g., Excel tracker or disease registry software) to monitor treatment response and outcomes over time at individual and population level, coaching and proactive f/u with appointment reminders.
4. Self-management support that is adapted to culture, socio-economic and life experiences of patients	Promote patient activation and recovery with adaptations for literacy, economic status, language, cultural norms	No/minimal patient education on general medical conditions and basic general health risk factor screening recommendations.	Some availability of patient education on basic general health risk factor screening recommendations, including materials/handouts/web-based resources.	Routine patient education delivered in person/technology application, on basic preventive screening recommendations and targeted GMC. Treatment plans include diet and exercise, with routine use of self-management goal setting outlined in treatment plans.	Routine patient education with practical strategies for patient activation and healthy lifestyle habits (exercise and healthy eating) delivered using group education, peer support, technology application and/or onsite or community-based exercise programs. Self-management goals outlined in treatment plans. If appropriate, advanced directives discussed and documented.

⁵ Embedded and co-located arrangements include PCPs available through telehealth services.

5. Multi-disciplinary team (including patients) with dedicated time to improve general health care	Care team	<p>Only BH provider(s) interface with patient no explicit discussion on role accountability and team goal progress.</p> <p>Team composition include: BH provider(s) and patient.</p>	<p>Limited or no defined team. Clinician works on general health patient activation and navigation/ engagement of primary care services.</p> <p>Team composition includes: BH provider(s), patient, peer and/or nurse.</p>	<p>The multi-disciplinary team works to improve general medical conditions for patents that may be present.</p> <p>Team composition include: BH provider(s), patient, peer, nurse, co-located PCP(s) (M.D., D.O., PA, NP), family caregiver. ⁶</p>	<p>The multi-disciplinary team incorporates technology strategies to communicate seamlessly with each other between patient visits to assign just-in-time action steps with patient to enhance adherence/activation.</p> <p>Team composition includes: BH provider(s), patient, peer, nurse, PCP(s), care manager focused on general health integration, family caregiver.</p>
	Sharing of treatment information with PCP, case review, care plans and feedback	<p>No/minimal sharing of treatment information and feedback between BH and external PCP.</p>	<p>Exchange of information (phone, fax) and routine consult retrieval from external PCP on changes of general health status.</p>	<p>Availability of PCP discussion of assessment and treatment plans in-person/ virtual platform or by telephone, when necessary.</p>	<p>Regular in-person, phone/ virtual/ phone meetings to discuss complex cases and routine electronic sharing of information and care plans.</p>
	GHI Integrated care team training	<p>No/minimal training at all staff levels on integrated care approach and incorporation of whole health concepts.</p>	<p>Some training at all staff levels on integrated care approach and incorporation of whole health concepts.</p>	<p>Routine training at all staff levels on integrated care approach and incorporation of whole health concepts with role accountabilities defined.</p>	<p>Systematic annual training for all staff levels with targets areas for improvement within the integrated clinic. Some job/role descriptions that include defined responsibilities for integrated BH and general health.</p>
6. Systematic QI	Use of quality metrics for general health program improvement and/or external reporting	<p>No/minimal use of general health quality metrics (e.g., data collection, analysis, cohort reviews). No organized efforts for quality improvement.</p>	<p>Some tracking of state or health plan quality metrics and some ability to track and report group level preventive care screening rates such as smoking, substance use disorders, obesity or HIV screening, etc.</p>	<p>Periodic monitoring of identified outcome and GHI quality metrics for basic and targeted GMC and ability to regularly review performance against benchmarks. Occasional implementation of QI projects.</p>	<p>Systematic monitoring of population level performance metrics (balanced mix of PC and BH indicators), with organized implementation of quality improvement projects.</p>

⁶ Family caregivers are part of team if appropriate to patient care.

