Healthy Beginnings Childhood Obesity Prevention Collaborative 2021

Final Report

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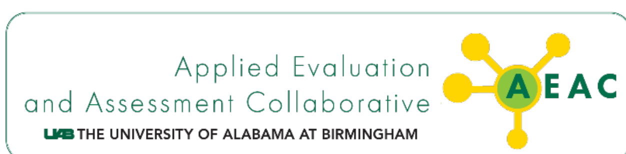

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Our Sponsors

This collaborative made possible by the generous support of:

Prevention of Childhood Obesity: Why It Matters and the Pediatrician's Role

Childhood obesity increased two-to-three-fold, depending on the age group, over the last few decades in the United States; indeed, more than 10% of preschoolers are now obese. Alarmingly, initial reports indicate obesity rates worsened since the pandemic began in 2020. Obesity remains a public health concern of the numerous medical and psychosocial complications arising from obesity. Because research to-date shows that interventions to reverse obesity are unlikely to be successful; prevention in the first two years of life is advocated as one path to address this public health priority.

Successful adoption of healthful modalities in the infant and toddler years is facilitated by both clinical interventions and supportive community efforts. Pediatricians are well positioned to contribute because of the longitudinal relationship with the family and because they are a trusted source of guidance to support the development of more healthful lifestyles.[1]

The American Academy of Pediatrics Institute for Healthy Weight recommends providers assess multiple interlocking components over the first two years of life to support a healthier lifestyle. Encouraging healthy nutrition and physical activity while limiting screen time are important and apparent guidance topics; however, the quality of parent-child interactions and social determinants of health, such as food security, also figure predominately in obesity prevention.

Once pediatricians assess these components, evidence shows how clinicians address obesity prevention has important ramifications on whether the family incorporates and sustains more healthful approaches. Applying a strengths-based, individually tailored approach that builds on family successes, as opposed to focusing on risks and recommended changes, has best outcomes.[2]

[1]The Role of the Pediatrician in Primary Prevention of Obesity. Stephen R. Daniels, Sandra G. Hassink and COMMITTEE ON NUTRITION. *Pediatrics* 2015;136; e275

[2]Childhood Obesity Evidence Base Project: A Systematic Review and Meta-Analysis of a New Taxonomy of Intervention Components to Improve Weight Status in Children 2–5 Years of Age, 2005–2019. CHILDHOOD OBESITY September 2020 j Volume 16, Supplement 2 DOI: 10.1089/chi.2020.0139.

Healthy Beginnings Collaborative Design

Healthy Beginnings, modeled on the American Academy of Pediatrics Optimize Infant & Toddler Feeding for Obesity Prevention collaborative, supports primary care practice teams in improving care relevant to early nutrition and obesity prevention during well child visits for children under two years, in a manner that supports the overall health and well-being of the child and family. The collaborative format integrates the Institute for Healthcare Improvement Breakthrough Series Collaborative Learning Model with the Model for Improvement.

QI Training

QI Training for the practices begins with a virtual coaching visit. Practices prepare for the visit by preparing Aim statements and a process map informed by brief videos on the Model for Improvement and a PowerPoint presentation on process maps. During the coaching visit, aim statements are revised, the process map is reviewed for change ideas, the data collection plan is developed and the plan for the first test of change is developed.

QI concepts are shared throughout the remainder of the collaborative with opportunities for transparency of practice level measures and peer to peer learning. The objective for this sharing is that practices learn from their measures and adjust their testing accordingly. In addition, through the sharing of practice experiences, latest ideas for testing and improvement can be adapted in a variety of practice settings.

The Healthy Beginnings Collaborative also required practices to determine operational definitions for each key driver. The coaching visit, practice specific email communications, and practice webinars provided opportunities for one-on-one advice and peer to peer learning to adapt operational definitions to reflect the actual focus of each practice’s improvement.

A Word About COVID

This collaborative spanned 9-months of the worldwide pandemic. To support collaborative practices, the curriculum included dedicated time for peer-to-peer learning on all things COVID.

Qualitative Methods

The Applied Evaluation and Assessment Collaborative (AEAC) conducted interviews and a post-assessment survey after the completion of the Healthy Beginnings learning collaborative. Interview data were analyzed in NVivo 12, and survey data were collected and analyzed in Qualtrics.

Collaborative Content Experts

Sandra Hassink, MD, MS, FAAP past president of the AAP and Director of the Institute for Healthy Weight, kicked off the collaborative at the Alabama Chapter's 2020 Annual Fall Meeting with two presentations on obesity prevention. Participants completed the AAP's online curriculum "Building a Foundation of Healthy Active Living." This series explores the importance of early feeding, responsive relationships and supportive environments and how pediatricians can help prevent obesity. Dr. Hassink participated in the celebratory final live webinar. Rainie Robinson, MS, RD, LD, CDE, the Clinical Manager of the Lactation Center and Enteral Feeding Lab at Children's of Alabama served as the Healthy Beginnings collaborative dietician expert and led several live case discussions at the monthly webinars.

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Healthy Beginnings Participants

Practices commit to the collaborative voluntarily. Each practice has minimum of three core team members: a lead physician, clinical staff, and administrative staff such as the practice manager. The prime motivation to participate is to improve how the practice supports obesity prevention. Additionally, ACHIA collaborative participation aligns with other practice and provider requirements such as:

- Continuing Medical Education and Continuing Education Units for providers and nurses which is required for State Licenses.
- Maintenance of Certification Part 4 for the American Board of Pediatrics which is required for the American Board of Pediatrics good standing.
- Supporting Patient Centered Medical Home (re)certification.

Participating Practices

- Alabama Multi-Specialty Group, P.C.
- Bama Pediatrics
- Charles Henderson Child Health Center
- Crimson Pediatrics
- Mobile Pediatrics
- Purohit Pediatric Clinic – Anniston, Purohit Pediatric Clinic – Birmingham, Purohit Pediatric Clinic -Moody, Purohit Pediatric Clinic – Roanoke
- Southeastern Pediatrics
- UAB Primary Care Clinic
- University Medical Center Pediatric Clinic
- University of South AL Pediatric Clinic

Goals, Aims, Key Drivers and Measures

Global Aim: To improve primary care practice related to fostering healthy behaviors and healthy weight in children from birth to age two, in the service of fostering a lifelong trajectory of optimal health.

Over the 9 months, participants will increase knowledge of best practices for addressing the prevention of children birth to 18 months of age at well visit by reviewing online educational modules and engaging with faculty experts on monthly webinars. Practices will conduct assessments of current practices through surveys and will implement change ideas by applying QI tools such as plan-do-study-act cycles under the guidance of the ACHIA QI coach.

Specific Aims: By the end of the collaborative period, during well child visits for children under age two, practices will assess and address:

- patient/family concerns 90% of the time.
- dietary intake and nutrition 90% of the time.
- caregiver lifestyle behaviors or environmental strategies to support a healthy lifestyle 70% of the time; and,
- key social determinants of health 50% of the time.

Additionally, practices will assess weight for length percentile 95% of the time.

Key Drivers

- *Social Determinants of Health:* Prioritize counseling on key social and relational health determinant based on individualized patient and family assessment.
- *Nutrition:* Support and encourage optimal dietary intake and nutrition at every developmental stage.
- *Supportive Environments:* caregiver strategies and the development of early care environments that foster and reinforce healthy lifestyle behaviors.
- *Monitor growth* and assess early obesity-related risks.

Healthy Beginnings Childhood Obesity Prevention Completion Results

Practice Demographics

The Healthy Beginnings learning collaborative had a total of fourteen pediatric practices involved in improving lifestyle behaviors of youth in Alabama.

