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One Location, One Visit

Pediatric Integrated Health Care in
Wayne County: A value proposition for
sustainability

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CENTER FOR HEALTH
AND RESEARCH
TRANSFORMATION

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Executive Summary

Background

While a growing body of evidence demonstrates the effectiveness of integrated medical and behavioral health care models, many health care providers, including pediatric practices, find the integration process to be daunting. Practices like these need a pathway to integration and a payer reimbursement system that sustains this model. At present, philanthropic organizations continue to hold the burden of supporting integrated health care in lieu of permanent financial support from the government and payers.

Children with undetected physical and mental health issues are more likely to become adults with extensive and expensive physical and mental health issues. Research has shown that early mental health intervention can lead to better outcomes.ⁱ Given a lack of adequate funding for mental health professionals trained to treat children, pediatricians are often the *de facto* health care providers for children's behavioral health issues, whether or not they have the training or resources to do so effectively.

Starfish Family Services (SFS), a recognized leader in integrated health care, transformed two large practices that serve children and families in Wayne County -- Integrated Healthcare Associates Pediatric Healthcare and the Pediatric Department of the Henry Ford Health System -- using the [Pediatric Integrated Health Care \(PIHC\) model](#), a model that integrates behavioral and medical care for children and deploys a behavioral health consultant (BHC).

SFS partnered with the Center for Health and Research Transformation (CHRT) to:

1. Assess the integration of the practices and document staff and workflow changes made during the PIHC transformation process
2. Evaluate the ways in which detection and early intervention of behavioral health needs in an appropriate setting impacts the physical and behavioral health of patients
3. Examine the cost effectiveness of the PIHC model
4. Provide payer systems with the data they would need to determine the value of making PIHC the standard of practice.

Methods

Multiple approaches were used to evaluate the work of the PIHC initiative and the role of the BHCs in their respective clinics.

1. **Clinic-level evaluation:** Interviews and questionnaires with care team members at three time points over the course of the project (pre-implementation/baseline, one-year, and two-year). Individual interviews were conducted with BHCs at the end of year one and year two.
2. **Patient-level evaluation:** Surveys with patients during their initial visit (baseline) and follow-up visits six to twelve months later. The survey contained questions related to the patient's overall health, physical and behavioral health (in the form of number of unhealthy days), health care utilization, and experiences with health care providers. The analysis of survey data focused on comparing baseline and follow up values.
3. **Economic evaluation:** A financial analysis that explores the potential impacts of integrated health care for clinics. Data sources included: 1) Assessments of local impact of the PIHC intervention from the sites, 2) Potential billing amounts from publicly-available insurance reimbursement levels, and 3) Data on the

broader system-wide effectiveness of improved behavioral health from the medical and public health literatures.

Key Findings

- PIHC can successfully integrate behavioral and medical care for children by deploying behavioral health consultants (BHCs).
- The PIHC model and deployment of BHCs can make clinic processes more efficient, offloading tasks from other care team members and improving physician throughput (efficiency).
- Care team members at both clinics indicated that the PIHC model improved the overall quality of care for children with behavioral health needs. Care team members also reported an improvement in the clinic's ability to identify behavioral health needs and provide appropriate care to patients.
- Both providers and patients were highly satisfied with the BHC and integrated care model.
- Patient outcomes improved in a variety of areas including reported improvements in overall health, reductions in the number of unhealthy days, and reductions in the number of days with lost productivity. Parent outcomes showed some improvement, but were not statistically significant.
- Aside from salary and benefits, BHCs do not require many resources to do their work; usually just a laptop, phone, place to chart to make calls to patients, and space for follow up consultations with patients. Many use empty exam rooms or meeting rooms effectively.
- One clinic chose to sustain a position similar to the BHC beyond the project funding period.

Recommendations for Sustainability

Clinics need payment model changes to sustain the PIHC model. Integrated care and deployment of a BHC can be financially sustainable, but would require increased fee-for-service payments, a properly-funded collaborative care model, or other payments for the system-wide longer-term benefits due to improved care of mental health issues.

Integrated BHCs may not be financially sustainable if:

- BHCs cannot bill for their services or have a system of reimbursement for their services such as value based payments
- BHCs are in very small clinics with few patients, and/or
- The clinic's financial model does not recognize the system-wide benefits of improved behavioral health care

However, Integrated BHCs are likely to be financially sustainable if:

- BHCs can bill/receive reimbursement for all services
- BHCs are in moderately-sized-to-large clinics with higher patient volumes, and/or
- The clinic's financial model can recognize the system-wide benefits of improved behavioral health care

Business models must be in place to support integrated care. Pediatric integration is an important change in the overall health service delivery to children. It is not a stretch to say that children with undetected and untreated health needs will become adults with more extensive and expensive health needs. By embedding a BHC onto the primary care team, more children's behavioral health needs will be identified and more children will receive intervention for behavioral and physical health needs. Detection and early intervention will improve the overall health outcomes for

children as they mature, thus impacting the overall health and wellness of our communities. In addition, the broader health system may see longer-term benefits from increased access to mental health care, leading to longer-term health cost savings. If a pediatrician believes their patients will benefit from having a BHC on the medical team there should be clear answers as to how to financially support this and the method for sustainability should be constructed in a manner that values the contribution of the BHC to medical team and patient care.

In order to ensure that integrated care is sustainable, we recommend:

1. **For fee-for-service:** BHC is credentialed under the medical clinic (regardless of who employs the BHC: the clinic directly or a partner mental health provider) and bills for one code that encompasses all BHC activities delivered for co-managing patients with the pediatrician. The code would have to pay approximately \$40, which is lower than a traditional outpatient session payment of a Medicaid health plan.
2. **For third-party insurance:** Only one co-pay should be required of patients for a physician visit when a BHC is utilized. A patient in a clinic who is offered a BHC visit but with a separate co-pay will likely decline. The goal is to pay for these integrated services under the physical health care benefits rather than as a separate mental health visit. In integrated health care health is health – we should not silo behavioral health benefits away from other physical health care benefits.
3. **For a value-based payment:** BHC is credentialed under the medical clinic; clinic creates an upcode or modifier for the physician when using a BHC for co-management of patient care that would encompass all BHC co-management activities.

Overview

While a growing body of evidence demonstrates the effectiveness of integrated medical and behavioral health care models, many health care providers, including pediatric practices, find the integration process to be daunting. Practices like these need a pathway to integration, as well as a payer reimbursement model that allows them to sustain integrated care initiatives far into the future.

The Starfish Family Services (SFS) Integrated Health Care Department is a recognized leader in pediatric integrated health care. SFS has an established track record of successfully integrating medical and behavioral health care in pediatric, OB/GYN, and family medicine at 22 sites in Wayne County, Michigan—home to the city of Detroit—by utilizing a self-developed manual and tool kit. The Pediatric Integrated Health Care (PIHC) Implementation Model Manual outlines the steps required to assess readiness, educate staff, and develop the workflows required for successful integration.

In 2016, pilot testing of the SFS integration model, which requires an embedded behavioral health consultant at each practice, indicated that:

- Physicians feel more confident to manage mild to moderate behavioral health needs with an embedded behavioral health consultant (BHC) on the medical team;
- Pediatric behavioral health issues can be detected during medical care;
- Integrating medical and behavioral health care is a transformational process for medical clinics;
- Patients are satisfied with having access to behavioral health in their pediatric clinic.

Given this initial success, and considering the number of pediatric clinics without integrated behavioral health care across Michigan, SFS wished to identify and address barriers to integration on a larger scale. To do so, in 2018 SFS proposed to:

1. Use its self-developed PIHC Implementation Model Manual and accompanying tool kit to integrate care at two non-integrated practices
2. Work with the Center for Health and Research Transformation (CHRT), a nonprofit policy center at the University of Michigan, to assess the efficacy and effectiveness, including cost-effectiveness, of the model.
3. Develop a business case and associated reimbursement models for integrating behavioral health services at pediatric clinics.

These steps were completed between September 2018 and December 2020 while CHRT measured the impact at provider, patient, and health care system levels to ascertain whether the model:

- a. Improved workflow for primary care providers by allowing them to delegate relevant tasks to the BHC;
- b. Improved patient health outcomes through detection and early intervention of behavioral health needs in an appropriate setting;
- c. Demonstrated the cost effectiveness of the PIHC model;

- d. Produced data to demonstrate the value of making PIHC the standard of practice.

Impact was measured using provider and patient/family surveys, practice data from electronic medical records (EMRs), and qualitative data gathered from interviews and focus groups.

Although there are prior studies of the impact and cost-effectiveness of integrated behavioral health and primary care, there are very few studies that examine this in the pediatric setting.

There is evidence that pediatric practice populations may benefit from collaborative and integrated care, particularly in treating attention deficit hyperactivity disorder (ADHD) and depression, but evidence of cost-effectiveness is absent.ⁱⁱ In addition, even if an intervention is found to be cost-effective from the perspective of society or the health care system as a whole, it is not clear that pediatric primary care providers have appropriate incentives, or an appropriate business model, to sustainably finance this type of care.ⁱⁱⁱ

Our economic analysis adds to this body of research in two ways:

1. By examining the cost-effectiveness of integrated mental health care with pediatric primary care, which is currently unknown.
2. By exploring new models for financial sustainability and investigating the barriers to implementation.

Partners

Starfish Family Services (SFS) is a community-based nonprofit agency headquartered in Inkster, Michigan, a disadvantaged community just outside of Detroit. The agency has served children and families in Wayne County for over 50 years, and currently operates a wide range of programs from nearly 20 sites, reaching over 10,000 children and families annually. SFS is a leading provider of early childhood development and parenting programs, children's mental health services. SFS served as the project lead, implementing its PIHC model and overseeing the project.

The Center for Health and Research Transformation (CHRT) is an independent nonprofit organization at the University of Michigan with a focus on public health policy. CHRT has experience in program evaluation, data analysis, and utilization analysis using administrative data. CHRT contracted with David Hutton, MS, PhD, an associate professor with the University of Michigan School of Public Health's Department of Health Management and Policy, to lead the economic analysis.

Integrated Health Care Associates: Headquartered in Ann Arbor, Michigan, IHA is one of the largest multi-specialty groups in Michigan, delivering more than one million patient visits each year. IHA employs more than 2,200 staff, including more than 650 providers consisting of physicians, nurse practitioners, physician assistants, and midwives in approximately 70 practice locations across Southeast Michigan. To support integration efforts, a BHC was placed at one of IHA's Wayne County Pediatric clinics. This IHA office has 14 pediatricians and has been serving infants, toddlers, children, and adolescents in the area for more than 20 years.

The Henry Ford Health System (HFHS) Department of Pediatrics includes more than 80 board-certified pediatricians who offer primary care and advanced specialty care services in more than 20 locations in Wayne, Oakland and Macomb counties. HFHS pediatric doctors have specialized training to care only for children from birth to age 21. To support integration efforts, a BHC was placed at one of HFHS's Wayne County Pediatric clinics.

Background

Pediatric Integrated Health Care is no longer a concept; it's a way of delivering improved care for patients and doing business.^{iv} Integrated health care has been supported through grants for years. Unfortunately, most states and payers of medical and behavioral health care have not made the significant changes required to allow for consistent, accessible, and affordable integration. As a result, funding and philanthropic organizations continue to hold the burden of supporting integrated health care in lieu of permanent financial support from the government and payers. However, developing a detailed business case for payers is more difficult than developing or building upon the model; so when grants end, so do the integration initiatives.