<p>7. Linkages with community and social services that improve physical health and/or mitigate environmental risk factors</p>	<p><i>Linkages to housing, nutrition and other social services</i></p>	<p>No/minimal screening of social drivers of health SDOH.</p>	<p>Some SDOH screening and referrals made to social service agencies, but no formal arrangements established.</p>	<p>Routine SDOH screening, with formal arrangements made to social service agencies, with some/limited capacity for f/u.</p>	<p>Detailed psychosocial assessment incorporating broad range of SDOH needs patients linked to formal arrangements with social service organizations/resources to help improve appointment adherence (e.g., childcare, transportation tokens), healthy food sources (e.g., food pantry), with f/u to close the loop.</p>
<p>8. Sustainability</p>	<p><i>Build process for billing and outcome reporting to support sustainability of integration efforts</i></p>	<p>No/minimal attempts to bill for GHI services (screenings, interventions, care management, education). GHI services generally by grants or other non-reimbursable sources.</p>	<p>Some fee-for-service (FFS) billing for GHI screening and intervention services (e.g., HBA1c, preventive care, case management, tobacco/alcohol/substance interventions) with process in place to track reimbursements.</p>	<p>Routine GHI FFS billing as well as some pay for performance (PFP) revenue from quality incentives related to GHI (e.g., diabetes and cardiovascular monitoring, tobacco screening, primary care visits (if available).</p>	<p>Receipt of some value-based population payments beyond PFP (e.g., shared savings, capitation) that reference achievement of BH and general health outcomes.</p>
	<p><i>Build process to expand regulatory and/or licensure opportunities for increased general health services</i></p>	<p>No/minimal primary care arrangements that offer general health services.</p>	<p>Some primary care arrangements through linkage/partnership that incorporate the basic array (e.g., appointment availability, feedback on engagement, report on required blood work) of desired GHI services.</p>	<p>Formalized primary care arrangements, co-located internal or external, with telehealth availability (when necessary) that incorporate patient-centered engagement and f/u.</p>	<p>Achieve and maintain appropriate license or certifications (local, state, federal as appropriate) to deliver BH and primary care services in the clinic/organization.</p>

Appendix B. GHI Framework Evaluation Collaborative Clinic Characteristics

GHI LEARNING COLLABORATIVE CHARACTERISTICS (N=19)		
CLINIC CHARACTERISTICS	AREAS OF MEASUREMENT	NUMBER/AVERAGE RESPONSE (%)
Clients Served	Total # unique individuals are served annually (not total visits)	62,884
Age	Less than 18	23%
	18-24	11%
	25-44	34%
	45-64	25%
	65+	7%
Ethnicity	White	54%
	Black/African American	25%
	Native American or American Indian	1%
	Asian/Pacific Islander	5%
	Hispanic/Latinx	19%
Gender	Female	50%
	Male	46%
	Transgender	1%

General Health Providers (Embedded)	Primary Care Physician	42%
	Nurse Practitioner	94%
	Registered Nurse	79%
	Physician Assistant	37%
	Medical Assistant	79%
	Care Manager	63%
	Peer Counselor	68%
Types of General Health Service Provisions	Embedded Primary Care	37%
	Refer to External Primary Care	95%
	Nursing for General Health Support	84%
	Tobacco Cessation	95%
	Peer Support for General Health	53%
EHR Use and Capacity	EHR Implemented in Clinic(s)	100%
	EHR Able to Analyze Data Across All Providers and Clinic/Patient Care Outcomes	89%
	Tracks Metrics on Groups with Same Diagnosis	95%
	Create and Track Referrals to PCP/Specialists	42%
	In-house health information technology Capacity for Modifying and Improving EHR Functionalities	79%
	Relies on vendor for improvements at additional cost	53%

Insurance Types	Medicare Fee-for-Service	12%
	Medicare Advantage	7%
	Medicaid Fee-for-Service	12%
	Medicaid Managed Care	60%
	Commercial Health Insurance	13%
	Self-paying or Uninsured	10%
Professional Designation	CCBHC Cohort	80%
	CCBHC Demonstration Clinic	10%
	CCBHC State-Certified	0.05%
	Behavioral Health Care Collaboratives	0.5%
	Accountable Care Organizations	0.5%
GHI Supports	Quality Incentives from Health Plan	16%
	Quality Incentives from State Medicaid Agency	32%
	Federal Incentive Programs	16%
	Incentives for Achieving Patient-centered Medical Home	0%
	Incentives for Achieving Patient Centered Medical Homes with Behavioral Health Distinction	0%