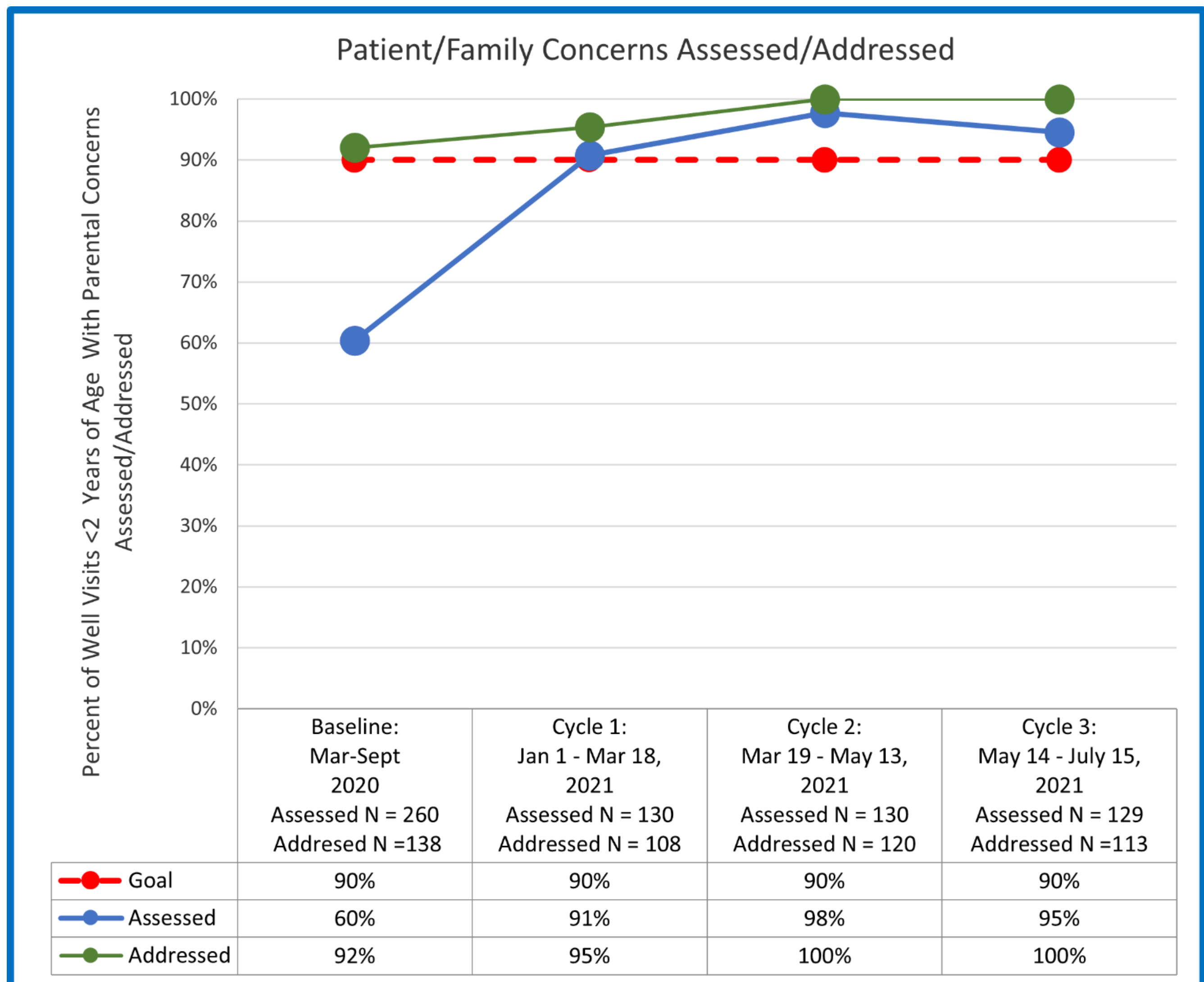
- 10 (71.4%) practices were independently owned, 2 (14.3%) were affiliated with a university, 1 (7.1%) was a non-profit practice, and 1 (7.1%) was affiliated with a hospital
- 6 (42.9%) of these practices were in a suburban area, 4 (28.6%) were in a rural area, and 4 (28.6%) were in an urban area.
- 11 (78.6%) of the practices had over half of their patients insured through Medicaid
- 1 (7.1%) of the practices had over half of their patients insured through Blue Cross Blue Shield
- One practice intended on participating but was unable to commit to the 9-month collaborative due to Covid constraints

Practice Sites	13
Participants	
Physicians	23
Administrative	15
CRNP	20
RN/PA	8
LPN/MA	8
Total	74
Practice Panel	
0-18 months of age	9,215
>18 months to 19 years of age	52,237
Primary Office Setting	
Small practice	57%
Medium practice	19%
Large practice	24%

Healthy Beginnings Practice Data Highlights

Measure 1: Percentage of patients for whom families were asked if they had any general concerns.

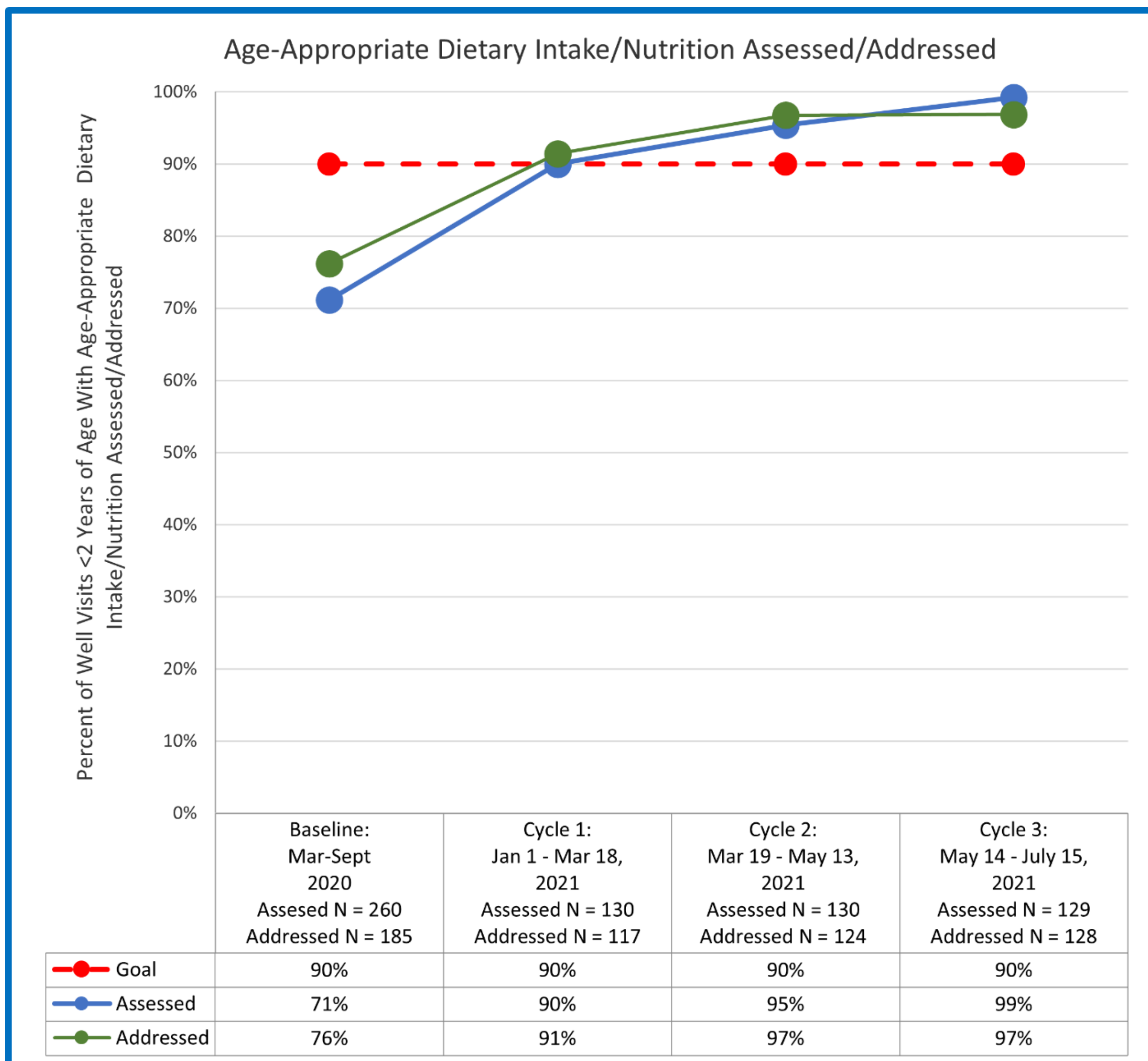
- Goal: Assess and address patient and family concerns 90% of the time.
- Patient Population: Assessed: Patients under the age of two who attended a well-child visit during the sampling period. Addressed: Patients who were assessed.
- Results: Elicited patient and family concerns increased from 60% to 95% and the percent of patient and family concerns addressed increased from 92% to 100%.
- Discussion: Practices were easily able to address parental concerns once they captured them with an assessment.