An issue paper published by the National Institute for Health Care Management Foundation (NIHCM) eloquently describes the shortcomings of the current fragmentation between behavioral health and physical health care system. It was written 11 years ago, but the identified shortcomings remain today:

One in five children and adolescents in the U.S. experiences mental health problems, and up to one-half of all lifetime cases of mental illness begin by age fourteen. Seventy-five percent of children with diagnosed mental health disorders are now seen in the primary care setting, making the management of mental health issues a growing part of pediatric practices. Pediatricians are well positioned to detect problems in a child's social and emotional development due to their consistent presence in a child's life, [however] pediatricians are increasingly relied upon not only to detect problems, but also to provide the full spectrum of mental health services without the tools and resources to do so effectively.^v

Fortunately, focused and purposeful work on developing models for the integration of primary care and behavioral health care has been occurring for many years. There have been initiatives that were built on previous foundations and we've seen creative new ways of thinking about integration and even some re-working of those foundations. We may sometimes struggle with the definition of integrated health care so a continuum approach was developed. We've seen the population health approach, the demand for addressing the impact of social determinants of health and trauma unfold and add to the argument against silos in health care. The evidence base for outcomes of an integrated health care approach has expanded and studies, evaluations and data have seemingly moved from a trickle here and there to a fountain of easily accessible information. At a time when the invitation to innovate was open for the development of new ways to effectively serve children and patients, professionals around the nation gladly accepted and since 2010, there has been valuable creation and innovation.

Many would say that the most pressing issue now is financing and sustaining what has been created over the years. The health care world, physical and behavioral, have all consistently verbalized "no more silos," but sustainable financing is required to answer this call in a consistent, safe, and secure way. We appear to be drowning in workarounds. It's as if we've spent more money on patching the holes in the boat than if we would have just invested in a new boat in the beginning. The call is now upon us to re-think the financing and sustainability issue as one of access. While very hard working and motivated professionals have been working to develop and refine models, doing research, talking about silos and creating workforce development education programs, pediatricians have been seeing patients every single day for years and likely thinking to themselves "this is great but when will someone come to me with a simple solution to allow me access to a behavioral health partner on my team." Questions abound on the ground level about real change for medical professionals who have not been part of pilot programs or grant awards. Where is their access today? How do they "get" integrated health care? How do they get a BHC, a partner with a specialty in mental health, to co-manage their patients with them? Where do they start, who do they talk to about it?

The accepted approach to physical health care disease is that detection leads to early intervention which leads to better outcomes. Behavioral health care, especially for children, should be delivered to patients with the same approach. The undetected physical and behavioral health care needs of children very likely lead to adults with more extensive and expensive physical and behavioral health care needs.^{vi}

Key Components of the PIHC Model

Pre-integration planning activities

It is well-known among those who have participated in the integration movement that simply placing a mental health professional into a primary care clinic is not a sufficient or effective solution and can result in model failures.

Integration requires a transformation, an educational experience, which involves changes in attitude, approach, time management, communication, workflow, clinical policies, human resources, patient engagement, billing systems, charting systems, and the daily choreography of team member activities.

The transformation of a medical clinic from non-integrated to fully integrated takes time and consistent attention to details. While there is no one-size-fits-all approach, planning is imperative for success.

SFS utilized the PIHC Implementation Manual to guide the transformative process of integrating the participating clinics. The process requires staff resources—either from existing staff or an outside expert. The resource of staff time should be considered in any planning and commitment process. There will be work to do in the transformation, so planning for the use of staff time is critical.

Prior to the assignment of a BHC to the participating practices, an administrator or supervisor led important activities including:

- educational meetings with select stakeholders and key clinic staff,
- selection and training of an implementation team,
- creation of an end-result vision and goals for implementation, and most importantly,
- identification of a champion in the practice who understands the costs and benefits and commits to the work and end vision.

At SFS, the director of integrated health care completed all of the administrative and first-tier educational meetings and presentations. Every role in the clinic was involved in the education sessions to foster buy in and ownership. The activities in *Table 1* below showcase the amount of work involved in true integration, from implementation to transformation, once the pre-integration work is completed.

Table 1

ACTIVITY	PURPOSE	FOCUS	FREQUENCY	OUTCOME(S)
Initial educational meeting	Describe integrated health care.	This meeting should involve anyone whose role in the practice involves strategic planning.	✓ Once	✓ The clinic has a well thought out desire to provide PIHC.

	Learn about the clinic’s readiness to implement.	For some practices this may involve a CEO, or a medical director, for others it may be an office manager or provider.		<ul style="list-style-type: none"> ✓ The clinic is able to connect integration investments to patient well-being. ✓ The clinic has identified a champion for the PIHC model. ✓ The clinic has committed resources to the implementation process.
Management educational meeting	<p>Educate key management staff about PIHC and provide managers with the information they will need to introduce change to their staff.</p> <p>Management staff need to have enough knowledge of PIHC to share with staff in a way that generates enthusiasm.</p>	Management-level stakeholders including managers of nurses, medical assistants, front desk staff members, and administrators (finance, human resources, etc.).	✓ Once	<ul style="list-style-type: none"> ✓ Staff learn about clinic intentions for PIHC ✓ Understand the integration model that will be used ✓ Are given an opportunity to positively lead their staff by sharing knowledge and expectations
Medical provider team meeting	Educate medical providers about PIHC, including the “why,” the “how,” and the benefits.	Medical team members including A, B, and C.	✓ Once	<ul style="list-style-type: none"> ✓ Create expectations ✓ Communicate benefits ✓ Create excitement and buy in ✓ Connect current Provider issues with the PIHC solution
General staff educational meeting	Educate about the PIHC model and the impact of clinic	All clinic staff	✓ Once	<ul style="list-style-type: none"> ✓ Staff will have knowledge of the reasons for transformation

	<p>transformation for each staff role.</p> <p>Staff should understand what IHC is, why the clinic is pursuing the PIHC model, the benefits to staff and patients.</p> <p>The goal is to foster buy-in and generate enthusiasm for the next phase.</p>			<ul style="list-style-type: none"> ✓ Staff will understand their role in the PIHC model ✓ Staff will hear expectations from the clinic management
All compliance activities between organizations	Complete all legal foundations of partnership.	Allow all parties to have written understanding of expectations in partnership activities	✓ Until completed	<ul style="list-style-type: none"> ✓ Business Associate Agreement ✓ Medical Record access ✓ All confidentiality and HIPAA requirements documented and completed ✓ Vendor requirements with health system completed

Behavioral Health Consultant Role

Implementation Activities

In most instances, the BHC is not responsible for leading the integrated health care implementation and transformation process; BHCs are generally solely focused on providing direct services to patients at the participating clinic. However, for the purposes of this study, the BHC assigned to each clinic was specially trained to participate in, and take on some leadership duties for, the implementation tasks outlined in *Table 2*.

Table 2

ACTIVITY	FOCUS	FREQUENCY (OR # OF TIMES OVER 2YR PROJECT)
Administrative/implementation coordination meetings	General implementation.	Weekly for approximately three months, as needed.
Medical team consultation on workflow and workflow development	Workflow is developed and refined in collaboration with clinic staff (pediatrician, nurse manager, CSR manager, etc.) as well as off-site management. Some tasks, such as creating a more robust behavioral health screening process took several months.	Daily/weekly for approximately two to three months, then as needed.
Mental health focused training for clinic staff (various topics)	Build the capacity of clinic staff around mental health.	Quarterly for the first year, then as needed after implementation.
Clinic staff meetings, team building activities	General implementation.	Monthly or based on existing clinic frequency, IHC added as agenda item on all meetings recommended.
BHC skill development and orientation activities	BHC is certified in IHC program (four months); receives physical health trainings, CAFAS/PECFAS and DECA certifications, and all required medical clinic trainings.	62
Building community resources relationships	Community needs assessment is conducted with local school districts, mental health treatment providers, specialty health care providers, and agencies that meet various concrete needs (i.e. housing, utilities, food, diapers, etc.) social determinants of health (SDOH) needs. .	21
Clinic environment activities	<p>Prepare staff to understand and operate from an integrated approach at every step as new workflows are created by attending and presenting at monthly staff meetings, lunch and learns, and daily huddles while maintaining an “open-door” policy to field questions and concerns from staff as they arise.</p> <p>Part of the training helps prepare front desk to greet and schedule patients, answer questions about screenings, and even identify patients for BHC consultation. Nurses working the triage line are prepared to direct and advise patients with mental health care needs.</p>	17
Staff relationship activities	Educate patients not only on the Pediatric Integrated Health Care model, but also on mental health. This work reduces the stigma associated with receiving	29

	mental health care and is often done with clinic staff as well to create an environment where behavioral health screening and care is routine.	
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Evaluation Activities

In addition to implementation activities, the BHC assigned to each clinic was responsible for several evaluation and data collection activities. Impact was measured using provider and patient/family surveys, practice data from the EMR, and/or qualitative data gathered from interviews or focus groups. The BHC played a key role in ensuring timely and coordinated data collection efforts across many different stakeholders (providers, clients, families, etc.) during the entire project. *Table 3* outlines the work of the BHC with regard to evaluation and data collection.

Table 3

EVALUATION ACTIVITY	PURPOSE	FREQUENCY
Recording BHC patient contact details into SFS recording system	Monitor the services provided by the BHC and the subsequent health care utilization and health outcomes of the patient.	Daily.
Recording consults, phone calls, ongoing appointments in provider EMR	Reach out to and provide PIHC interventions to patients and families with mental health concerns.	Daily.
Record BHC implementation activities	Gather information about the types of implementation activities necessary to implement the PIHC model.	As needed.
Conduct behavioral health assessments	Improve patient behavioral health outcomes through detection and early intervention of behavioral health needs in an appropriate setting.	As needed.
BHC key informant interviews	Understand the clinic staff workflow, efficiencies, and changes in clinic processes; understand fidelity to the PIHC model.	Baseline and 12-month follow-up.
Baseline and follow-up patient survey administration	Understand the impact of services on behavioral and physical health outcomes; understand patient and family satisfaction with the PIHC model and the BHC.	Baseline and 12-month follow-up.
Coordinate with various stakeholder to ensure access to necessary documents and tools	Ensure data collection activities—surveys, assessments, forms—are completed in a timely manner.	As needed.

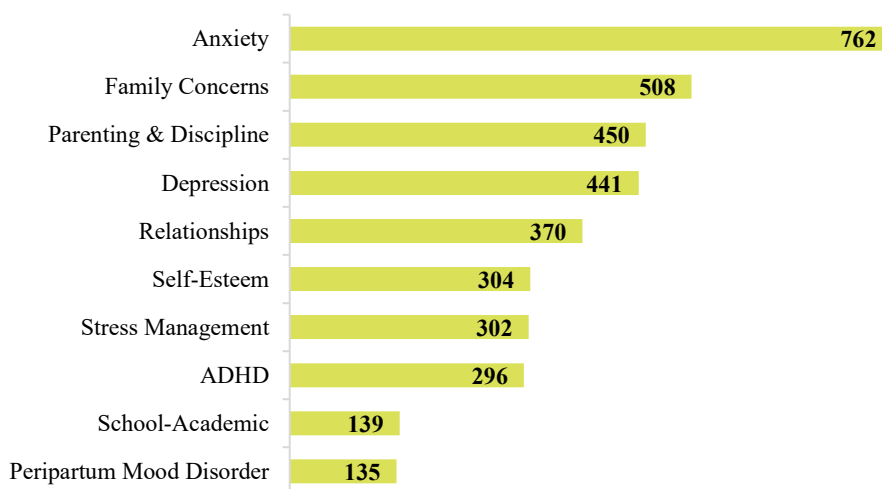
Patient Services

The primary work of a BHC is to consult with patients, parents, and the medical team. As part of the PIHC rollout, BHCs provided direct services to 1,149 patients. Based on data collected by the BHCs using the methods noted above, *Figure 1* displays the top reasons for these consultations, which include both traditional mental health

concerns (such as anxiety, depression, and ADHD) as well as health behavior concerns (such as nutrition, exercise, and medication management).

Figure 1

BHCs can address a range of mental and behavioral health concerns.



Data source: Internal BHC tracking

The most common types of services provided during these encounters can be seen in *Figure 2*.