Appendix C. Monthly Webinar and Office Hour Topics

DATE	TOPIC	DESCRIPTION
April 2021	Project Kick-off	<ul style="list-style-type: none"> Introduction to purpose and participants Overview of Framework components and next steps in assessment and data collection
May 2021	Quality Improvement Focused on GHI Metrics and LC Reporting Requirements	<ul style="list-style-type: none"> Overview of participant-reported use of quality and process outcomes for GHI Detailing difference between performance vs. improvement measures Review of GHI Collaborative individual metrics
June 2021	Clinic Assessment Results and Planning for Advancement	<ul style="list-style-type: none"> Results of clinic baseline assessment Guidance on how to plan for advancement on GHI Framework domains
July 2021	Planning for Sustainability	<ul style="list-style-type: none"> Expanding financing options for integrated care
August 2021	Screening, Referral to Care and Care Management	<ul style="list-style-type: none"> Medical screening in populations with SMI Medical care management in populations with SMI
September 2021	Quality Improvement and Data Sharing Including Registry	<ul style="list-style-type: none"> Defining a registry and how to develop registry tool
October 2021	Social Needs Screening and Linkages to Crisis Care	<ul style="list-style-type: none"> Social needs screening and linkages to crisis services GHI structural metrics overview
November 2021	Self-management Supports and Integrated Care	<ul style="list-style-type: none"> Importance of self-management in GHI/BH integration Promoting and assessing self-management
December 2021	Multi-disciplinary Team and Peer Supports	<ul style="list-style-type: none"> Efforts to address early mortality and health disparity in people with a diagnosis of a SMI Origins of peer support Application of peer support across settings and disease states Practical considerations: hiring, training, retention
January 2022	Evidence-based Care, Medication Management and Trauma-informed Care	<ul style="list-style-type: none"> Presenting a system's focus in quality and community mental health
February 2022	Tobacco Medication Management and Evidence-based Care	<ul style="list-style-type: none"> Clinic spotlight: integrated tobacco treatment at the institute for community living
March 2022	Care Management, Quality Improvement and Co-located Primary Care	<ul style="list-style-type: none"> Clinic spotlight: Arisa Health's approach to address health care needs Clinic spotlight: Centerstone of Indiana's overview of their quality improvement and data dashboards Clinic spotlight: Northeast Treatment Center's care coordination approach Clinic spotlight: Lutheran Family Services care management process for social determinants of health Clinic spotlight: Washington Heights Community Services approach to integrating primary care in behavioral health setting
August 2022	GHI Collaborative Comprehensive Data Review	<ul style="list-style-type: none"> Results of surveys at 0 and 12 months and lessons learned over the course of the project Structural metrics preliminary analysis GHI collaborative monthly data report preliminary analysis

Appendix D. List of Monthly Reported Quality Metrics Aligned with GHI Framework Domains

This list of monthly reported metrics are part of the General Health Integration Learning Collaborative offered by the [CoE-IHS](#) and is based on the framework in [Advancing Integration of General Health in Behavioral Health Settings: A Continuum-based Framework](#).

GHI COLLABORATIVE METRICS	NQF OR NCQA IDENTIFIER	CCBHC REPORTING	METRIC TYPE	SCREENING AND REFERRAL TO CARE	EVIDENCE-BASED CARE	ONGOING CARE MANAGEMENT	SELF-MANAGEMENT	LINKAGES TO SOCIAL SERVICES
Access to Prevention/ Ambulatory Health Services	NCQA AAP	HEDIS	Process	X				
Diabetes Screening for People with Schizophrenia/Bipolar Disorder	NQF 1932	CCBHC-State	Process	X				
Tobacco Use Screening and Cessation Intervention	NQF 0028	CCBHC - Organizations	Process	X	X			
Unhealthy Alcohol Use Screening and Brief Counseling	NQF 2152	CCBHC	Process	X	X			
Unhealthy Drug Use	USPSTF		Process	X	X			
Comprehensive Diabetes Care:	NQF 2607	HEDIS	Outcome	X	X	X	X	
HbA1c Poor Control (>9.0%)								
Depression Remission at 6 and 12 Months	NQF 0710	CCBHC	Outcome	X	X	X	X	
Screening and Treatment Monitoring for Depression	NQF 0418	CCBHC	Process	X	X			
Screening for Social Needs		NOMS	Process	X				X