	Baseline: Mar-Sept 2020 Assessed N = 260 Addresed N =138	Cycle 1: Jan 1 - Mar 18, 2021 Assessed N = 130 Addressed N = 108	Cycle 2: Mar 19 - May 13, 2021 Assessed N = 130 Addressed N = 120	Cycle 3: May 14 - July 15, 2021 Assessed N = 129 Addressed N =113
Goal	90%	90%	90%	90%
Assessed	60%	91%	98%	95%
Addressed	92%	95%	100%	100%

Measure 2: Percentage of patients for whom age-appropriate questions were assessed/addressed concerning dietary intake and nutrition or relevant barriers

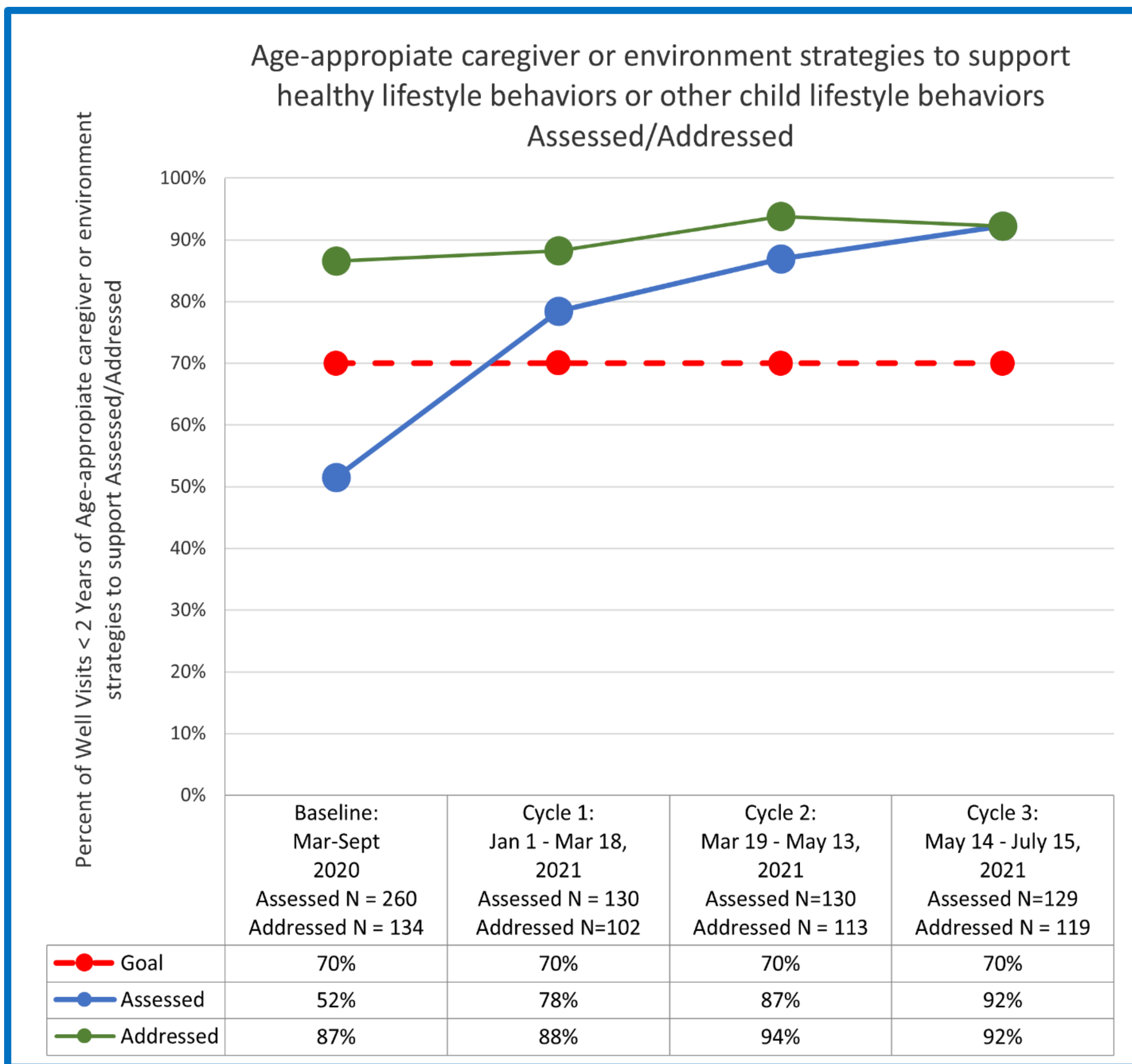
- Goal: Assess and address dietary intake and nutrition 90% of the time.
- Patients Population: Assessed: Patients under the age of two who attended a well-child visit during the sampling period. Addressed: Patients who were assessed.
- Results: The percent of age-appropriate dietary intake and nutrition assessed increased from 71% to 95% and the percent of age-appropriate dietary intake and nutrition addressed increased from76% to 97%.
- Discussion: Most practices prioritized this nutritional key driver. Commonly reported change ideas included providing standardized anticipatory guidance around juice intake and assessing for solid food consumption early in infancy. Practices highly valued interactive sessions with the nutritional and WIC community expert. Learning about the availability of statewide breast-feeding support groups was especially appreciated.



	Baseline: Mar-Sept 2020 Assesed N = 260 Addressed N = 185	Cycle 1: Jan 1 - Mar 18, 2021 Assessed N = 130 Addressed N = 117	Cycle 2: Mar 19 - May 13, 2021 Assessed N = 130 Addressed N = 124	Cycle 3: May 14 - July 15, 2021 Assessed N = 129 Addressed N = 128
Goal	90%	90%	90%	90%
Assessed	71%	90%	95%	99%
Addressed	76%	91%	97%	97%

Measure 3: Percentage of patients for whom age-appropriate questions were assessed/addressed concerning caregiver or environmental strategies to promote healthy lifestyle behaviors, relevant barriers, or child lifestyle behaviors other than dietary intake/ nutrition (sleep, media use, physical activity)

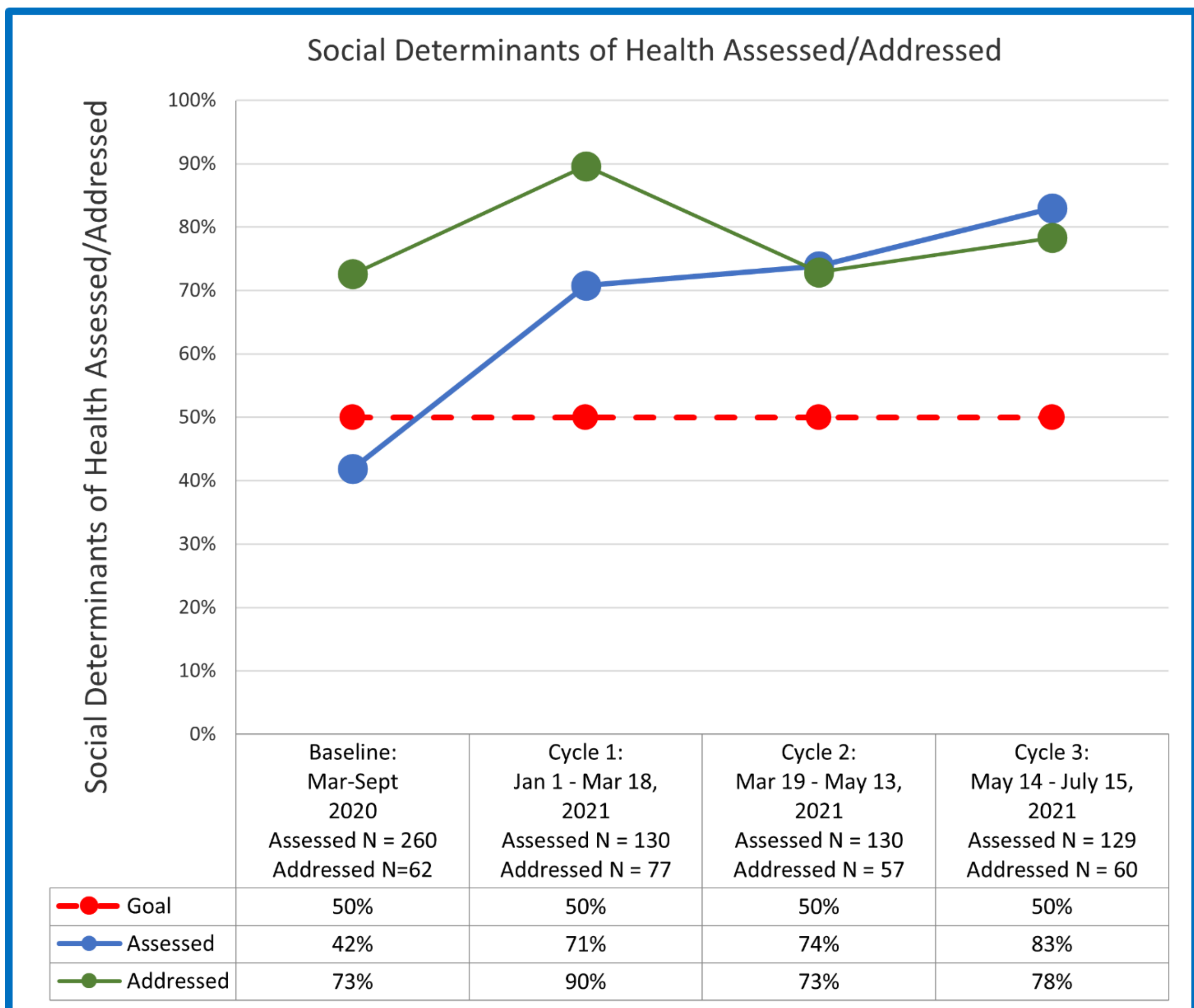
- Goal: Educate caregivers on lifestyle behaviors or environmental strategies to support a healthy lifestyle 70% of the time.
- Patient Population: Assessed: Patients under the age of two who attended a well-child visit during the sampling period. Addressed: Patients who were assessed.
- Results: Patient healthy lifestyles assessed increased from 52% to 87% and the patient healthy lifestyles addressed increased from 87% to 92%.
- Discussion: Practices prioritized other key drivers and began supporting lifestyle behaviors later in the collaborative.