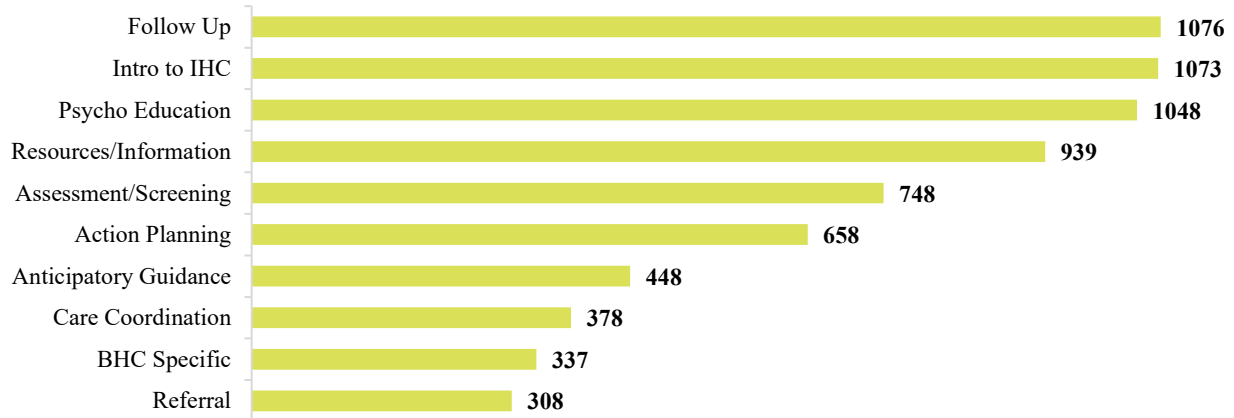
Services often included parent psychoeducation and anticipatory guidance, as is common in pediatrics. Screenings, assessments, and referrals proved to be beneficial as well. For example:

- Mothers enrolled in treatment for postpartum depression ahead of their obstetrician follow up due to BHC screening and intervention,
- Parents expressed gratitude for learning a great deal from the BHC during short consultations,
- Parents found answers in a setting they trusted, when they weren't sure where to go.

Figure 3 displays the number and types of screening assessments completed as part of the broader PIHC initiative.

Figure 2

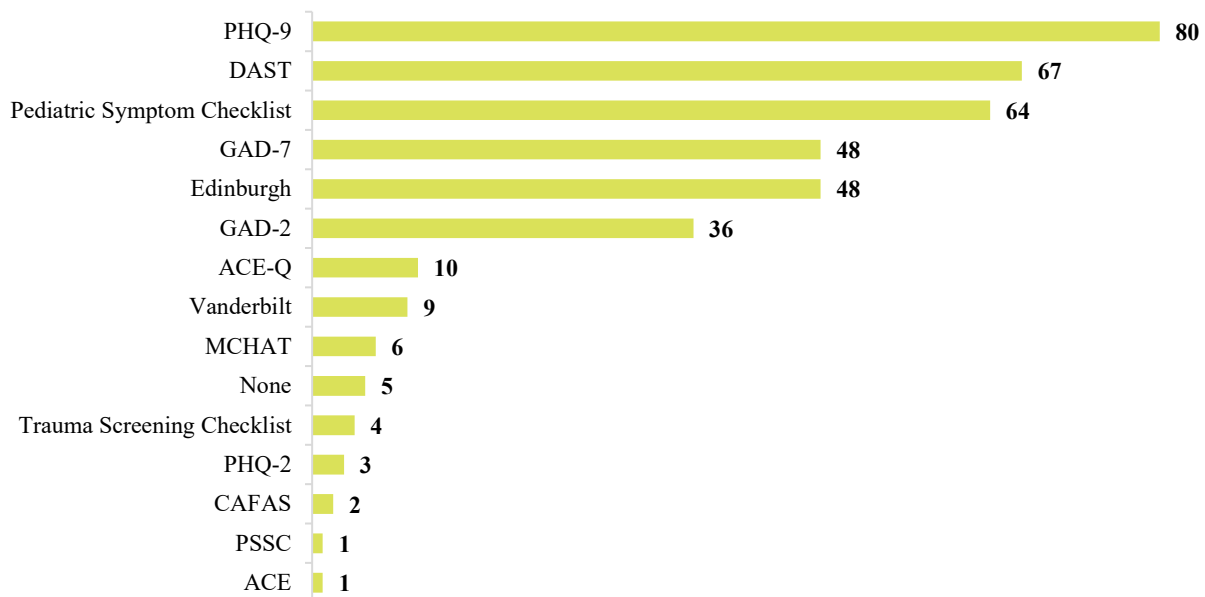
BHCs provide a number of important services, including psycho education, for patients, parents, and guardians



Data Source: Internal BHC tracking

Figure 3

Screening Assessments Completed



Data source: Internal BHC tracking

Brief Interventions

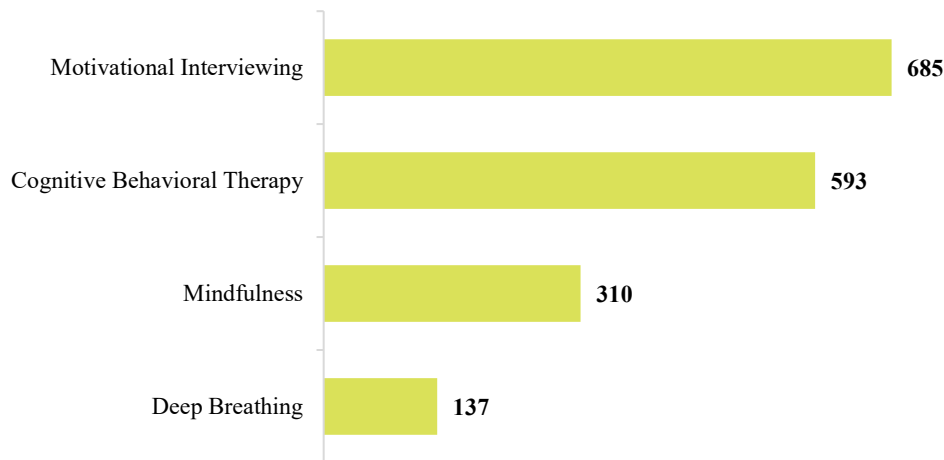
Additionally, the BHCs who participated in the PIHC launch provided ongoing brief interventions. The purpose of these brief interventions was to address minor concerns (self-esteem, mild anxiety), bridge gaps in care, and explore motivations for ongoing treatment. These interventions proved to be beneficial to patients and parents. For example:

- Patients reported that they were looking forward to visits so they could share their success with the BHC,
- Patients reported that they enrolled in long-term therapy following brief BHC visits.

Figure 4 shows the types of brief interventions delivered throughout the PIHC initiative. While the need for brief intervention was clearly present, it was at times difficult to balance with consultations. Many patients and providers felt confident that the BHCs could address the presenting concerns “in house,” however that meant that the BHCs were often not available for consults in real time. Since the warm hand off to the BHC is an integral part of the PIHC model, this balance between consults and brief interventions was continuously monitored. Providers and patients alike were both reminded of the BHC role in order to manage expectations.

Figure 4

BHCs conducted a series of brief interventions



Data source: Internal BHC tracking

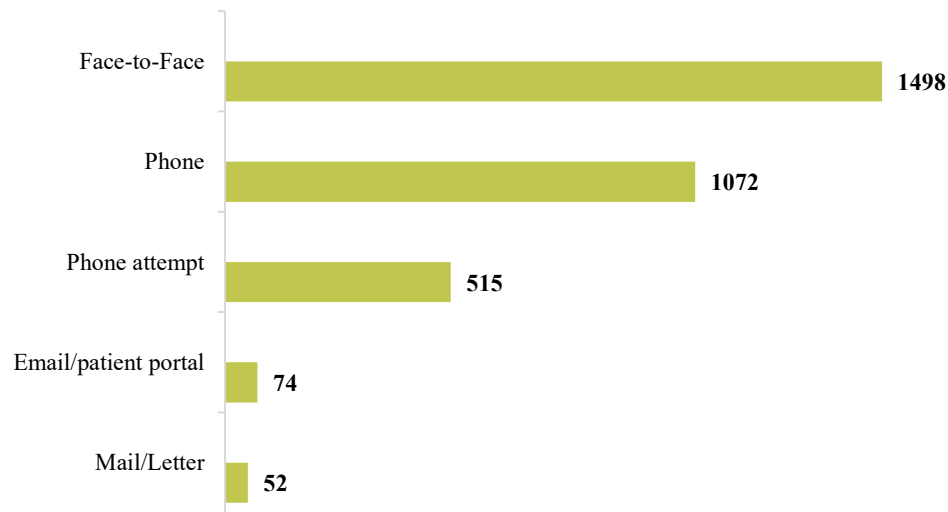
Follow Ups/Care Coordination

The BHCs also completed over 1,000 phone calls, many of which were to follow up on service referrals and progress toward goals (Figure 5). These follow ups proved to be beneficial to patients and parents. For example:

- Patient body mass index (BMI) ratings were found to be lower after ongoing BHC phone support,
- BHCs coordinated psychiatric care to avoid hospitalizations,
- BHCs connected patients to specialized services such as applied behavior analysis for autism.

Figure 5

Phone calls and attempts made up nearly half of all BHC contacts



Data source: Internal BHC tracking

Evaluation

The evaluation of the PIHC by CHRT sought to:

1. Assess the transformation of the practices and document staff and workflow changes as they integrate using the PIHC model
2. Examine changes in patient physical and behavioral health outcomes following the provision of integrated behavioral health services
3. Determine the cost effectiveness of the PIHC model
4. Provide payer systems with the data they require to evaluate the value of making PIHC the standard of practice

Clinic-level Evaluation

Methods

Multiple data collection methods were used to evaluate the PIHC initiative and the role of the BHCs in their respective clinics. Data collection occurred at three time points over the course of the project (pre-implementation/baseline, one-year, and two-year). Questionnaires and group interviews of care team members were

completed at all three time points. Individual interviews were conducted with BHCs at the end of year one and year two.

Care Team Questionnaires

CHRT administered the care team questionnaire to members of the care team on an annual basis via Qualtrics. The care team included physicians, nurses, medical assistants, care managers, clinic managers, and customer support representatives. The following questions were asked using a five-point scale for responses:

1. How confident are you in providing behavioral health services?
2. How confident are you in navigating the mental health system (including providing referrals) for your patients?
3. How confident are you identifying childhood trauma?
4. How confident are you treating childhood trauma?
5. How would you rate your clinical effectiveness at detecting children with behavioral health needs?
6. How would you rate your clinical effectiveness at providing the appropriate intervention(s) to children with behavioral health needs?
7. How would you rate the overall quality of care your clinic provides children with behavioral health needs?
8. How satisfied are you with the overall care your clinic provides children with behavioral health needs?

Results

Care team members at both clinics indicated that improvements were made in all areas with the exception of recognizing childhood trauma at one clinic and confidence in treating childhood trauma at both clinics. Care team members were increasingly confident in providing behavioral health services, navigating the mental health system on behalf of patients, detecting the need for behavioral health services, providing the needed services, and offering high quality care to children with behavioral health needs. they improved the overall quality of care that the clinic provides children with behavioral health needs. Care team members also reported an improvement in the effectiveness of the clinic to be able to identify behavioral health needs and provide the appropriate care to patients (with the exception of childhood trauma).

Descriptive statistics were run on the questionnaire responses. *Tables 4 and 5* show the average scores reported by care team members at each clinic for the key questions related to providing pediatric integrated behavioral health care. Responses are listed by care team confidence (*Table 4*) and quality of care (*Table 5*).

All items showed improvement from baseline to final time points with the exception of “confidence in identifying childhood trauma” at IHA and “confidence in treating childhood trauma” for both clinics.

The two highest rated items at the final time points were “confidence in providing behavioral health services” and “satisfaction with the overall care the clinic provides children with behavioral health needs.” At both sites, the largest positive change from baseline to final was provider satisfaction with overall care provided by the clinic to children with behavioral health needs (0.76 increase in mean rating at IHA and 0.92 at HFHS). The mean scores for each of the eight key questions have been visualized as line graphs to show how the scores changed over the duration of the project in *Figures 1 - 4* below.