Appendix E. Nine National Quality Measures Used in the GHI LC

METRIC NAME AND DEFINITION Note: All clients in the numerator are a subset of those in the denominator	MEASURE IDENTIFIERS	CCBHC OR OTHER REQUIRED REPORTING
<p>Access to Prevention/Ambulatory Health Services (AAP)</p> <p><i>Denominator:</i> All adults ≥20 years served during the measurement year</p> <p><i>Numerator:</i> Primary care visit during measurement year</p>	<p>Stewarded by NCQA (AAP)</p>	<p>HEDIS</p>
<p>Diabetes Screening for People with Schizophrenia/Bipolar Disorder (SSD)</p> <p><i>Denominator:</i> All adult clients 18-64 years with schizophrenia/bipolar disorder on an antipsychotic during the measurement year</p> <p><i>Numerator:</i> Diabetes screening test during measurement year</p>	<p>NQF #1932</p> <p>Stewarded by NCQA (SSD)</p>	<p>CCBHC for State Reporting, HEDIS</p>
<p>Tobacco Use: Screening & Cessation Intervention (TSC)</p> <p><i>Denominator:</i> All adults ≥18 years served during measurement year</p> <p><i>Numerator:</i> During measurement year...</p> <ul style="list-style-type: none"> ■ Screened at least once for tobacco use ■ Screened negative or, if positive, received cessation intervention (counseling or medication) 	<p>NQF #0028</p> <p>PQRS #226</p> <p>Stewarded by AMA & PCPI® Foundation</p>	<p>CCBHC for Clinic Reporting</p>
<p>Unhealthy Alcohol Use Screening and Brief Counseling (ASC)</p> <p><i>Denominator:</i> All adults ≥18 years with two or more visits in measurement year</p> <p><i>Numerator:</i> During measurement year...</p> <ul style="list-style-type: none"> ■ Screened at least once for unhealthy alcohol use using a systematic screening method (AUDIT/-C or NIDA-Quick Screen) ■ Screened negative or if positive received counseling ■ Positive screen: AUDIT (>/= 8), AUDIT-C (>/= 4 men, 3 women) or NIDA-Quick Screen Alcohol item (>/= 2 days in past year 5+(men)/ 4+(women) drinks in one day) 	<p>NQF #2152</p> <p>PQRS #431 Stewarded by the AMA and PCPI® Foundation</p>	<p>CCBHC</p>
<p>Unhealthy Drug Use (UDU)</p> <p><i>Denominator:</i> All adults ≥18 years served during measurement year</p> <p><i>Numerator:</i> Screened for unhealthy drug use using a systematic screening method (validated tool, e.g. NIDA Quick screen) during measurement year</p>	<p>NQF #2597</p>	<p>Medicare Core Set, USPSTF Recommendation</p>

<p>Comprehensive Diabetes Care: HbA1c Poor Control (>9.0%) (SMI-PC)</p> <p>Denominator: All adults 18-75 years with SMI and diabetes served during the measurement year</p> <p>Numerator: No HbA1c lab value or value >9.0% during the measurement year</p>	<p>NQF 2607</p> <p>Stewarded by NCQA (SMI-PC)</p>	<p>HEDIS</p>
<p>Screening and Treatment Monitoring for Depression</p> <p>Denominator: All adults ≥18 years served during the measurement year</p> <p>Numerator: Received PHQ-9 assessment quarterly during the measurement year</p>	<p>*</p>	<p>*</p>
<p>Depression remission at 6 months</p> <p>Denominator: All adults ≥18 years served 6 months prior to or during the first 6 months of the measurement year with a positive depression screen (PHQ-9 ≥10) and diagnosis of depression/ dysthymia</p> <p>Numerator: All clients with a PHQ-9 <5 at 6 months after screening positive for depression (+/- 30 days)</p>	<p>NQF 0711</p> <p>Stewarded by Minnesota Community Measurement</p>	<p>CCBHC</p>
<p>Screening for Social Needs</p> <p>Denominator: All adults ≥18 years served during the measurement year</p> <p>Numerator: Standardized screen (e.g., AHC HRSN) or at a minimum housing and food insecurity assessed during measurement year</p>	<p>**</p>	<p>CCBHC NOMS (housing only); CMS (new for hospitals in 2023)</p>

Abbreviations:

AMA & PCPI Foundation – American Medical Association and their Physician Consortium for Performance Improvement Foundation

CMS – Centers for Medicaid & Medicare Services

CCBHC – Certified Community Behavioral Health Clinics

HEDIS – Healthcare Effectiveness Data and Information Set

NCQA – National Committee for Quality Assurance develops HEDIS performance measures for managed care (insert reference)

NQF- National Quality Forum reviews and approves measures (insert reference)