	Baseline: Mar-Sept 2020 Assessed N = 260 Addressed N = 134	Cycle 1: Jan 1 - Mar 18, 2021 Assessed N = 130 Addressed N=102	Cycle 2: Mar 19 - May 13, 2021 Assessed N=130 Addressed N = 113	Cycle 3: May 14 - July 15, 2021 Assessed N=129 Addressed N = 119
Goal	70%	70%	70%	70%
Assessed	52%	78%	87%	92%
Addressed	87%	88%	94%	92%

Measure 4: Percentage of patients for whom social or relational determinants of health (SDH) were assessed/addressed, including food or economic security, living conditions, family health, and well-being or family strengths/protective factors

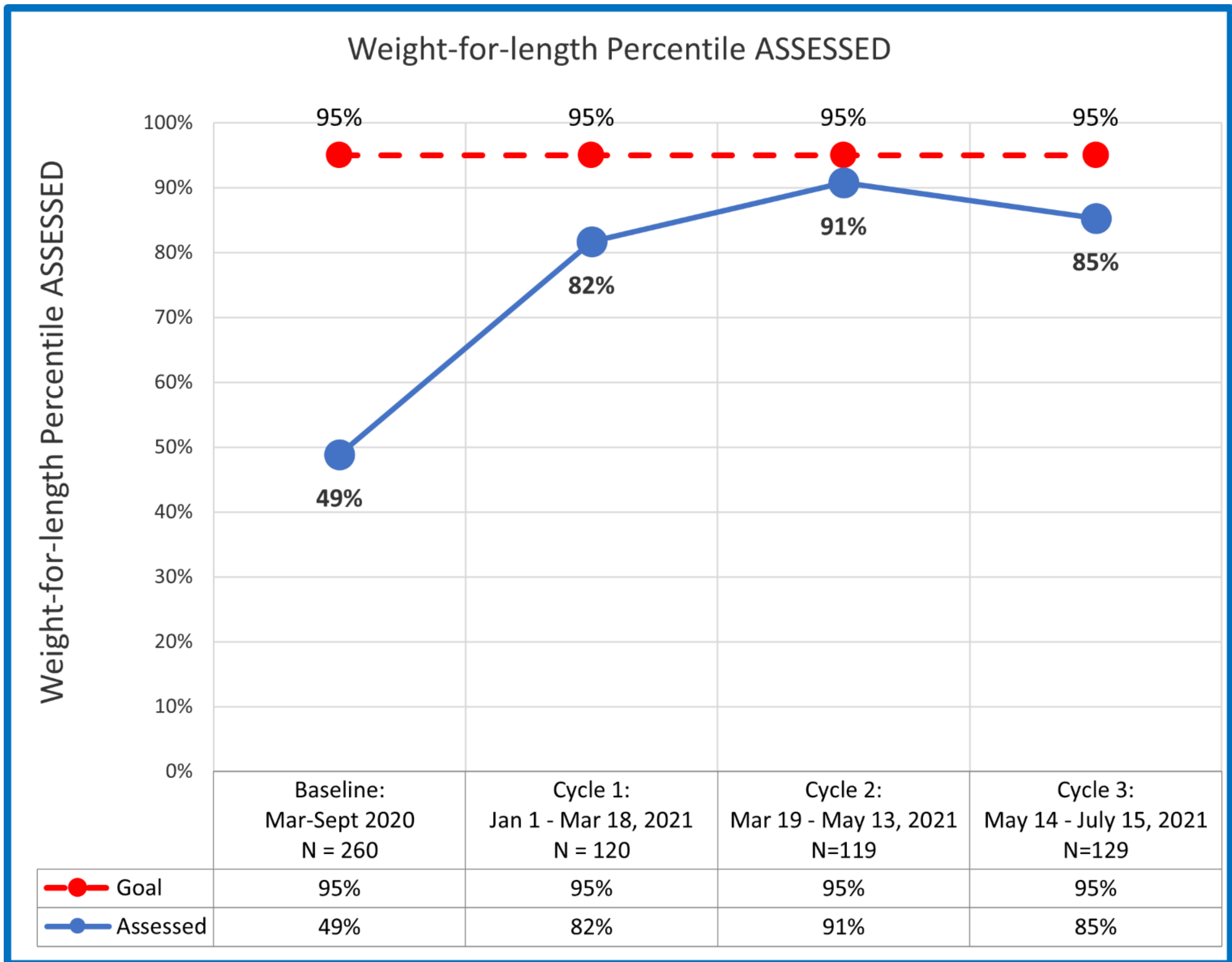
- Goal: Assess/address key social determinants of health 50% of the time.
- Patient Population: Assessed: Patients under the age of two who attended a well-child visit during the sampling period. Addressed: Patients who were assessed.
- Results: Social determinants of patient health assessed increased from 42% to 74% and the social determinants of patient health addressed increased marginally from 73% to 78%.
- Discussion: One practice deployed the Ages and Stages Questionnaire-Social/Emotional and another tested the hunger vital signs. Food security was the priority most reported. Practices reported screening for SDH and locating community resources to address needs as the largest barriers to improving this measure.



	Baseline: Mar-Sept 2020 Assessed N = 260 Addressed N=62	Cycle 1: Jan 1 - Mar 18, 2021 Assessed N = 130 Addressed N = 77	Cycle 2: Mar 19 - May 13, 2021 Assessed N = 130 Addressed N = 57	Cycle 3: May 14 - July 15, 2021 Assessed N = 129 Addressed N = 60
Goal	50%	50%	50%	50%
Assessed	42%	71%	74%	83%
Addressed	73%	90%	73%	78%

Measure 5: Percentage of patients for whom weight- for-length was assessed.

- Goal: Assess weight for length percentile 95% of the time.
- Patient Population: Patients under the age of two who attended a well-child visit during the sampling period.
- Results: Pediatrics clinics improved the frequency they assessed weight to length but did not reach the 95% goal. Patient weight to length measurements assessed increased from 49% to 85%.
- Discussion: The biggest barrier noted was documentation as many electronic records do not plot weight for length.



	Baseline: Mar-Sept 2020 N = 260	Cycle 1: Jan 1 - Mar 18, 2021 N = 120	Cycle 2: Mar 19 - May 13, 2021 N=119	Cycle 3: May 14 - July 15, 2021 N=129
Goal	95%	95%	95%	95%
Assessed	49%	82%	91%	85%

Qualitative Results

Practice self-assessment for Healthy Beginnings learning collaborative

This section is self-reported experiences and insights from practices who participated in the Healthy Beginnings learning collaborative. The AEAC collected and analyzed survey data using Qualtrics. One practice of the thirteen did not respond to the survey.

Clinical Process and Performance Improvements

Clinical Processes	No improvement (N) %	Somewhat improved (N) %	Significantly improved (N) %	High performance prior and during collaborative (N) %	Total
Assessing family concerns	(1) 9.1%	(3) 27.3%	(4) 36.4%	(3) 27.3%	11
Addressing family concerns	(1) 10.0%	(1) 10.0%	(6) 60.0%	(2) 20.0%	10
Assessing social or relational determinants of health	(0) 0.0%	(4) 33.3%	(8) 66.7%	(0) 0.0%	12
Assessing age-appropriate dietary intake/nutrition	(0) 0.0%	(2) 16.7%	(9) 75.0%	(1) 8.3%	12
Addressing age-appropriate dietary intake/nutrition	(0) 0.0%	(2) 16.7%	(10) 83.3%	(0) 0.0%	12
Assessing age-appropriate caregiver on environmental strategies to support healthy lifestyle or other child lifestyle behavior	(1) 8.3%	(2) 16.7%	(9) 75.0%	(0) 0.0%	12
Addressing age-appropriate caregiver on environmental strategies to support healthy lifestyle or other child lifestyle behavior	(0) 0.0%	(4) 33.3%	(8) 66.7%	(0) 0.0%	12
Weight-for-length percentile assessed	(0) 0.0%	(3) 25.0%	(8) 66.7%	(1) 8.3%	12

Practice Future Improvement Plans

Practices intend to continue obesity prevention improvements in the following areas:

- Eleven practices will continue to work with key drivers from Healthy Beginnings
- Four practices will continue to adapt 90-day goals and test PDSA cycles
- Three practices will continue to track their data (two using clinical processes, one using QIDA)
- One practice said that “Residents are reassessing and taking on the initiative.”