At HFHS the majority of the items averaged scores of 3.5 or higher. Only one item received average scores of 3.0 or less (classified as “confidence on treating childhood trauma.”) At the final timepoint, the two highest rated domains at

HFHS were “how would you rate your clinical effectiveness at detecting children with behavioral health needs?” and “satisfaction with the overall care the clinic provides children with behavioral health needs” with mean scores of 4.67.

At IHA, the majority of the items averaged scores of 3.0 or higher. Similar to HFHS, only one item received average scores of 3.0 or less (classified as “confidence on treating childhood trauma”). Two items related to childhood trauma showed an overall decrease from baseline to final timepoints – confidence in identifying and confidence in treating. The two highest rated items at the final time points were “how would you rate your clinical effectiveness at detecting children with behavioral health needs and “how would you rate the overall quality of care the clinic provides children with behavioral health needs”.

For several items, including the aforementioned confidence in treating childhood trauma, we observed a peak at mid-point followed by a dip at the final timepoint. We speculate that this is due to a shift in the care team’s understanding of their current level of knowledge/ability due to the education provided by the BHCs within the organization and greater experiences with the integrated care model. As a result, the final timepoint score may represent a more accurate reflection of their understanding of how to identify and treat childhood trauma.

Table 4

Care team confidence				
	How confident are you in providing behavioral health services?	How confident are you in navigating the mental health system (including providing referrals) for your patients?	How confident are you identifying childhood trauma?	How confident are you treating childhood trauma?
Henry Ford Health System (HFHS)				
Baseline	3.25	3.50	3.75	3.25
Midpoint	3.50	3.50	3.50	3.50
Final	4.00	4.00	4.33	2.67
Change from baseline to follow-up	0.75	0.50	0.58	-0.58
Integrated Health Associates (IHA)				
Baseline	2.78	3.00	3.33	2.00
Midpoint	3.60	2.80	3.20	2.40
Final	2.88	3.13	3.13	1.50
Change from baseline to follow-up	0.1	0.13	-0.2	-0.5

Table 5

Quality of care				
	How would you rate your clinical effectiveness at detecting children with behavioral health needs?	How would you rate your clinical effectiveness at providing the appropriate intervention(s) to children with behavioral health needs?	How would you rate the overall quality of care your clinic provides children with behavioral health needs?	How satisfied are you with the overall care your clinic provides children with behavioral health needs?
Henry Ford Health System (HFHS)				
Baseline	4.00	4.00	4.00	3.75
Midpoint	4.00	4.00	5.00	4.50
Final	4.67	4.33	4.33	4.67
Change from baseline to follow-up	0.67	0.33	0.33	0.92
Integrated Health Associates (IHA)				
Baseline	3.56	3.33	3.56	3.11
Midpoint	4.20	4.00	4.20	3.80
Final	4.00	3.75	4.00	3.88
Change from baseline to follow-up	0.44	0.42	0.44	0.77