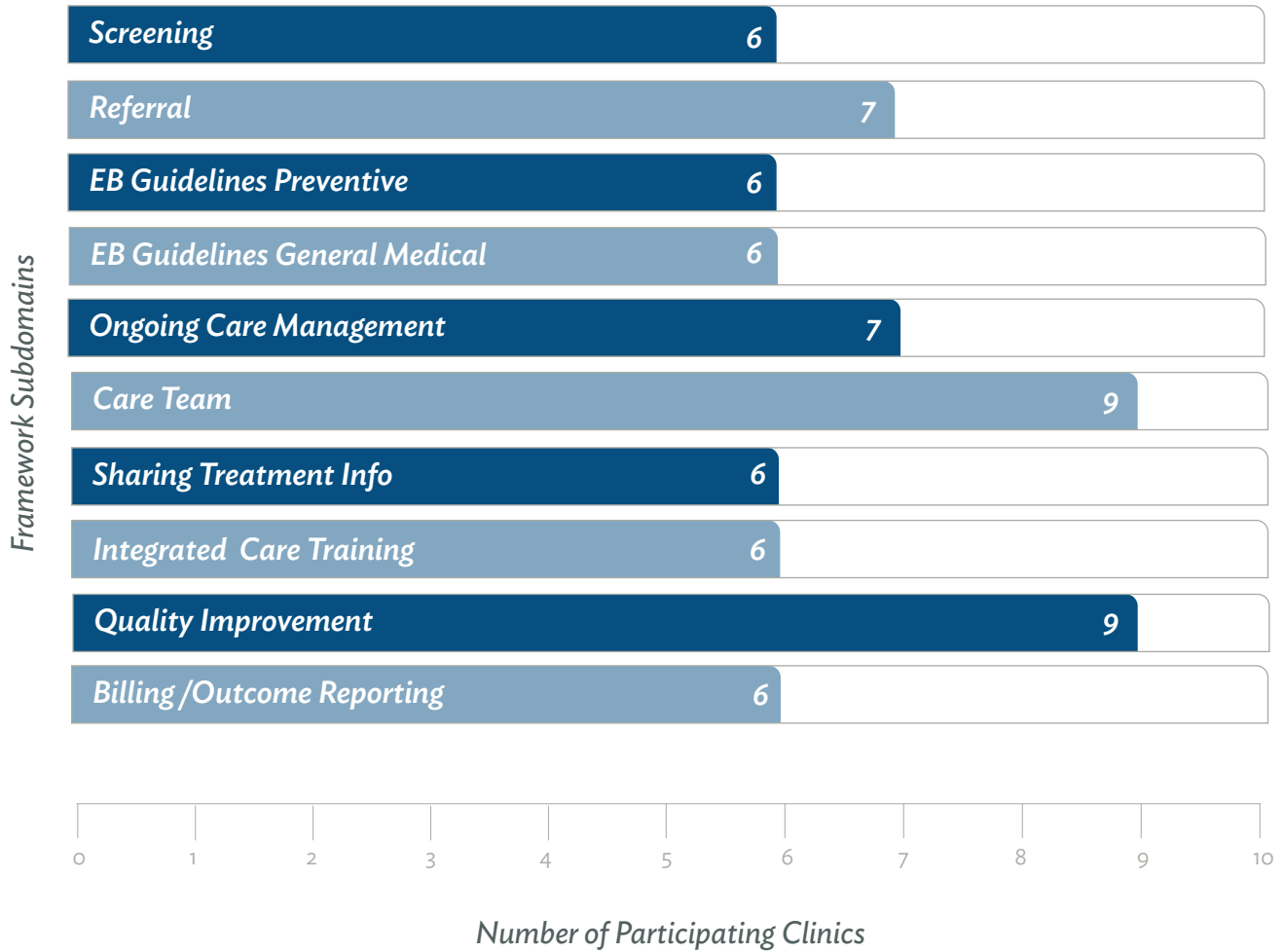
USPSTF – US Preventive Services Task Force

Table Notes:

* In the GHI LC we examined universal depression screening and monitoring with the PHQ-9 (assessment quarterly during the measurement year) for all individuals served, which is related to two other national measures. CMS #134 (NCQA 0418) examines universal depression screening and documentation of a follow-up plan among those without an existing mood disorder diagnosis. The Depression Assessment with PHQ-9/ PHQ-9(M) measure assesses administration of PHQ-9/M for those with depression/dysthymia within a 4-month period; this measure was withdrawn by developers and NQF #0712 is no longer endorsed as of December 2022.

** After the GHI LC project CMS announced new measures for assessing five social drivers of health (SDOH-1) and positive screening rates (SDOH-2) which are voluntary for hospitals in 2023 and mandatory in 2024. The Screening for Social Drivers of Health Measure assesses whether a hospital implements screening for all clients that are 18 years or older at time of admission for food insecurity, housing instability, transportation needs, utility difficulties and interpersonal safety or use a recommended screening tool, e.g., CMS’s Accountable Health Communities (AHC) Health-Related Social Needs (HRSN) Screening Tool. In the GHI LC we focused on screening using a standardized screening tool (e.g., AHC HRSN) or at a minimum assessing housing and food insecurity annually.

Appendix F. Subdomains with Highest Number of Clinics Reporting Improvement in Integration



Appendix G. Proportion of Sites Reporting by Quality Measure During the First and Last Reporting Period