Practice Quality Improvement Training

Five practices found the coaching visits to be helpful and seven practices found the visits to be immensely helpful. One practice did not respond to this question. A sample of comments are included below.

- “Quality Improvement Training helped us to focus on ways to identify problems that concern our population, ways to address those concerns, and measure/maintain our improvements.”
- “Coaching visit helped to narrow a collaborative that covered a broad range of areas to more specific, well-defined goals with a clearer course of action specific to our practice.”
- “Helping us turn our ideas into aim statements; helping us set specific goals”
- “It was very helpful in explaining the many documents emailed for this initiative. It also provided a pinpoint person incase questions arise.”

QI coach communicated content effectively to practices during one-on-one calls and webinars

Practice Response	(N) %
Strongly Disagree	(1) 8.3%
Disagree	(0) 0.0%
Agree	(4) 33.3%
Strongly Agree	(7) 58.3%

QI Tool Application: Practice Feedback

Statements	Strongly Disagree (N) %	Disagree (N) %	Agree (N) %	Strongly Agree (N) %	Total
Process mapping informed our change ideas	(0) 0.0%	(0) 0.0%	(5) 41.7%	(7) 58.3%	12
The 90-day goals were an effective tool to improve our work in obesity prevention	(0) 0.0%	(0) 0.0%	(6) 50.0%	(6) 50.0%	12
The review of data informed adaptations to our tests of change	(0) 0.0%	(0) 0.0%	(4) 33.3%	(8) 66.7%	12
Our practice team meetings effectively communicated the project to our team and other providers in the practice	(0) 0.0%	(0) 0.0%	(3) 25.0%	(9) 75.0%	12

Practices rated their level of agreement with the following statements

Statements	Strongly Disagree (N) %	Disagree (N) %	Agree (N) %	Strongly Agree (N) %	Total
We are satisfied with our experience in this learning collaborative	(0) 0.0%	(0) 0.0%	(3) 25.0%	(9) 75.0%	12
The American Academy of Pediatrics Online Modules Building a Foundation for Healthy Active Living modules were effective for the core team, and providers to learn about obesity prevention	(0) 0.0%	(0) 0.0%	(2) 16.7%	(10) 83.3%	12
The email communication was at the appropriate level to keep the practice on track with the QI project	(0) 0.0%	(0) 0.0%	(2) 16.7%	(10) 83.3%	12
The monthly webinar calls were an effective format to learn from other practices and from the content experts	(0) 0.0%	(0) 0.0%	(3) 25.0%	(9) 75.0%	12
The ACHIA website (www.achia.org healthy beginnings) was useful for obtaining project resources	(0) 0.0%	(0) 0.0%	(2) 16.7%	(10) 83.3%	12
The Slack website was useful for sharing resources/ideas	(0) 0.0%	(1) 8.3%	(6) 50.0%	(5) 41.7%	12
The Quality Improvement Data Aggregator (QIDA) was easy to navigate and an effective way to track our practices' improvement	(0) 0.0%	(0) 0.0%	(3) 25.0%	(9) 75.0%	12
The four data cycles (1 baseline/ 3 intervention) were sufficient to assess our change ideas	(0) 0.0%	(0) 0.0%	(4) 33.3%	(8) 66.7%	12
The three practice surveys provided sufficient opportunity to reflect on our efforts	(0) 0.0%	(0) 0.0%	(3) 25.0%	(9) 75.0%	12
Having Maintenance of Certification Part 2 available was highly valued by our practice	(0) 0.0%	(0) 0.0%	(2) 16.7%	(10) 83.3%	12
Having Maintenance of Certification Part 4 available was highly valued by our practice	(0) 0.0%	(0) 0.0%	(2) 16.7%	(10) 83.3%	12
Having CME/CEU available was highly valued by our practice	(0) 0.0%	(0) 0.0%	(2) 16.7%	(10) 83.3%	12
Being able to use this collaborative for PCMH status (initial or renewal) was highly valued by our practice	(0) 0.0%	(0) 0.0%	(5) 45.5%	(6) 54.6%	11
Increased peer to peer learning from the COVID Corner in select webinars was highly valued by our practice	(0) 0.0%	(0) 0.0%	(4) 33.3%	(8) 66.7%	12

Most beneficial aspect of the collaborative according to practices

A sample of comments are included below.

- “Having the opportunity to review and learn new information as related to keep our patients nutritionally healthy was very valuable. Also, conversing with other providers and health care partners was equally appreciative. Thanks to this learning collaborative, we have new tools to assist in providing the best care for our patients.”
- “Learning about resources and techniques that can actually help families understand and meet various aspects of healthy lifestyles with their children.”
- “We made some changes to our nurse phone triage, nutritional assessment/counseling that will be long-lasting. We created new tools that have been well received by patients, families. We have been assessing weight-for-length regularly now - still working on the EHR hurdle to documenting.”

Institute for Healthcare Improvement scale to rate the effort of their practice to improve obesity prevention

Practice Response	(N) %
Non-starter, no real activity	(0) 0.0%
Some activity, but no real change in practice or outcome	(0) 0.0%
Modest improvements	(2) 16.7%
Significant progress and real improvement	(8) 66.7%
Outstanding and sustainable results	(2) 16.7%

Impact of the collaborative on practices

The collaborative had a favorable impact on practices' day to day operations, patient care outside of obesity prevention, communication among all practice members, and bi-directional communication between practices and families.

How did work/learnings/improvement been applied to other areas of your practice?

Resources and initiatives such as Hunger Vital Signs have been applied to age groups. The learning collaborative has also helped practices improve their other QI projects.

Practices described their core team's level of agreement with the following statements

Statements	Strongly Disagree (N) %	Disagree (N) %	Agree (N) %	Strongly Agree (N) %	Total
We believe our practice successfully applied our minds and hearts into this project and made significant improvements in patient outcomes in our populations	(0) 0%	(0) 0%	(4) 33.3%	(8) 66.7%	12
We believe this project influenced how the members of this practice perform	(0) 0%	(0) 0%	(3) 25.0%	(9) 75.0%	12
Our staff will use this information to onboard others in the future	(0) 0%	(0) 0%	(3) 25.0%	(9) 75.0%	12
Our staff has a clear vision to foster healthy behaviors and healthy weight in children from birth to age two for this practice	(0) 0%	(0) 0%	(4) 33.3%	(8) 66.7%	12

Healthy Beginnings Key Informant Interview Summary

Seven individuals were identified as key informants by ACHIA staff. In October 2021, an Applied Evaluation and Assessment Collaborative (AEAC) staff member coordinated Zoom interviews with the key informants. Three individuals did not respond to multiple requests for an interview. The AEAC staff member conducted the interviews, which lasted between 10 and 15 minutes. The interviewer recorded the conversations and analyzed notes for common themes using NVivo 12.

Strengths

All interviewees shared that their experience participating in this learning collaborative was positive. Half of the interviewees noted the benefits of peer-to-peer learning and that it was helpful to have regular meetings to collaborate with physicians working throughout the state. Half of the interviewees shared that there were opportunities throughout the collaborative dedicated to discussing the COVID-19 pandemic. Learning about what other practices were doing to safely see patients and how to navigate challenging situations related to the pandemic. The moral support of peers was valuable to participants.

The collaborative was well organized, and the goals were clearly communicated. Participants received relevant materials, such as posters and handouts, which were used in their practice offices for patient education. The topic of this collaborative was extremely broad with many drivers that practices could select as their focus. This allowed practices to choose a driver most relevant to them. Compared with other ACHIA collaboratives, the Healthy Beginnings collaborative had fewer data entries and complementary surveys which lightened the workload of participants. This was helpful for participants as the COVID-19 pandemic kept physicians busy.

Challenges

Two interviewees noted the time commitment of participating in the collaborative. It was challenging to make time to complete necessary tasks and monthly meetings took place during lunch time.

While the broad topic of this collaborative was noted as a strength, it was also identified as a challenge. Each monthly meeting focused on a specific driver and, while the information provided was useful for participants, it was often the case that it was not relevant to the driver they chose as their focus. During the breakout portion of each meeting, there were not opportunities to collaborate because each practice was addressing a different driver. Participants gleaned ideas they could implement in the future related to different drivers. A suggestion for addressing this challenge was to pair practices working on the same driver in breakout groups. In the future, ACHIA may need to consider a different approach to running a collaborative with such a broad and complex topic (e.g., multi-year timeline).

A lighter workload for participants was identified as a strength and a challenge. For this collaborative, ACHIA tested a national model for quality improvement that required fewer data collection points. While this model worked better than staff expected, it was not possible to tell how practices were doing until the final data point was collected. For upcoming collaboratives, there will be a shift back to monthly data collection.

Three of the participating practices had not participated in any quality improvement initiatives in a while. It took these practices some time to get their activities running compared with practices that participate in ACHIA collaboratives and other quality improvement initiatives more often.