Figure 6

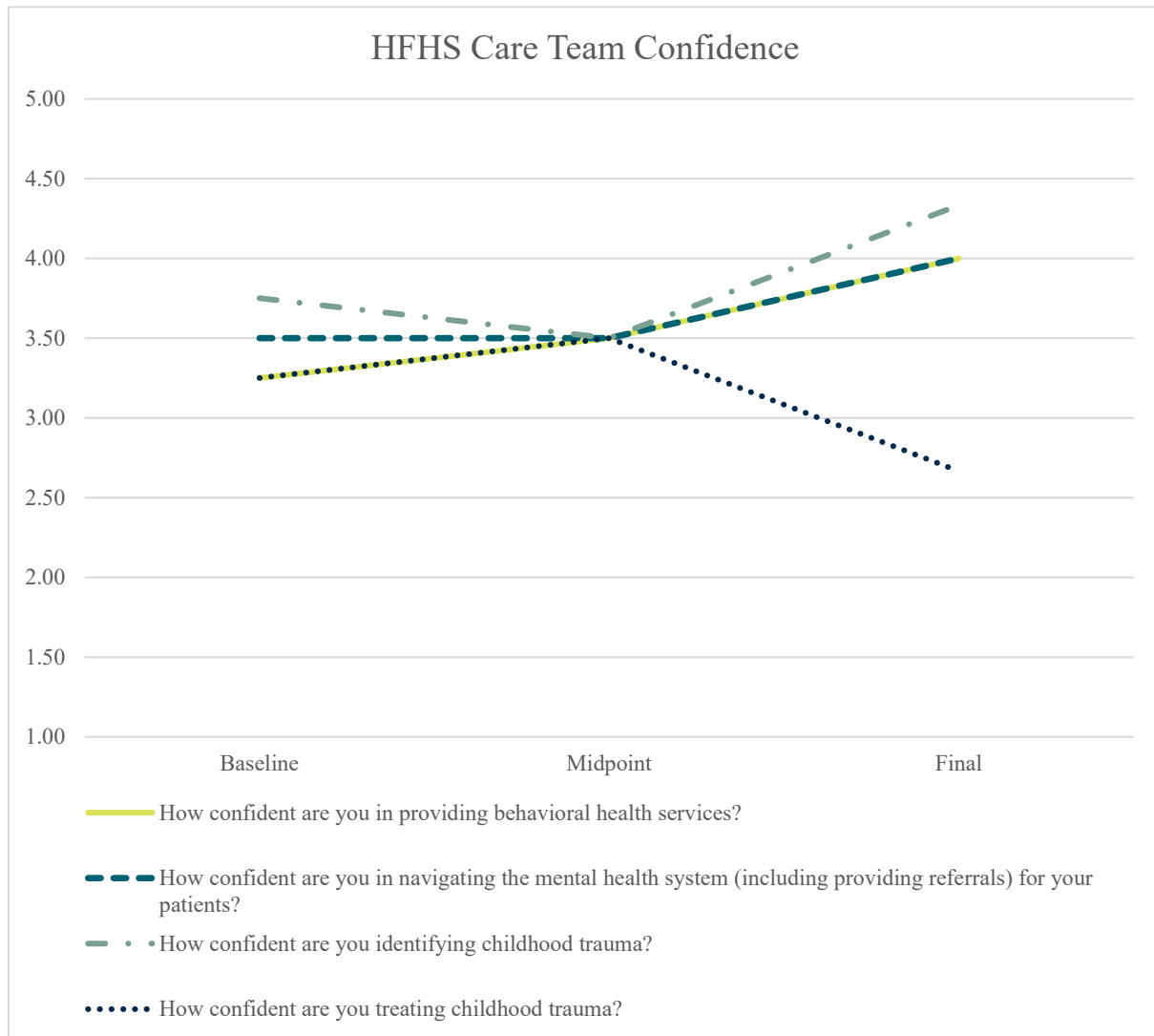


Figure 7

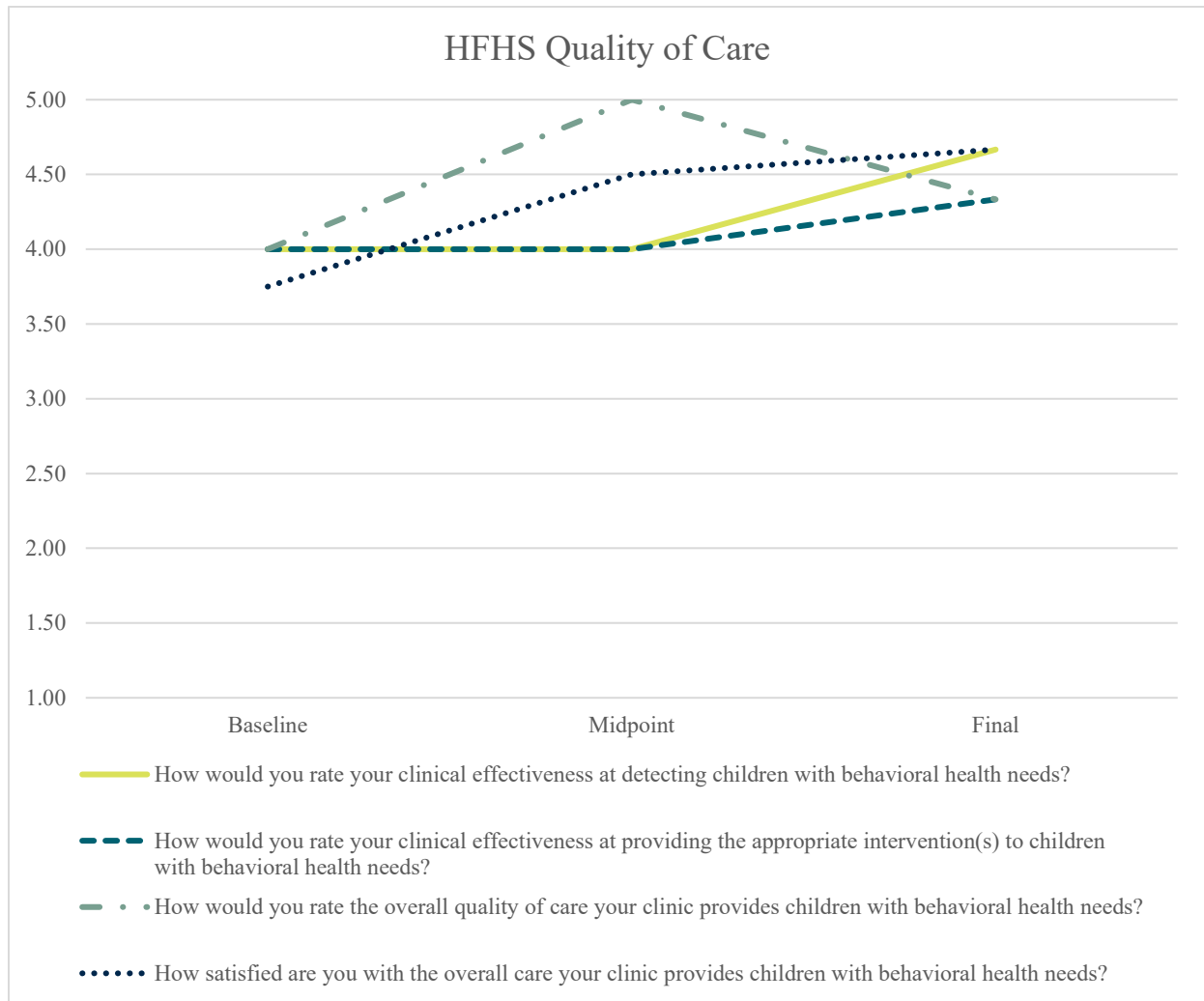


Figure 8

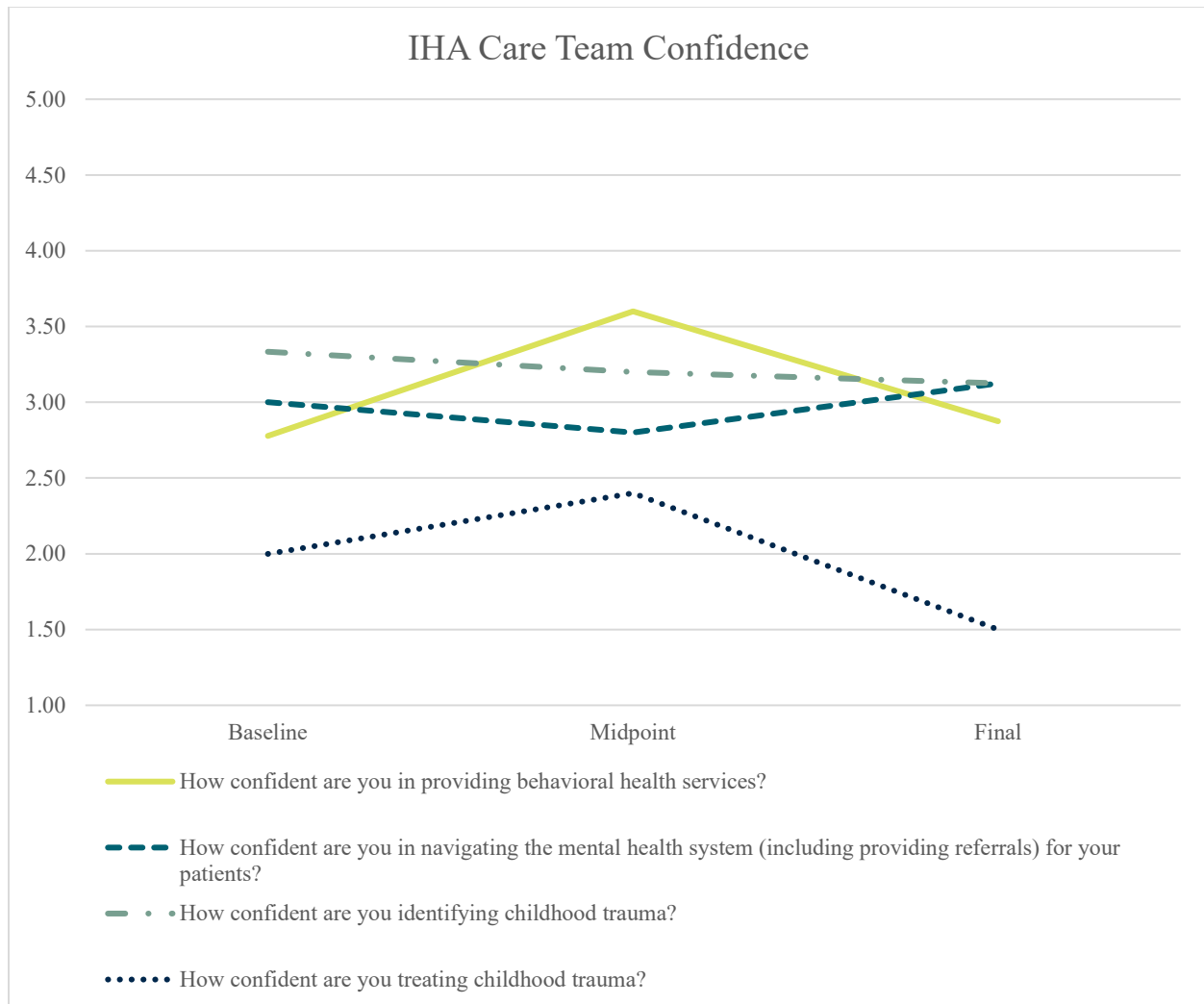
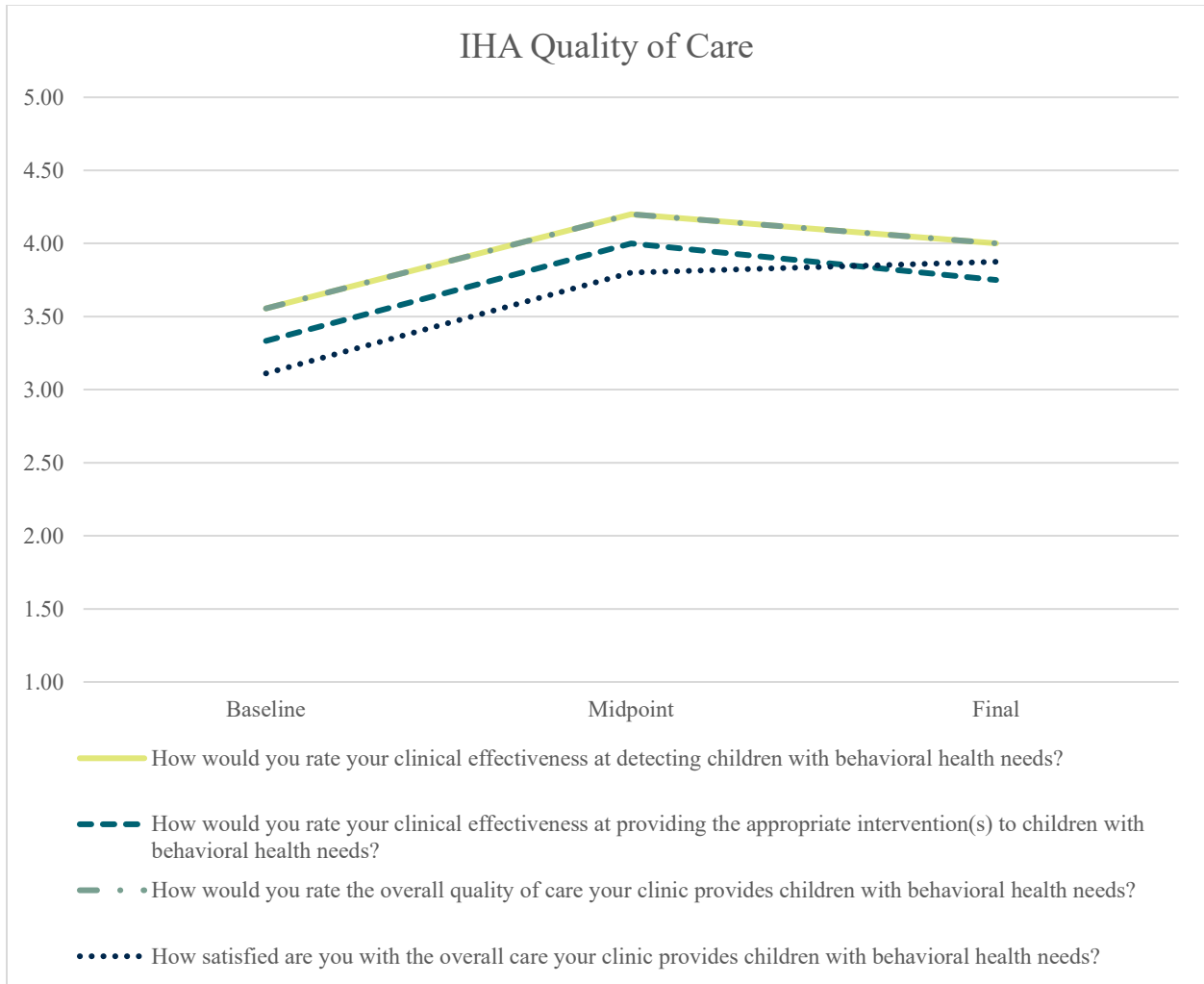


Figure 9



Key Informant Interviews

Methods

Care Team Group Interviews

Key members of the care teams at IHA and HFHS were interviewed to gain a deeper understanding of the processes and workflows at each of the pediatric primary care clinics. Participants were selected based on their role within the organizations, familiarity with the project, and level of engagement with the BHCs. Informants included physicians, nurses, medical assistants, care managers, clinic managers, and customer support representatives. Interview questions focused on implementation activities, successes, challenges, lessons learned, policy and system changes, economic impact, and sustainability (Appendices A-C).

BHC Interviews

BHCs were interviewed individually. Questions were similar to those asked of care team members, but also focused on the support BHCs received from members of the care team, integration champions within the organization, and the organization's vision for integrated care.

Digital audio recordings and notes from the focus groups and interviews were used as source material for qualitative analysis. Inductive qualitative thematic analysis was used to identify the key themes in the data.^{vii} NVivo 12 was utilized to manage the qualitative data.

Results

Integrated care and deployment of a BHC can make clinic processes more efficient, offloading tasks from other care team members and improving physician throughput.

Providers and patients are highly satisfied with the BHC and integrated care model, but challenges still exist related to the delivery and receipt of integrated care.

Baseline

At the onset of this initiative, children with behavioral health conditions and their parents/guardians faced a number of challenges accessing and self-managing care. The care team perceived that parents/guardians and their children attached a stigma to behavioral conditions that prevented them from seeking care or attempting to address behavioral health issues by seeking professional help. Additionally, there was a belief (or desire) among patients for primary care providers (PCPs) to provide care for behavioral health conditions themselves.

Some parents of young children were reluctant to follow-up on a referral to a mental health expert out of a fear that these mental health professionals would prescribe medications to manage behavioral health issues. Alternatively, some patients wanted a PCP to prescribe anti-depressants and the PCP was not comfortable doing so due to a lack of experience.

According to providers, patients also faced difficulties with:

- Access to mental health care providers.
- Navigating the health care and mental health care systems (including scheduling and making appointments).
- Navigating insurance (government and private) for mental health services.

In addition to the challenges associated with patients and their families, members of the care teams identified several barriers to providing behavioral health services, including:

- Not enough time within the providers' schedules to offer quality comprehensive care, including behavioral health care. The length of time allotted for appointments limits the time providers have to adequately delve into behavioral health issues.
- Limited opportunities for patients to schedule timely appointments with providers. Often, when patients make a phone call to the clinic, they need immediate help (an issue has gone beyond the tipping point). One clinic stated that they frequently try to get patients to see their PCP when these types of incidents arise, but for emergent and urgent issues, patients do not want to wait.

- Provider challenges identifying patient needs in a mental health care context (psychologist or psychiatrist) and the time-consuming nature of navigating those issues for clinic staff.

Care team members saw the PIHC initiative and the BHC role as beneficial to the clinic. They believed that the BHC would be able to triage patients based on need, taking that burden off nurses and providers. They also believed that an in-house BHC would help patients overcome barriers to follow-up appointments (scheduling, wrangling children, transportation).

Year 1 (Midpoint)

One year after implementation began, clinical teams gave positive feedback regarding the BHCs and the PIHC model.

Respondents indicated that they were better able to address behavioral health issues (ranging from mild to moderate cases as well as more severe cases including one suicidal patient). In particular, the care teams spoke about the new facilitated referral process to mental health specialists (including psychiatrists). They indicated that the deployment of the BHC as a link between primary care and mental health care would lead to greater follow-up among patients.

Prior to the PIHC, clinical care teams reported that most patients would not follow through with referrals to behavioral health specialists. In the integrated care model, patients were more likely to engage with mental health services and anecdotally, patients seemed to be doing well at follow-up visits.

The care teams also indicated that the BHC likely had a positive impact on patient physical and behavioral health outcomes including obesity, diabetes, and asthma self-management. In the long-term, the care team was hopeful that they would see reductions in ER visits and medication usage.

In addition to assistance with coordinating referrals, the BHC was able to ease patients into the concept of counseling. The care team stated that many patients did not know what counseling entailed (and were therefore often reticent), so the first experience receiving services from the BHC made them more open to seeing other people for behavioral health issues. Patients also seemed more likely to follow-up with specialists because they had a positive experience with a behavioral health provider (the BHC). Rather than simply getting a date off in the distance when they could talk to a behavioral health specialist they were able to receive immediate behavioral health services in the primary care clinic.

The integration of the BHC into the clinic provided an opportunity to catch behavioral health issues early on and take more preventative measures for patients. Many parents turn to pediatricians first when their child is having behavioral issues. As one doctor put it, “The first person you trust with your children is your pediatrician.” Several providers stated that they had years of rapport with their patients and were able to transfer some trust to the BHC by giving the handoff. The care team was then able to support the family through the process of navigating onsite behavioral health services. One care team member summed this up by recounting a message from a parent, saying, “If you weren’t here, I wouldn’t know how to navigate this.”

Care team members indicated that patients appreciated one-stop shopping. While it was difficult for patients to go to another location to receive behavioral health care—due to unfamiliarity with the location, transportation issues, etc.—patients were largely comfortable with traveling to the location of their primary care doctor.

Physicians noted that the BHC’s ability to have long diagnostic conversations with patients was very helpful for them, as they often felt constrained by time and in some cases, knowledge of behavioral health issues. With children, addressing behavioral health issues can take up an entire appointment. With the BHC integrated into the

workflow, the providers were able to offload tasks and improve their own efficiency. Anecdotally, the care team felt that wait times were down for patients and that doctor scheduling had improved.

Care teams reported that clinics were able to cope with patients needing a lot of behavioral health services without getting backed up, leading to better patient care while freeing up resources. Additionally, providers indicated that their own capacity to navigate behavioral health issues with patients improved as a result of their interactions with the BHC.

Respondents also noted that BHCs required very little in terms of resources, usually only a room to counsel patients, a laptop, and a phone. Providers noted that in the integrated care model, appointments could take longer for the patient as a result of more comprehensive care being provided, but the care team was able to work around this issue fairly easily.

Care team members and BHCs also identified ongoing barriers:

- a. Scheduling appointments due to limited provider capacity
- b. Navigating insurance plans and paperwork
- c. Patient reluctance to pursue the course of action recommended by doctors
- d. Competing patient priorities of greater urgency

Care team members reported that challenges for the BHC included:

- a. Time constraints with patients
- b. Trust and rapport with patients (difficult to establish quickly)
- c. Managing workloads effectively

At one clinic, the BHC felt overwhelmed working with 16 providers, managing their workload, and trying to provide excellent care to patients. At another clinic, the BHC was challenged by only having one pediatrician as a source of referrals.

Care team members, including the BHCs, described various challenges patients faced in accessing behavioral health care. After the first year of implementation, some patients still had reservations about mental health professionals. Many patients preferred receiving care from familiar doctors and clinic staff, where trust was already established. The pediatric primary care clinic was reportedly viewed as a safe place when compared to an unfamiliar therapist's office.

Respondents also detailed a number of issues experienced by patients related to the social determinants of health (SDOH) including time/competing priorities, transportation, and transience. These challenges made it difficult for the BHC to engage patients and follow up on referrals. Cost of mental health services was cited as a barrier, often as a result of a lack of health insurance coverage for mental health services or difficulty navigating insurance.

Finally, care team members noted limited access to child psychiatrists in the community, often leading to long wait times that could result in patients seeking ER care.

Regarding the potential next steps with PIHC, respondents indicated that similar permanent positions to the BHCs exist within both health systems (at different locations) and that those positions could provide a pathway to

sustainability in the future. In addition, care team members discussed marketing their integrated services as an area of future growth.

Year 2 (Final)

At the final time point, two years after the program began, some of the aforementioned challenges for care team members persisted, including challenges getting patients to follow-up with referrals and stigma surrounding behavioral health generally. Access to behavioral health services remained a persistent problem for patients, as well. One pediatrician interviewed noted that she still does not have a good sense of the local behavioral health landscape—who to refer to for specific conditions—despite being in the area for years. Both clinics indicated that there continued to be a shortage of behavioral health providers in the area, making it difficult for patients to receive services in a timely fashion.

The COVID-19 pandemic brought new challenges for the PIHC initiative in 2020. As the state locked down in March, the BHCs were not able to see patients in the clinic for a number of months, which reduced opportunities for follow-up with existing patients and limited interactions with new patients.

Providing behavioral health services via phone or virtual calls was viewed as less valuable for patients than in-person engagements. Young children in particular seemed to find these remote sessions difficult. Given that the BHCs in the PIHC initiative were not official employees of the clinics in which they operated, rather they were Starfish Family Services employees, there were additional barriers such as limited access to EMRs, difficulty scheduling appointments, and challenges accessing telemedicine software from a remote environment. By summer 2020, however, BHCs were able to resume normal work flows.

Care teams and BHCs also noted increased levels of anxiety and depression due to the pandemic. Children experienced challenges to physical activity, healthy eating, and healthy sleep patterns in the new context of remote learning, with a greater amount of time spent home and on screens. Care teams observed increasing BMIs among patients and provided assistance to parents so they were better equipped to encourage healthy behaviors.

The change in school format also caused increased stress for disadvantaged children due to lack of reliable internet, computers, and household conditions in addition to the increased screen time associated with virtual learning. On top of those challenges, given the increase in behavioral health concerns with COVID-19, wait times for mental health providers in the community had reportedly lengthened (in areas where there was already a shortage of providers for child and adolescent psychiatry).

In light of these challenges, the care teams and BHCs reflected on the achievements brought by integrated care. Care team members reiterated that it had been helpful to have a BHC on-hand to provide some immediate service and to help ease patients into treatment for behavioral health issues, reducing stigma around behavioral health. The BHCs were able to reduce the anxiety of patients by immediately addressing some concerns, which started patients off on the right foot. The care team indicated that if patients left the clinic without that foundation, behavioral health issues could escalate or patients could get lost trying to navigate the behavioral health system. As a result of the integrated care, patient outcomes seemed better.

As described by care teams and BHCs at both locations, access to behavioral health providers remained a challenge for the communities served. By having the BHC onsite, patients did not have to confront scheduling wait times, location challenges, or transportation issues associated with offsite specialists. Receiving behavioral health services at the primary care clinic -- a familiar, convenient location -- was viewed positively by patients. One parent described the pediatrician's office as the "First place [to] call when you start having behavioral issues with your child." The lack of sufficient behavioral health coverage on patient insurance plans presented another barrier to

access— particularly for Medicaid patients. As such, the ability to provide a free service through the grant was appreciated.

In the past, the referral process to behavioral health specialists was a major source of frustration for patients. The PIHC initiative addressed some of these barriers. The BHCs, for example, were able to explain the urgency of the referral. BHCs were also able to have conversations about patient readiness, trying to address fears and answer questions. The care team at HFHS indicated that referrals for Medicaid patients were particularly frustrating because they had to call the local community mental health (CMH) agency – which had very long wait times. However, both care teams indicated that follow through with external referrals improved after the BHCs were introduced. With the BHC in place, pediatricians were able to refer to BHCs for short-term issues, leading to less external referrals.

By integrating the BHC into the pediatric primary care setting, the providers were able to offload certain behavioral health tasks and improve their own efficiency. Because of the BHC focus, providers were able to spend more time with patients than usual (typically limited to 20 minute appointments). The BHCs were able to help families navigate the next steps and treatment options and provide some immediate counseling and resources. Families indicated high satisfaction with the BHC. And care team members believed that the quality of care the clinic provided was improved through integrated care.

One medical assistant remarked that his job was made easier because the BHC was able to calm anxious children, making them feel comfortable prior to shots or other procedures. BHCs were also able to provide services to new mothers in their post-partum period – as all new babies seen at the clinic were introduced to the BHC. One provider observed that child BMIs significantly decreased due to the BHC services related to obesity and pre-diabetes. There was also improvement for patients with ADHD – where the BHC was able to educate patients and parents about coping mechanisms and grounding techniques – and mild self-esteem issues with pre-teens and teens. One parent remarked that they “Learned more in 10 minutes [with the BHC] than we did with the therapist for X amount of time.”

Through participation in the PIHC initiative, care team members recognized the importance of integrated care and identified “how much we need this service.” One clinic with high patient volume stated that they “could easily fill two to three BHC schedules. If they’re here, we will fill them.” Several members of the care team at the other clinic stated that they would be willing to take pay cuts to sustain the BHC at their location long-term. One physician asked the BHC “What did we ever do without you?” Another care team member stated that the clinic needs the BHC service like people need oxygen.

Providers also indicated that they felt better about the quality of care they were able to provide their patients now that they were integrated. One doctor remarked that they were getting families the care that they needed and doing a better job of addressing mental health issues like depression and anxiety. The work of the BHC to integrate the clinic and build behavioral health capacity among health care providers (in combination with the University of Michigan’s MC3 program which provides psychiatry support for primary care providers), helped to make providers at one clinic more comfortable addressing behavioral health issues, making referrals to specialists, and prescribing medications for behavioral health conditions.

As the PIHC funding wound down in late 2020, HFHS decided not to sustain the BHC role beyond the grant period. The clinic, located in Southfield, MI, may not be the right one for a BHC given the low pediatric patient volume. In addition, the clinic does not have a billing mechanism set up for the BHC services at this time. HFHS is still considering when and where integrated BHCs may be valuable within their system.

IHA, on the other hand, committed to creating a permanent BHC position and recently hired a full time clinical social worker. Clinic leaders will continue to evaluate the role and explore other positions in the future (it was noted

that the clinic likely has the patient volume to support additional behavioral health support staff). The clinic will evaluate the role by gathering feedback from providers regarding satisfaction with the role, impact on patients' anxiety and depression metrics, and referral patterns to monitor impact on the clinic and its patients. From a business perspective, clinic leaders stated that it was easy to promote continued expansion of the BHC/integrated care model with quality, patient need, referral patterns, and financial performance.

Providers noted how important it was that the BHC was available for immediate consults with patients. If over time, the clinic is unable to provide those types of services due to other follow-ups, more in-depth consults, and other responsibilities, the clinic would likely expand further. For the clinic, it was important that the providers were able to offload these behavioral health-related tasks to reduce their workload.

While there are no current plans to market the integrated services widely (due to concerns about overwhelming the BHC with an influx of new patients), leadership felt that they could potentially bring a lot of new patients into the office by promoting integrated care to the public as behavioral health embedded into a pediatric practice is both attractive and marketable. This could represent an opportunity to do some community education sessions with the BHC about a range of topics, such as school anxiety.

With the BHC officially hired through IHA, the clinic will be able to overcome some of the administrative challenges BHCs faced working in clinics as SFS employees, leading to greater integration into the clinic's systems, work flows, and schedules.

Lessons Learned

In reflecting on the lessons learned for the PIHC initiative as a whole, respondents spoke across a few major topic areas.

From the provider perspective, lessons learned focused on education and scheduling.

Providers remarked that it was important to make all parts of the clinic system aware of the BHC and new work flows, so that patients could be routed effectively.

Getting providers on board with integrated care was also critical. Sharing the message that integrated care is the best care for patients helped ensure that the care team was on board with the initiative. Some useful approaches to get hesitant providers on board with integrated care and utilization of the BHC were:

- Introductions to the BHC,
- Integrated health care seminars or lunch and learns, and
- Provider-to-provider communication and sharing success stories from the initiative.

One clinic noted that each provider thinks about behavioral health differently. Because of this circumstance, the clinic found it helpful to get the BHC in front of providers to explain the services they are able to provide, the conditions they are able to address, the ways they can help patients, and the process for utilizing BHC services.

The more you talk about integrated care in the clinic, the more comfortable providers get with the service said one interviewee. However, some providers do not want to delve into behavioral health topics because they do not want an appointment to take longer. Getting providers to realize that they can offload this aspect of a visit to the BHC--to the benefit of the patient--was valuable.

One provider felt it was important to drive home the message that the more you connect behavioral health and primary care, the better it is for both the patient and provider. She encouraged providers to use the BHC service frequently: “Don’t think of it as time taken away from patient, but as a service that builds up over time.”

BHCs often had ideas that doctors were not able to think about regarding behavioral health treatment. The provider also commented that it was important for their clinic that the schedule permitted BHCs to be available for emergent issues (quick consults) that arise from a primary care appointment to be able to help patients in the moment, rather than having a schedule filled with ongoing therapy and counseling follow-ups.

From the BHC perspective, lessons learned focused on flexibility and adaptability.

BHCs noted that their work benefitted from an awareness of different provider personalities and preferred approaches. It is important for care team members, including the BHC, to be adaptable. While each team member may have an initial vision for the PIHC initiative, the real world implementation may unfold differently.

BHCs also noted that it is important to triage and prioritize cases. Behavior change is hard and takes time; providers need to meet people where they are, develop a relationship with patients over time, and move slowly. It is not always possible to help everyone and boundaries need to be maintained.

One BHC stated that it was difficult to sort out their role at first and to balance shorter-term vs longer-term services. Managing a full caseload can be difficult at clinics with larger patient volumes, which may necessitate hiring two BHCs. It is also important to know your own limitations as a BHC and when it makes sense to refer patients to a specialist.

In the future, BHCs felt it would be helpful to have additional administrative support to stay organized and manage administrative and research tasks. BHCs also benefited from having their own space and phone line to handle calls with patients.

Patient-Level Evaluation

Methods

BHCs collected patient data via survey from a subset of the patients who were willing to participate in the evaluation during their initial visit. The survey was administered after being screened for having a behavioral health condition and consenting to participation in the PIHC initiative, this represented the baseline timepoint. The survey contained questions related to the patient’s overall health, physical and behavioral health (in the form of number of unhealthy days), health care utilization, and experiences with health care providers. For patients under 18 (the vast majority of the sample), surveys were completed by the parent/guardian. In these instances, the survey included an additional module, asking the parents to rate their own overall health, physical and behavioral health (in the form of number of unhealthy days). A small number of patients (ages 18-21) completed the survey themselves, without any parent/guardian support. Follow-up surveys were completed six to 12 months after baseline.

The analysis of survey data focused on comparing the baseline and follow up values. There were separate analyses for all children and for children at IHA Canton and Henry Ford Bloomfield. Models used for analyses allowed for baseline data to be included for children with missing follow up data.

Results

Patient outcomes improved in a variety of areas including overall health, number of unhealthy days, and number of days with lost productivity. Parent outcomes showed some improvement, but not statistically significant.

The survey demonstrated mixed, but promising results. There was a significant improvement at follow-up in the child’s health overall ($p = 0.01$) and at both IHA Canton ($p = 0.022$) and Henry Ford Bloomfield ($p = 0.045$), as shown in *Table 6*¹. While the overall health for parents/guardians improved over time, this change was not statistically significant.

Table 6

Patient’s overall health ¹	Baseline (n = 295)	Follow-up (n = 142)	p-value = 0.01
Excellent	91 (31%)	53 (37%)	
Very Good	118 (40%)	59 (41%)	
Good	68 (23%)	26 (18%)	
Fair	15 (5%)	3 (2%)	
Poor	3 (1%)	1 (1%)	
Missing	0 (0%)	1 (1%)	

Additionally, there was a significant overall reduction at follow-up in the number of unhealthy days overall experienced by patients ($p < 0.001$ for days of bad physical, mental and overall health, $p = 0.0027$ for days that bad health prevented usual activities). These reductions were also highly significant for Henry Ford Bloomfield but not for IHA Canton. As with the measure of overall health, while the number of unhealthy days for parents/guardians improved over time, this finding was not statistically significant.

There was also a significant reduction in the number of children experiencing breathing conditions (such as asthma) over the previous six months (15% at baseline, 6% at follow up, $p = 0.025$) at IHA-Canton.

A majority of baseline results (56%) were from Henry Ford Southfield, while a majority of follow up results (57%) were from IHA Canton. This constituted a significant difference ($p = 0.0071$) (*Table 7*).

The vast majority of guardians at baseline (83%) and follow up (90%) were mother/female guardians.

¹ It is possible that this difference could be attributed to non-response bias, where children in more stable situations were more likely to follow-up up than those who were not hence they would be more likely to be represented in the follow up sample. Because we do not have diagnostic or clinical information for this survey, we do not know anything about this larger context.

Table 7

Sample Characteristics	Baseline (n = 295)	Follow-up (n = 142)
Number of survey responses by site		
IHA Canton	129 (44%)	81 (57%)
Henry Ford Southfield	166 (56%)	62 (43%)
Parent/Guardian's relationship with child		
Father/Male Guardian	18 (6%)	3 (2%)
Mother/Female Guardian	246 (83%)	129 (90%)
Other	10 (3%)	2 (1%)
Unspecified	21 (7%)	9 (6%)

Economic Evaluation

Aside from salary and benefits, a BHC does not require many resources to do their work; usually just a laptop, access to a phone, a place to chart to make calls to patients and space for any follow up consultations with patients. Many use empty exam rooms or meeting rooms effectively.

The clinic needs payment model changes to be financially sustainable. Integrated care and deployment of a BHC can be sustainable with increased fee-for-service payments, a properly-funded collaborative care model, or other payments for the system-wide longer-term benefits due to improved care of mental health issues.

The primary aim of the economic evaluation was to determine the cost-effectiveness of the PIHC initiative and its potential longer-term financial sustainability.

To accomplish this, the evaluation team held initial, mid-, and final implementation meetings with site staff, BHC's and site leadership to understand the driving forces for cost-effectiveness and financial sustainability. The team also held discussions with insurers to understand their perspective on the PIHC initiative and its potential impacts.

The site staff felt the BHCs made the process of care more efficient for the nurses and pediatricians (faster visits with pediatrician). They felt that overall morale improved and the patients received better care (better access to care within the clinic and better handoffs/linkages to external care). Site leaders were interested in both the financial sustainability of having a BHC, but also the impact on the rest of the staff (morale) and potentially the impact on the larger health system (particularly in the case of the Henry Ford clinic, which is part of a larger system).

In our discussion with insurers, we found they were generally supportive of integrated BHCs and felt this could be an important part of value-based care and might end up affecting HEDIS measures.

To summarize, from our meetings with the various stakeholders, we determined that the PIHC initiative was likely to impact the financials of the clinic and health system in several ways.

The initiative was likely to increase costs. There are start-up costs such as hiring and training the BHC as well as onboarding in the clinic. There also are other ongoing costs such as salary, benefits, supplies, workspace, and other overhead.

The initiative could also provide benefits both directly in the form of increased revenue, but also through indirect ways like long-term improvements of health. Direct revenue could be increased in several ways. It may be possible for clinics to directly bill for some PIHC services but again, this is a workaround as what to bill for and how is variable and confusing and does not provide sustainability but rather a patchwork approach. Or, clinics may be part of collaborative care models that would provide for increased reimbursement. Finally, the PIHC model could lead to improved efficiency of physician visits, leading to higher physician throughput, and higher physician billing. The indirect benefits may come in several forms. The clinic may see improved goodwill with local clients, which could lead to word-of-mouth referrals and new clients, patients may engage more with health care because of the BHC partnership with their physician which can positively impact no-show rates. The broader health system may see system-wide benefits from reduced demand for pediatric psychiatrists from offloading of short-term, mild cases to BHCs. Academic studies of mental health suggest the broader health system may also see longer-term benefits from increased access to mental health care, leading to longer-term health cost savings.^{viii ix x xi xii xiii}

The net financial impact was uncertain, so we created a financial model to compare and weigh the costs and benefits of the PIHC initiative.

Financial Model

To calculate the financial impact of the PIHC initiative, evaluation team built an Excel-based model. This model is structured to incorporate all of the potential impacts listed above. Although users of the tool can alter the assumptions, the model is initially parameterized by several sources of data. The team acquired this data from several sources. We gathered assessments of local impact of the PIHC intervention from the sites, we collected potential billing amounts from publicly-available insurance reimbursement levels, and we assembled data on the broader system-wide effectiveness of improved behavioral health from the medical and public health literatures.

More details on the tool can be found in the [tool itself and the technical manual](#). It includes all the components described above.

The tool allows us to evaluate several scenarios to come to some high-level conclusions about the financial viability of the PIHC initiative. Those high-level conclusions are:

Integrated BHCs may not be financially sustainable if:

- BHCs cannot bill for their services or have a system of reimbursement for their services such as value based payments
- BHCs are in very small clinics with few patients, and/or
- The clinic's financial model does not recognize the system-wide benefits of improved behavioral health care

However, Integrated BHCs are likely to be financially sustainable if:

- BHCs can bill/receive reimbursement for all services
- BHCs are in moderately-sized-to-large clinics with higher patient volumes, and/or

- The clinic’s financial model can recognize the system-wide benefits of improved behavioral health care

By “the financial model can recognize the system-wide benefits”, we mean that the organizational unit supporting the PIHC model is able to be rewarded for the economic benefit of the system-wide longer-term benefits. This is a complex function of the clinic itself and the payment system environment around it. For example, an independent clinic being paid only for fee-for-service may not see or be rewarded for improving access to long-term mental health care. However, a large comprehensive integrated health system funded by capitated payments and with long-term patient relationships, may see the longer-term economic cost-savings due to improved linkage to mental health services, which may reduce overall health costs in the long run.

We next show a few illustrative examples of situations where an integrated BHC may or may not be financially viable. The first scenario is of a medium-sized standalone clinic. This example clinic has an average of 100 BHC consults per month. In this first scenario, they cannot bill for those services either with fee-for-service or collaborative care. Additional details on the other costing and revenue assumptions can be found in the supplement. This clinic would have \$6,333 in net costs each month. This works out to be \$63 in added costs per patient consulted each month.

In our second scenario, we start with the same scenario as before, but we assume that the BHC increases physician capacity by an additional 4 visits per day, with each being billed at \$60 per consult. In this scenario, we also assume that the BHC can bill for fee-for-service consults at a rate of \$45 billed per consult and also receives a \$54 reimbursed per eligible patient as part of the collaborative care model. We assume 90% of patients will be fee-for-service and 10% of patients are part of a collaborative care model. This is now much more financially sustainable, with net income of \$7,887 per month.

These are calculations of the financial sustainability directly at the clinic. We can also calculate system-wide benefits. Based on data from the literature cited earlier, we estimate that on average every child newly-linked to care receiving mental health treatment may save the health care system about \$1,500 per year. In addition, the BHC in the clinic may be able to treat mild-to-moderate cases, which could offload some patients from more expensive psychiatry visits. If about 20% of patients could be seen by the lower-cost BHC instead of a higher-cost psychiatrist, the clinic like that mentioned in the scenario above might save the health care system about \$20,000 per year.

Financial Scenarios Summary:

Scenario Assumptions	Financial Impact
No billing, no efficiency	\$6,333 in monthly losses to the clinic
Billing, collaborative care, and added clinic efficiency	\$7,887 in monthly profits to the clinic
Additional system-wide benefits	\$1,500 saved annually per child linked to mental health care \$20,000 saved annually due to lower-cost mental health care treatment for mild-to-moderate cases

The technical manual accompanying the tool has some additional details and specific case study scenarios where an integrated BHC may or may not be financially viable.

We have made multiple presentations to each site's leadership of both the conclusions of the analysis and the financial evaluation tool. They have provided helpful feedback on the tool, which we have used to make modifications and improvements. The resulting Excel-based financial evaluation tool and accompanying technical report have been disseminated to IHA and HFHS, and are planned to be disseminated to other pediatric clinics as well.

Conclusions

Our analysis suggests that there is a need for additional financial incentives. The scenarios we have analyzed suggest that integrated behavioral health is not financially beneficial to the clinic alone. The benefits from increased efficiency are insufficient without some sort of additional payments. However, there are several ways integrated Behavioral Health Consultants can be financially sustainable.

- If the BHC clinic visits with patients are paid for in a fee-for-service system with sufficient reimbursement, hiring integrated BHC's can be financially sustainable.
- If clinics utilized a Collaborative Care Model (CoCM). Unfortunately, our analysis suggests that the current Michigan Medicaid rates may not be sufficient to financially support an integrated BHC model.
- If the larger system is paid capitated rates to cover both the patient's physical and mental health.

We do find that the integrated BHC model can save the overall health system money by diverting lower-acuity patients from higher-cost mental health services and by improving access to mental health care, thereby reducing longer-term costs of poorly-managed mental health. However, this would require the pediatric clinic to be part of a larger system that is responsible for other mental and physical health costs and that the system be responsible for the patient's costs over a medium-term span (likely several years).

Many third party insurers pay for health behavior codes, however this leaves out BHC interventions for mental health diagnoses that are regularly seen at the primary care office such as anxiety and depression. In many cases, it appears that once a mental health diagnosis is identified, even if mild and able to be treated using an Integrated Health Care model, the silos of mental health benefits vs. physical health benefits come into play and patients are charged a copay for their physical health care provided by the physician, and any mental health interventions provided by the BHC, even if it's not a traditional outpatient mental health intervention. Breaking up the two services to be funneled through two silos and asking patients to pay two copays is not integrated health care.

Key Evaluation Findings

- Pediatric Integrated Health Care (PIHC) can successfully integrate behavioral and medical care for children by deploying behavioral health consultants (BHCs).
- Integrated care and deployment of a BHC can make clinic processes more efficient, offloading tasks from other care team members and improving physician throughput.
- Care team members at both clinics indicated they improved the overall quality of care that the clinic provides children with behavioral health needs. Care team members also reported an improvement in the effectiveness of the clinic to be able to identify behavioral health needs and provide the appropriate care to patients.

- Providers and patients are highly satisfied with the BHC and integrated care model.
- Patient outcomes improved in a variety of areas including overall health, number of unhealthy days, and number of days with lost productivity. Parent outcomes showed some improvement, but not statistically significant.
- Aside from salary and benefits, a BHC does not require many resources to do their work; usually just a laptop, access to a phone, a place to chart to make calls to patients and space for any follow up consultations with patients. Many use empty exam rooms or meeting rooms effectively.
- The clinic needs payment model changes to be financially sustainable. Integrated care and deployment of a BHC can be sustainable with increased fee-for-service payments, a properly-funded collaborative care model, or other payments for the system-wide longer-term benefits due to improved care of mental health issues.
- One clinic chose to sustain a similar position beyond the project funding period.

Recommendations for Sustainability

Pediatric integration is an important change in the overall health service delivery to children. It is not a stretch to say that children with undetected and untreated health needs will become adults with more extensive and expensive health needs. By embedding a BHC onto the primary care team, more children's behavioral health needs will be identified and more children will receive intervention for behavioral and physical health needs. Detection and early intervention will improve the overall health outcomes for children as they mature, thus impacting the overall health and wellness of our communities.

Make integrated health care accessible to all Pediatricians and patients through access to standardized, consistent and easy reimbursement that financially supports the co-management of patient needs during any patient visit. If a pediatrician believes their patients will benefit from having a BHC on the medical team there should be clear answers as to how to financially support this and the method for sustainability should be constructed in a manner that values the contribution of the BHC to medical team and patient care.

We have seen pediatric integration can have system-wide long-term economic benefits, but business models must be in place to support integrated care.

One thing we do not recommend is the continuation of the status quo of "workarounds." Without structured and consistent measures in which to financially support the work of the BHC in the integrated care model, there will never be sustainability and there will never be fair and consistent access to the model for physicians, patients, clinics, or health systems. The most important aspect of financing the integrated health care model is access to the model and the professional partnership in co-managing patients with the BHC. If there are only workarounds happening, then access becomes limited and scarce. Workarounds create inefficiencies and do not allow for the full model to operate in the way in which is intended. Workarounds also create anxiety and take away from confidence that is needed during the transformative process from non-integrated to fully integrated. When numerous systems or clinics or partnerships are using workarounds, there is also no way to determine what long-term funding needs are, where gaps are, and whether long term success is possible. As the workaround eventually fails, so will the model.

Our recommendations are:

1. For fee-for-service: BHC is credentialed under the medical clinic (regardless of who employs the BHC: the clinic directly or a partner mental health provider) and bills for one code that encompasses all BHC activities delivered for co-managing patients with the pediatrician. The code would have to pay approximately \$40, which is lower than a traditional outpatient session payment of a Medicaid health plan. Assuming seven BHC contacts per day for 48 work weeks, the cost of \$67,200 which would cover the general cost of the BHC salary and benefits. Fee-for-Service billing is volume based vs. quality based which has shown to be problematic if the volume of any particular day is lower than expected. The BHC records all service encounters in the patient record in the EMR to show co-management services.

Comparison and savings: Traditional Mental Health reimbursement comparison and percentage savings are shown in the table below. Because a BHC provides targeted screening, intervention and action plans and not traditional outpatient therapy, there is no requirement for a full psychosocial. A BHC fee for service code would cover all direct patient activities of the BHC as well as all consultation with the Pediatrician/medical team and care coordination.

The BHC model also differs from the traditional outpatient model in that BHC-patient contacts are not weekly and are usually course completed in less than 5 visits which may span multiple months i.e.: follow up every 3-6 weeks. The model generally follows a protocol in that if a patient needs more course intervention after 5 follow up visits, a referral to a traditional mental health Therapist is warranted at which time care coordination will take place for a warm hand off.

Patients that are deemed appropriate for community mental health services are referred immediately, patients identified as needing traditional outpatient therapy are referred right away. Savings infer patients who are deemed appropriate to be served in the primary care setting (i.e. mild to moderate mental health needs).

Activity	Commercial Insurance	BHC Savings	Medicaid Health Plan	BHC savings
Full Psychosocial Assessment	\$136.00	100%	\$77.00	100%
Individual session up to 52 minutes	\$80.00-\$89.00	50-55%	\$50.00	20%
Individual session above 52 minutes	\$95.00-\$133.00	57-69%	\$75.00	53%

2. For 3rd party insurance: Only one co-pay should be required of patients for a physician visit when a BHC is utilized. A patient in a clinic who is offered a BHC visit but with a separate co-pay will likely decline. The goal is to pay for these integrated services under the physical health care benefits rather than as a separate mental health visit. In integrated health care health is health – we should not silo behavioral health services away from other physical health care benefits.
3. For a value-based payment structure: BHC is credentialed under the medical clinic; clinic creates an upcode or modifier for the physician when using a BHC for co-management of patient care that would encompass all BHC co-management activities. Proof of co-management and BHC services are documented in the EMR. See sidebar for opportunity for innovation.

Opportunity for Innovation

Innovative recommendation for financing integrated health care: The creation an external certification process whereby the clinic workflows meet certain criteria to meet integrated health care standards that have been developed. Once the clinic is certified “integrated” then the payer has confidence that the integrated health care model is being provided to fidelity and will pay a higher rate for physician services that include the partnership work of the BHC. The work must be part of the clinical record and a name and NPI number of the BHC credentialed to ensure quality. The clinic’s integrated health care certification will be reviewed for renewal after the first year and then every 2-3 years after that so that payers can be assured that processes are being consistently done for the services provided to the patients. Examples of foundational implementation standards would include clinic staff education, patient education, integrated health care workflows, screenings and documented responses to screenings, patient registries, an EMR that includes BHC work in the patient record and outcomes management.

Appendix A

Care Team Interview Protocol Baseline

Workflow

In the first section, we'll ask about how you work together to provide services and challenges you may face...

1. How do providers at this clinic work as a team to provide the best care for pediatric patients?
2. What challenges do you face in providing behavioral health care services?
3. What do you see as the major challenges your patients face in regard to behavioral health care (e.g. receiving services, self-managing)?
4. What screenings are currently done at your clinic to detect behavioral health issues in children?
 - a. Who scores the screening?
 - b. What is your current workflow if a behavioral health issue is detected?
 - c. What is done for a positive screen?
 - i. Is a referral generated? If so, where? How?
 - ii. Is any follow-up done to see if they go?
 - iii. Are any psycho-education services provided?
 - iv. Do you create action plans?
 - v. Is any care coordination provided?
5. Is any care coordination done for children already receiving mental health services? If so, what does that look like?
6. What kind of management is currently done for children with ADHD?
7. What is your process for suicidal or homicidal patients?

Economic Evaluation

1. How do you think this intervention will affect your processes?
 - a. Resource allocation
 - b. Efficiency and staff time spent on various clinic tasks
2. How do you think this intervention will affect your costs?
 - a. Staff salaries and hours
3. How do you think this intervention will affect patient outcomes?
4. How do you think this intervention will affect the quality of care you provide?

5. How do you think this intervention will affect your revenues?
6. What concerns do you have about the long-term viability/sustainability of this intervention?
7. If you are concerned this may not be financially sustainable, in what ways would you like payers to change their payment policies so that it would be more financially sustainable?

Follow-up Questions

8. How many patients are seen at your clinic in this age range (up to 21) total? Number of those who have behavioral health needs?
9. What is the current engagement/activation rate (ie: no show rate) for your pediatric population (up to 21)? For those who have behavioral health needs?

Appendix B

Care Team Interview Protocol Follow-Up

Workflow

In the first section, we'll ask about how you work together to provide services and the challenges you may face now that a behavioral health consultant has been installed at your clinic for nearly a year...

1. How do providers at this clinic work as a team to provide the best care for pediatric patients?
2. What challenges do you face in providing behavioral health care services?
 - a. How has this changed from pre-implementation?
3. What do you see as the major challenges your patients face in regard to behavioral health care (e.g. receiving services, self-managing)?
 - a. How has this changed from pre-implementation?
4. Since the start of this project last year, have your screening processes changed for behavioral health issues in children? If so, how?
 - a. Do you feel more comfortable asking about behavioral health issues now that you have the BHCs as a resource?
5. Are your patients fully educated to the fact that their clinic is integrated?

Economic Evaluation

1. How has integrating pediatric behavioral health care affected your processes?
 - a. Is there a difference between your initial “ramp-up” vs. today (steady state)?
 - b. How have referrals changed?
 - c. How has time spent with patients changed (both for new and old staff)?
 - d. Are there different resources used now?
 - e. How has efficiency and staff time spent on various clinic tasks changed (e.g. time on phone)?
2. How do you think integrating pediatric behavioral health care has affected your costs?
 - a. Do you think it has changed staff time working?
 - b. Do you have new staff salaries?
3. How do you think having integrated pediatric behavioral health care has affected your revenues?
 - a. Are you getting paid for these services?
 - b. Do you have new patients because you have integrated care?

4. How do you think this has affected the quality of care you provide and patient outcomes?
5. What concerns do you have about the long-term viability/sustainability of having integrated behavioral health care?
 - a. Have there been any discussions about sustaining components of this initiative within your organization? If not, who would you engage with as a possible next step toward sustainability?

Wrap up Questions

6. What has been the biggest achievement of this initiative so far?
7. Could you share a success story that demonstrates the impact of this work?
8. What has been the biggest lesson learned from this initiative so far?
9. At the one-year mark, what is still needed to be accomplished with regard to implementation from non-integrated to fully integrated?
 - a. What thoughts/hopes did they have when first approached about this project? Have they been met? What is left?

Appendix C

BHC Interview Protocol

Background

In the first section, we'll ask about how you work together to provide services and the challenges you may face now that a behavioral health consultant has been installed at your clinic for nearly a year...

1. How do providers at this clinic work as a team to provide the best care for pediatric patients?
2. What challenges do you face in providing behavioral healthcare services?
3. What do you see as the major challenges your patients face in regard to behavioral health care (e.g. receiving services, self-managing)?
4. Are your patients fully educated to the fact that their clinic is integrated?
5. Are members of the care team educated about integrated health care?
6. Are members of the care team supportive of your work as a behavioral health consultant?
7. Does your organization have a person to champion integration work?
8. Is there a clear vision within the organization about what you hope to achieve with integration? And how the organization hopes to achieve that vision?

Economic Evaluation

1. How do you think pediatric behavioral health care processes have changed?
 - a. Do you think the process of referrals has improved?
 - b. How much time do you spend with patients (what fraction of patients do you see and for how long)?
 - c. What kind of resources do you require (space, technology, materials, time from others on the staff)?
 - d. How do you think you "offload" tasks from other staff members to make things more efficient?
2. How do you think having integrated pediatric behavioral health care has affected the clinic's revenue?
 - a. Is the clinic paid for your services?
 - b. Do you have new patients because the clinic has integrated care?
3. How do you think integrated care has affected the quality of care you provide and patient outcomes?
4. What concerns do you have about the long-term viability/sustainability of having integrated behavioral health care?
 - a. Have there been any discussions about sustaining components of this initiative within your organization? If not, who would you engage with as a possible next step toward sustainability?

Wrap up Questions

5. What has been the biggest achievement of this initiative so far?
6. Could you share a success story that demonstrates the impact of this work?
7. What has been the biggest lesson learned from this initiative so far?
8. At the one-year mark, what still needs to be accomplished to make the clinic more integrated?
 - a. What thoughts/hopes did you have when first introduced to this project? Have they been met?
9. What could be done to improve the initiative?
 - a. What could be done to improve your work as a BHC specifically?

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