Peer to Peer Learning

Most interviewees reported that it was beneficial to learn from what other practices do. One individual shared that hearing from peers made her think "We really need to be doing this!" and talk to the practice manager about the idea. Another was inspired by the creativity of her peers, especially in terms of patient education. She learned that another practice created patient education videos to be played during an appointment. Another interviewee described how seeing a patient flow chart from another practice helped her think through an unusual way patient flow could work in her clinic. This aspect of peer-to-peer learning was especially helpful throughout the COVID-19 pandemic. As described above, participants learned from each other about how to safely see patients and navigate challenging situations.

One interviewee felt that having different methods of communication, specifically Slack, allowed for more peer-to-peer learning as the breakout discussions were less productive. Participants would share ideas they were testing in their practices and resources they found.

One interviewee observed participants being quieter and less engaged as compared to past collaboratives. Her suspicion was that physicians are tired because of the pandemic and a Zoom call is an opportunity to take a break during a busy day. Additionally, practices who participated in previous collaboratives were more engaged than those who were participating for the first time.

Adapting to COVID-19

To support practices, collaborative webinars incorporated peer-to-peer learning sessions focused on the COVID-19 pandemic. number of intervention data collection periods decreased by half to mitigate the workload of collaborative participation.

Even with accommodations, COVID-19 impacted practices' abilities to test and implement Healthy Beginnings interventions. Particularly challenging was staff turnover. A number left employment or required quarantine or isolation. Staff shortages hampered testing change ideas as well as collecting and reporting data. Especially as the collaborative was coming to close, Alabama experienced a severe pandemic surge that tested the state's healthcare system. As a result of competing priorities, most practices focused one or two change ideas around a couple of key drivers rather than tackling each measure.

Lessons Learned

- Addressing all key drivers within the 9-month timeframe, especially during the pandemic, was challenging.
- Peer-to-peer learning inspired new workflows and creative communication with families.
- Practices valued the resources provided on the website, during webinars, and shared by colleagues.
- Fewer data collection cycles were appreciated by busy practices but also led to fewer learning opportunities.
- Healthy Beginnings obesity prevention resources and QI tools are being utilized for patients and other QI work beyond the scope of the collaborative.

Conclusion

Despite delays and disruptions to the ACHIA Healthy Beginnings Learning Collaborative due to the COVID global pandemic, participating practices were able to meet collaborative goals except for capturing weight-for-length 95% of the time.

Appendix A: About ACHIA

A member of the National Improvement Partnership Network (NIPN) since 2013, the Alabama Child Health Improvement Alliance (ACHIA) is a statewide collaboration of public and private partners that uses measurement-based efforts and a system approach to improve the quality of children's healthcare. Our partners include the Alabama Chapter American Academy of Pediatrics, Children's of Alabama, the University of Alabama at Birmingham Department of Pediatrics, the University of South Alabama Department of Pediatrics, the Alabama Medicaid Agency, the Alabama Department of Public Health – Title V, ALL Kids, Blue Cross and Blue Shield of Alabama, Jefferson County Department of Health, Family Voices, The Children's Rehabilitation Services, and others. ACHIA's administrative home is in the University of Alabama at Birmingham Department of Pediatrics, a state agency, with staffing comprised of a Director and administrative/support staffing. An ACHIA cornerstone is establishing learning collaboratives for practices and health systems to improve care on the front-line, using meaningful data to gauge these efforts, and identifying policy-level implications and improvements. A key component of our staffing structure and work is the use of practice-/system-level facilitators to guide improvement efforts at the ground-level and ensure that evidence-based strategies are implemented and sustained.

Vision, Mission, and Values

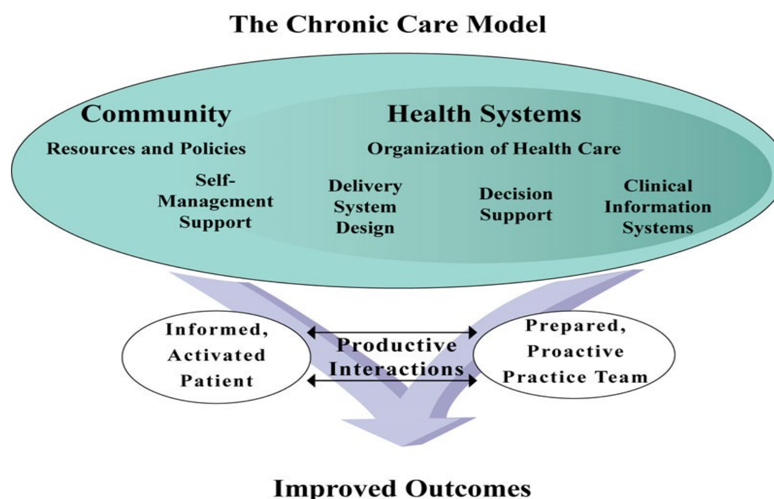
- Vision: Alabama's children achieve optimal health.
- Mission: To improve health outcomes by fostering a culture of quality improvement through partnerships with practitioners, payers, families, and organizations that deliver care to Alabama children.
- Values: We will
  - be committed to conducting high value, high quality project work.
  - be measurement driven.
  - focus our work on improving the use of interventions with a solid evidence base of effectiveness in practice-based settings.
  - select projects that address priority health/healthcare issues for Alabama children.
  - conduct our work in a multi-disciplinary fashion as improving pediatric care requires the involvement of many different sectors and systems.
  - operate in a spirit of collaboration not competition. We will not address a pediatric health or healthcare priority that is already being comprehensively addressed by another organization unless there is a mutually identified role the ACHIA can play to support that organization's efforts.
  - adhere to principles of health data confidentiality.
  - share knowledge and information learned through our quality improvement work with Alabama public agencies interested in child health and National Improvement Network Partnership stakeholders in the interest of child betterment.

Appendix B: Collaborative Format

ACHIA Collaboratives use three tightly linked and extraordinarily successful frameworks: the IHI Breakthrough Series Collaborative Learning Model, the Chronic Care Model, and the Model for Improvement.

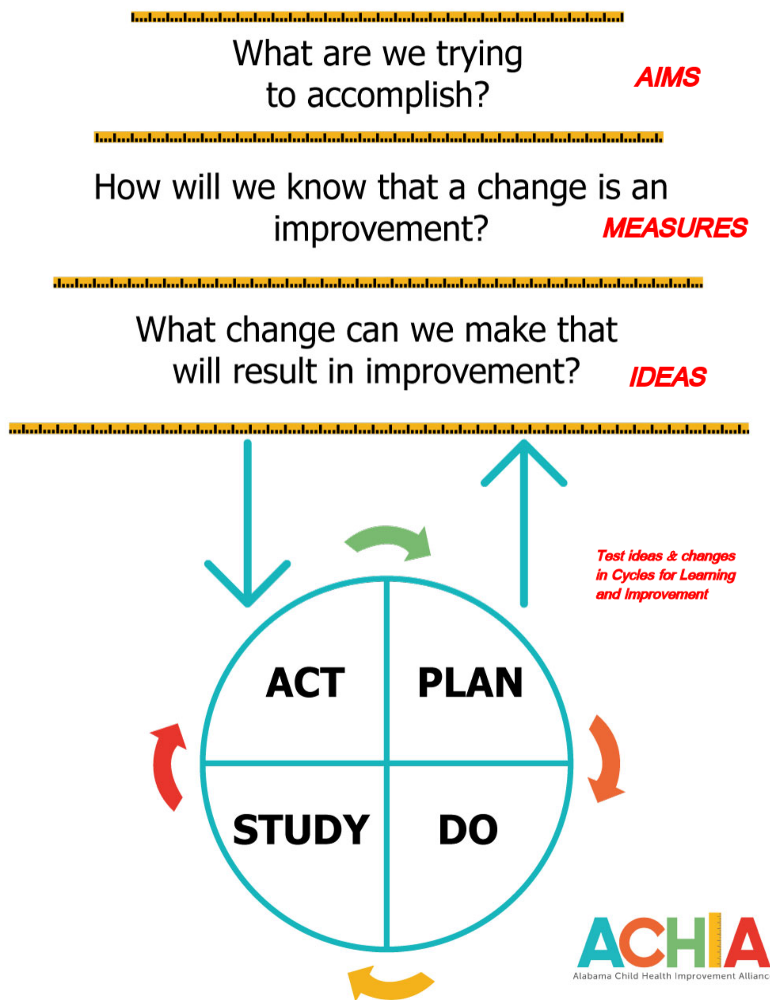
1. The IHI Breakthrough Series Collaborative Learning Model –The collaborative learning model is based on the Institute for Healthcare Improvement's (IHI) Breakthrough Series. The model is designed to create a learning laboratory for practices to test and implement changes using the methods and approaches outlined in this section. In the Adolescent Well Visit learning collaborative, practice QI Core Team members voluntarily participate in monthly webinars over a 9-month period. Practice QI Core Teams identify approaches, tools, and resources to implement small *tests of change* with guidance from improvement faculty. Beyond guidance from experts, we have found that many practices learn the most from one another. Hearing what a similar practice has tested and learning what works (and what does not work), are repeatedly reported to be the most valuable part of the collaborative. During "*action periods*," the time in between practice calls and webinars, the learning collaborative participants analyze their progress by reviewing their data with input from improvement faculty. Monthly practice calls/webinars develop strategies to overcome barriers to making change based on what your practice and other practices are facing as they develop and implement tests of change. Because the learning collaborative is dynamic, topics and assignments currently listed on the syllabus may be revised to meet participant's needs.

2. The Chronic Care Model – The Chronic Care Model, developed by Ed Wagner of the MacColl Center for Healthcare Innovation, identifies the essential elements of a health care system that encourages high quality child health care. These elements are outlined in the visual below: the community, the health system, self-management support, delivery system design, decision support and clinical information systems. Since you may be hearing more about the concept of "patient centered medical home," you should know that many of the chronic care components are similar to those required to be a patient centered medical home. The practice *key driver diagram* is based on Wagner's Chronic Care Model.

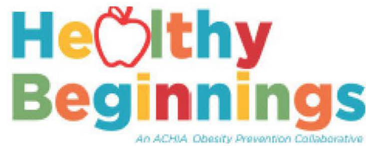


3. The Model for Improvement (MFI) – Building multiple, planned *tests of change* with Plan-Do-Study-Act cycles allow learning to be captured in small increments. This approach reduces the risk of lengthy planning periods and lost time and effort. The MFI is based on the three questions stated below. The circle describes the iterative cycles that your *Practice QI Core Team* will go through to identify whether a test you have tried is worth acting on a larger scale.

   The MFI is at the core of your practice's work, so it is described below. More information about the Model for Improvement developed by Associates in Process Improvement is available at http://www.ihi.org/resources/Pages/HowtoImprove/default.aspx



Appendix C: Healthy Beginnings 360



Childhood obesity is a recognized public health emergency because if its alarming rise and long- term health consequences. Preventing obesity in the first two years of life is a recommended intervention. As a trusted partner with frequent interactions with families, pediatricians are well positioned to support adoption of healthful modalities in the infant and toddler. The American Academy of Pediatrics recommends providers assess and address multiple interlocking components over the first two years of life to support a healthier lifestyle. Encouraging healthy nutrition and physical activity while limiting screen time are important and apparent guidance topics; however the quality of parent-child interactions and social determinants of health, such as food security, also figure predominately in bending the obesity curve.

December 2020 - August 2021

Global Aim

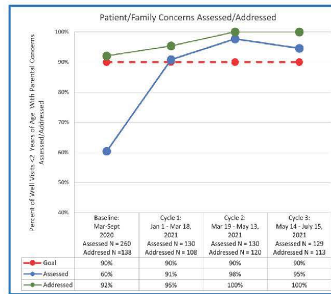
To improve primary care practice related to fostering healthy behaviors and healthy weight in children from birth to age two, in the service of fostering a lifelong trajectory of optimal health.

Specific Aim

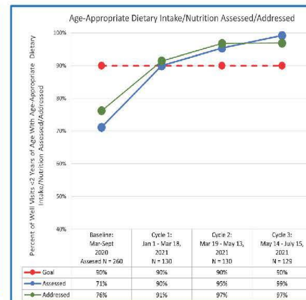
By the end of the collaborative period, during well child visits for children under age two, practices will assess and address the following:

- patient/family concerns 90% of the time.
- dietary intake and nutrition 90% of the time.
- caregiver lifestyle behaviors or environmental strategies to support a healthy lifestyle 70% of the time.
- key social determinants of health 50% of the time.

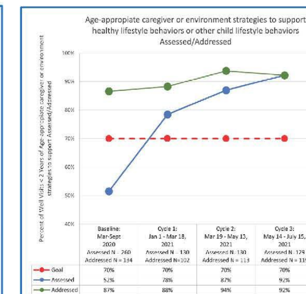
Additionally, practices will assess weight for length percentile 95% of the time.



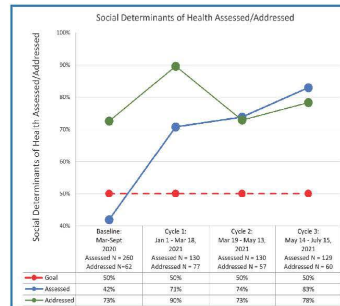
Practices were easily able to address parental concerns once they captured them with an assessment.



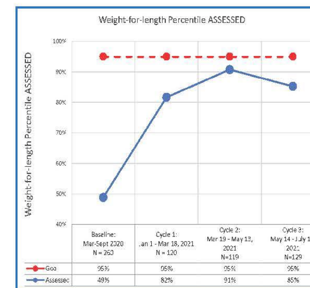
Most practices prioritized this nutritional key driver.



Practices prioritized other key drivers and began supporting lifestyle behaviors later in the collaborative.



Practices reported screening for SDH and locating community resources to address needs as the largest barriers to improvement.



The biggest barrier noted was documentation as many electronic records do not plot weight for length.

Lessons Learned

- Addressing all key drivers within the 9-month timeframe, especially during the pandemic, was challenging.
- Peer-to-peer learning inspired new workflows and creative communication with families.
- Practices valued the resources provided on the website, during webinars, and shared by colleagues.
- Fewer data collection cycles were appreciated by busy practices but also led to fewer learning opportunities.
- Healthy Beginnings obesity prevention resources and QI tools are being utilized for patients and other QI work beyond the scope of the collaborative.

Participating Practices

Alabama Multi-Specialty Group, P.C.; Bama Pediatrics; Charles Henderson Child Health Center; Crimson Pediatrics; Mobile Pediatrics; Purohit Pediatric Clinic – Anniston; Purohit Pediatric Clinic – Birmingham; Purohit Pediatric Clinic - Moody; Purohit Pediatric Clinic – Roanoke; Southeastern Pediatrics; UAB Primary Care Clinic; University Medical Center Pediatric Clinic; University of South Alabama Pediatric Clinic

Participants	Project Partners	Project Support
13 practices from across Alabama enrolled with 73 total staff: • 22 physicians • 20 CRNP • 16 nursing/clinical • 15 administrative/ support Practice: • 9,215 well visits 0 – 18 months. • 52,237 total visits ages 19 months – 18 years • 62% of patients have Medicaid.	Alabama Chapter-American Academy of Pediatrics	Children's of Alabama University of Alabama at Birmingham Department of Pediatrics University of South Alabama The Caring Foundation Alabama Medicaid Agency ALLKids Alabama Department of Early Childhood Education American Academy of Pediatrics

Content Experts: Obesity: Sandra Hassink, MD, MSFAAP Past President American Academy of Pediatrics; Director AAP Institute for Healthy Weight
Nutrition: Rainie Robinson, MS, RD, LC, CDCES- Children's of Alabama

Key Drivers Healthy Beginnings 2020-2021

Outcomes

Global Aim

To improve primary care practice related to fostering healthy behaviors and healthy weight in children from birth to age two, in the service of fostering a lifelong trajectory of optimal health.

Specific Aims

By the end of the collaborative period, during well child visits for children under age two, practices will assess and counsel on the following:

- patient/family concerns 90% of the time
- dietary intake and nutrition 90% of the time
- caregiver lifestyle behaviors or environmental strategies to support a healthy lifestyle 70% of the time
- key social determinants of health 50% of the time.

Additionally, practices will assess weight for length percentile 95% of well visits.

Key Drivers	Change Concepts + Interventions
Prioritize counseling on key social and relational health determinants based on individualized patient and family assessment	• Assess and build linkages to community resources that support economic/food security and positive caregiver strategies • Assess and build relationships with caregiver partners • Assess food/economic security and facilitate appropriate access to care or services • Elicit and address parental concerns to optimize child development and build relationships between the family and provider/medical home • Assess key social and relational risks to healthy development and facilitate the provision of appropriate care or services • Help identify and build upon family strengths to support resilience • Use patient/family-centered counseling techniques
Support and encourage optimal dietary intake and nutrition at every developmental stage	• Help families anticipate and address barriers to optimal nutrition at every stage • For breastfed infants, support families in meeting recommendations for exclusivity and duration • For infants receiving breastmilk or formula, provide general feeding guidance to support optimal nutrition (content, volume, supplements, etc.) • Support optimal timing for introducing complementary foods • Support healthy beverage consumption, including providing guidance about water, juice, and sugar-sweetened beverages • Support consumption of healthy foods during meals and snacks and foster the development of healthy routines • Support repeated exposure to and acceptability of a variety of healthy foods
Support caregiver strategies and the development of early care environments that foster and reinforce healthy lifestyle behaviors	• Provide guidance to support optimal feeding and emotional regulation in infants (relationship between feeding and bonding, hunger and satiety cues, fussiness/not using food to soothe,etc.). • Provide guidance regarding responsive feeding techniques at various levels of child independence • Provide guidance regarding developmentally appropriate parenting strategies that facilitate healthy behaviors (authoritative parenting; not using food as reward, etc.) • Encourage caregiver role modeling of healthy behaviors • Assess and provide guidance on the food environment (family meals; availability of unhealthy foods) to help families create an optimal nutritional environment at home • Help families anticipate and address barriers to healthy lifestyle behaviors at every stage and across early care environments • Assess and provide guidance regarding appropriate sleep durations and encourage the establishment of healthy routines • Assess and provide ongoing guidance on environmental and individual media exposure • Assess and provide guidance on developmentally appropriate physical activity/active play
Monitor growth and assess early obesity-related risks	• Measure weight-for-length and review growth trajectory at every visit • Assess family history, including early risk factors for obesity

Key Driver 1 *Prioritize counseling on key social and relational health determinants based on individualized patient and family assessment*

Change Concept	Tools and Resources
Assess and build linkages to community resources that support economic/food security and positive caregiver strategies	• Bright Futures Tips to Link to Community Resources • Ensure Access to WIC for eligible families
Assess and build relationships with caregiver partners	• AAP Statement on Patient and Family Centered Care • NICHQ Family Engagement Guide
Assess food/economic security and facilitate appropriate access to care or services	• Food Insecurity mini module • Food Insecurity AAP Policy Statement Tables 2 & 3: Screening/Resources • Food Insecurity: Toolkit for Pediatricians • U.S. Department of Agriculture summer food service program finder • Selected screening tools for Bright Futures implementation
Elicit and address parental concerns to optimize child development and build relationships between the family and provider/medical home	• Bright Futures 4th Edition
Assess key social and relational risks to healthy development and facilitate the provision of appropriate care or services	• Engaging families in culturally effective care AAP Toolkit
Help identify and build upon family strengths to support resilience	• Bright Futures Previsit Questionnaires • Bright Futures Visit Documentation Forms • Selected screening tools for Bright Futures implementation • ACES mini module • Healthy Family mini module • Promoting Young Children's Social-Emotional Development in Primary Care • Double Burden of Malnutrition
Use patient/family-centered counseling techniques	• Change Talk—interactive module • Motivational Interviewing—CME video
Reflect on role of racism and weight stigma on counseling and health outcomes	• Project Implicit • Impact of Racism on Child and Adolescent Health (See ACHIA Website) • Influence of Race, Ethnicity, and Culture on Childhood Obesity: Implications for Prevention and Treatment (see ACHIA Website) • NICHQ Implicit Bias Resource Guide

Key Driver 2 *Support and encourage optimal dietary intake and nutrition at every developmental stage*

Change Concept	Tools and Resources
Help families anticipate and address barriers to optimal nutrition at every stage	General to All Change Concepts: • Healthy Growth App • Bright Futures Patient Handouts • Bright Futures Guidance • Bright Futures Previsit Questionnaires • AAP First 1000 Days Policy Statement • AAP Early Nutrition & Atopic Disease Policy Statement • CME module Overview and Introduction to Early Obesity Prevention • Feeding Infants and Children from Birth to 24 Months • Summarizing Existing Guidance National Academy of Science (ACHIA website pdf) • Healthy Active Living Implementation Guide • Healthy Active Living Parent Resources • Making the Case infographic (patient) • Social media assets (various topics)
For breastfed infants, support families in meeting recommendations for exclusivity and duration	• General resources above • Alabama Breastfeeding • AAP Breastfeeding Policy Statement • AAP Breastfeeding Friendly Office Clinical report • Breastfeeding infographic (patient) English/Spanish • NICHQ Breastfeeding Social Media Toolkit • Breastfeeding mini module • Center for Health Equity (includes Ready, Set, Baby handouts) • Chocolate Milk Mommies Videos • African American Women and the Stigma Associated with Breastfeeding
For infants receiving breastmilk or formula, provide general feeding guidance to support optimal nutrition (content, volume, supplements, etc.)	• General and breastfeeding resources above • Social media graphic • Bottle feeding mini module
Support optimal timing for introducing complementary foods	• General resources above • Complementary Food Introduction infographic & video (patient) • Food Introduction mini module
Support healthy beverage consumption, including providing guidance about water, juice, and sugar-sweetened beverages	• General resources above • Social media graphic (patient) • Healthy Beverage mini module • AAP Fruit Juice Policy Statement • Health Beverage consumption
Support consumption of healthy foods during meals and snacks and foster the development of healthy routines	• General resources above • Subscribe to free CHOP CHOP newsletter • Social media – fruit and veggie (patient) • Social media – fruit and veggie v2 (patient) • Healthy Snacks mini module
Support repeated exposure to and acceptability of a variety of healthy foods	• General resources above • Picky eating infographic & video (patient)

Key Driver 3 *Support caregiver strategies and the development of early care environments that foster and reinforce healthy lifestyle behaviors*

<table>
<tr><th>Change Concept</th><th>Tools and Resources</th></tr>
<tr><td>Provide guidance to support optimal feeding and emotional regulation in infants (relationship between feeding and bonding, hunger and satiety cues, fussiness/not using food to soothe, etc.)</td><td rowspan="4">Resources for Caregiver Support:
• Responsive Feeding infographic and video
• Parenting & Feeding Styles mini module
• Hunger & Satiety mini module
• Role Modeling & Routines mini module
• Healthy Family mini module
• Social media assets (various topics)
• CDC positive parenting tips
• Screen Tips of Parents with children under three</td></tr>
<tr><td>Provide guidance regarding responsive feeding</td></tr>
<tr><td>Provide guidance regarding developmentally appropriate parenting strategies that facilitate healthy behaviors (authoritative parenting; not using food as reward, etc.)</td></tr>
<tr><td>Encourage caregiver role modeling of healthy behaviors</td></tr>
<tr><td>Assess and provide guidance on the food environment (family meals; availability of unhealthy foods) to help families create an optimal nutritional environment at home</td><td>• Dietary intake and nutrition resources above
• Caregiver resources above
• Social media assets (various topics)</td></tr>
<tr><td>Help families anticipate and address barriers to healthy lifestyle behaviors at every stage and across early care environments</td><td>• Caregiver resources above
• Sleep, screen time, active play/physical activity resources below
• Social media assets (various topics)</td></tr>
<tr><td>Assess and provide guidance regarding appropriate sleep durations and encourage the establishment of healthy routines</td><td>• Sleep mini module
• Sleep social media (parent)</td></tr>
<tr><td>Assess and provide ongoing guidance on environmental and individual media exposure</td><td>• Screen Time mini module
• Screen Time social media (parent)
• AAP Media Policy Statement</td></tr>
<tr><td>Assess and provide guidance on developmentally appropriate physical activity/active play</td><td>• Active Play mini module
• Active babies social media (parent)</td></tr>
</table>

Key Driver 4 *Monitor growth and assess early obesity-related risks*

Change Concept	Tools and Resources
Measure weight-for-length and review growth trajectory at every visit	• WHO weight for length percentile growth charts for infants and children 0-2 • Online training for using the WHO growth charts • Measuring length and weight in infants
Assess family history, including early risk factors for obesity	• AAP First 1000 Days Policy Statement
Employ robust reminder/recall processes to support well visit adherence	• Reminder Recall Resources (see ACHIA website)

Appendix E: Healthy Beginnings Timeline

Healthy Beginnings an ACHIA Childhood Obesity Prevention Collaborative
December 2020 to August 2021

Action Period 1			Action Period 2			Action Period 3		
Dec 2020	Jan 2021	Feb 2021	March 2021	April 2021	May 2021	June 2021	July 2021	Aug 2021
Webinar: Orientation and Data Webinar 12/9/2020 Prework: Assemble Core Team; Review	Peer to Peer/ COVID Corner webinar: 1/27/2021 Data Due (baseline) 1/22/2021	Webinar 2/17/2021 Nutrition	Peer to Peer/ COVID Corner webinar: 3/17/2021 Data Due 3/19/2021	Webinar 4/14/2021 Supportive Environment	Peer to Peer/ COVID Corner webinar: 5/19/2021 Data Due 5/14/2021	Webinar 6/16/2021 Social Determinants of Health	Peer to Peer/ COVID Corner webinar: 7/21/2021 Data Due 7/16/2021	Webinar 8/18/2021 Celebration
Practice Meeting	Practice Meeting	Practice Meeting	Practice Meeting	Practice Meeting	Practice Meeting	Practice Meeting	Practice Meeting	Practice Meeting
Complete Practice Readiness Assessment Survey: 12/9/2020 Core Team Review AAP CME Module complete by: 12/9/2020	Physicians seeking MOC complete AAP CME modules by: 2/17/2021							Post Survey Due: Attestations Due: