

Project Title: Early Peanut Introduction in Infants to Prevent Peanut Allergy: Improving Guideline Adherence Through EMR Standardization

Improvement Scholars Program Proposal
UNC Institute for Healthcare Quality Improvement

1. Project Lead/Key Contact

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2. Why are you interested in participating in the Improvement Scholars Program?

The recent completion of my Doctor of Nursing Practice program was an introduction to quality improvement work. I selected a project about which I am passionate, which had direct implications for my professional practice as a pediatric nurse practitioner in the allergy and immunology division at UNC. Through mentorship and interprofessional collaboration, the results of my pilot project left me wanting to do more and take my project 'on the road' to impact the surrounding UNC community more significantly.

3. Which UNC Health improvement priority will your project address?

Peanut allergy in children is a population health problem affecting individuals, families, and healthcare systems. Research shows early peanut introduction can reduce the incidence of peanut allergy in young infants, but adoption of this practice remains low in primary care settings. Primary prevention of peanut allergy should target all infants during the first year of life. This project will address the outpatient care improvement priority.

4. What is the problem or gap in quality you seek to improve?

The prevalence of peanut allergy in children has increased by more than 50% from 2001 to 2017 in the United States (Togias et al., 2017). The 2017 addendum guidelines replace the 2008 guidelines from the American Academy of Pediatrics (AAP), which recommended delaying the introduction of allergenic foods, including peanuts (Greer et al., 2019). The Learning Early about Peanut (LEAP) study found an 86.1% relative reduction in the prevalence of peanut allergy between a peanut consumption group and a peanut avoidance group. In this novel study, infants randomized to consume peanuts regularly, starting around six months of age through 60 months of age, had lower rates of peanut allergy than infants randomized to delay the introduction of peanut until 60 months ($p < .001$) (Du Toit et al., 2015). However, primary care settings have not widely adopted the addendum guidelines published in 2017 in response to the LEAP study. Seven years after the LEAP study, clinicians, caregivers, and policy-makers struggle to optimize the guidelines' implementation strategies (Abrams et al., 2021). Documented barriers to carrying out the addendum guidelines for screening high-risk infants include the overall cost, time, resource utilization, and practice infrastructures (Abrams et al., 2020;

Greenhawt et al., 2018; Koplin et al., 2016). Therefore, the purpose of my doctoral quality improvement project was to improve adherence to early peanut introduction guidelines by primary care providers (PCPs) during 4, 6, and 9-month well-child check (WCC) encounters using electronic medical record (EMR) standardization.

5. Describe the patient population affected, scope, and impact of the problem.

Peanut allergy is a common problem with significant morbidity among children. It affects 2% of the population in western nations (Lieberman et al., 2020). Families living with peanut allergies can suffer financial and psychological burdens, including needing to shop at expensive specialty stores for allergen-safe food, bullying at schools, friction in caregiver relationships, limitations in extracurricular activities, and the cost of epinephrine auto-injectors (Bilaver et al., 2016). Only one in five children will outgrow peanut allergy (Cosme-Blanco et al., 2020), and allergic reactions to peanuts are the leading cause of anaphylaxis in children (Du Toit et al., 2015). Early exposure to allergens through disrupted skin barriers, as in infants with eczema, can lead to the development of food allergies (Larson et al., 2017). Strong evidence from the Learning Early About Peanut (LEAP) study suggests that early peanut introduction (EPI) for infants after four months of age but before 12 months can reduce the risk of developing peanut allergy (Du Toit et al., 2015; Fleischer et al., 2021; Obbagy et al., 2019; Togias et al., 2017).

EPI guidelines have not been widely adopted or standardized at UNC primary care offices during WCCs during the first year of life. In a retrospective chart review of encounters at UNC from 2017 to 2020 for infants under 12 months of age presenting for either a WCC or eczema-focused visit, researchers found that 0.8% of those clinical encounters had documentation of EPI guidance (Iglesia et al., 2021). During the baseline period, the clinic conducted 134 WCC encounters for 4, 6, and 9-month-old infants between January 1, 2022, and March 31, 2022. Providers documented EPI guidance during nine (6.7%) of these visits (Herlihy, 2022).

The success of peanut allergy prevention in infants is highly dependent on PCPs incorporating the addendum guidelines into routine WCC encounters in infants' first year of life (Bilaver et al., 2019; Lai & Sicherer, 2019). This project will impact children receiving care at identified primary care clinics in the UNC Health system. Eczema is still considered the highest risk factor for developing IgE-mediated food allergy (Fleischer et al., 2021).

Without guidance from their providers at WCC encounters during the first year of life, they may miss a critical window of peanut allergy prevention through early introduction of peanut. Koplin et al. (2016) showed that guideline adherence might only prevent up to 44% of peanut allergy diagnoses if providers restrict interventions to high-risk infants. Therefore, we need to target guiding EPI to all infants unless their high-risk status requires allergy referral.

6. What do you think are the underlying causes of the problem? Why do you think the problem is happening?

I believe the barriers to adopting standardized EPI guidance in PCP settings, including UNC Health, are due to the extraordinary burden upon the shoulders of primary care providers. With specific scheduling demands, providers must conduct WCC encounters efficiently and thoroughly. This dichotomy leaves little room for a lengthy list of new initiatives, each deemed necessary by one specialty's agenda or another.

While primary care providers may be aware of EPI for allergy prevention, they may fear their most highly atopic patients reacting to peanuts at home and feel responsible for that outcome. They may also not perceive the importance of recommending EPI in all infants, even those considered low-risk for developing peanut allergy. Broadly, many PCPs lack the tools and standardized protocol to briefly and quickly evaluate an infant's risk during WCC encounters in the first year of life. Providers are also subject to the same flaws as any of us providing specialty care. They may forget to discuss EPI if there is no prompt in the EMR to remind them.

In our pilot project, the local context questionnaire identified lack of time as the main barrier perceived by staff and providers to implementing this initiative. I suspect this perception is not different in other primary care settings. However, our balancing measures showed no statistically significant changes in patient time-in-room ($p=0.795$) during our intervention. I attribute this to the thoughtful structure of making our tools easy to use and difficult to ignore by embedding them in the EMR.

7. What is the history of improvement or attempted improvement at UNC Health? What work will your proposed improvement build on?

Through my doctoral project, my quality improvement (QI) team and I developed and implemented a work protocol to improve guideline adherence through EMR standardization using QI methodology and the model for improvement (Institute for Healthcare Improvement [IHI], n.d.; Langley et al., 2009). Interventions included EMR smart lists, visit templates, and patient education handouts for home peanut introduction at 4, 6, and 9-month WCC encounters. Collectively, these interventions represent a clinical decision support (CDS) tool bundle. Through plan-do-study-act (PDSA) cycles, the team executed changes and modifications to improve outcomes. We piloted the CDS bundle, collected 19 weeks of data, and continue to use the bundle at the Children's Primary and Specialty Clinic in Chapel Hill.

The team collected data from 292 WCC encounters during the QI project. Documentation of clinically appropriate early peanut introduction (EPI) guidance at 4, 6, and 9-month WCCs shifted from a mean of 8.8% at baseline to 74.7% after 19 weeks of PDSA cycles ($p<0.001$) (Figure 1). Mean provider adoption of smart lists and templates was 67.3% (Figure 2), and the distribution of home peanut introduction handouts was 50.2% after 19 weeks of project implementation (Figure 3). No statistically significant changes in patient time in-room ($p=0.795$), and DTaP vaccination rates at 6-month visits remained at 100% during the intervention (Table 1).

I propose to build on the results of our pilot intervention by adapting and modifying the tools in our CDS bundle to meet the needs and existing workflow of the primary care clinics in the UNC health system identified to receive the project's next iteration. While project aims will be similar to those of the pilot project, how we will target these aims will vary. Existing tools will serve as the CDS bundle foundation, but adapting the tools to individual sites after conducting local context questionnaires and site assessments will ensure our efforts remain innovative to improve the spread of this project to additional practices.

Figure 1

Percentage of Documentation of EPI Guidance in EMR

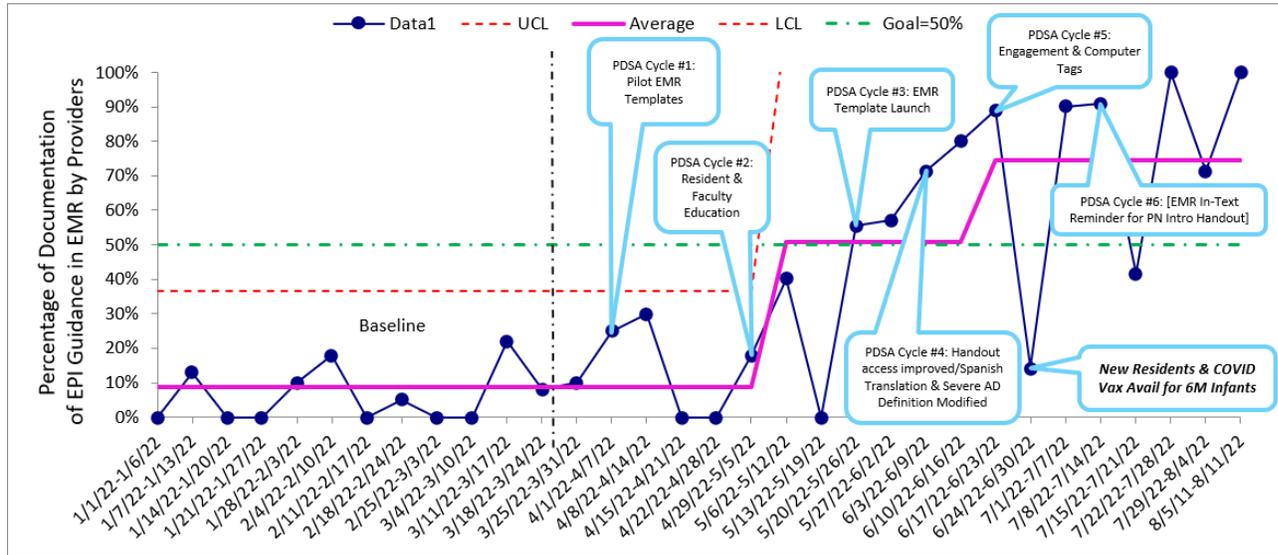


Figure 2

Percentage of Provider Adoption of EMR Templates, Smart Lists, and Phrases

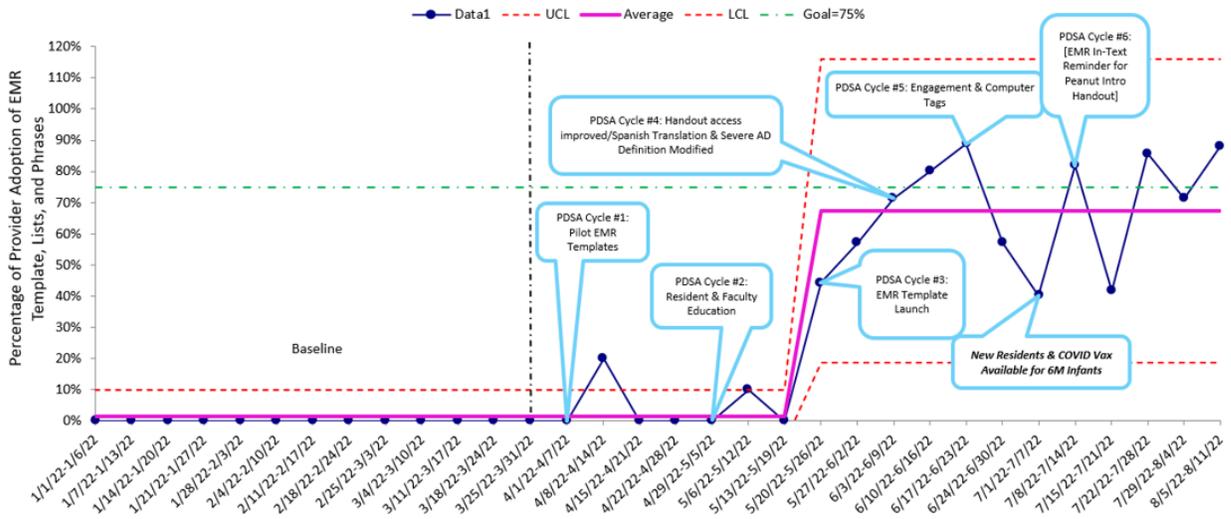


Figure 3

Percentage of Expected Home Peanut Introduction Handouts in AVS

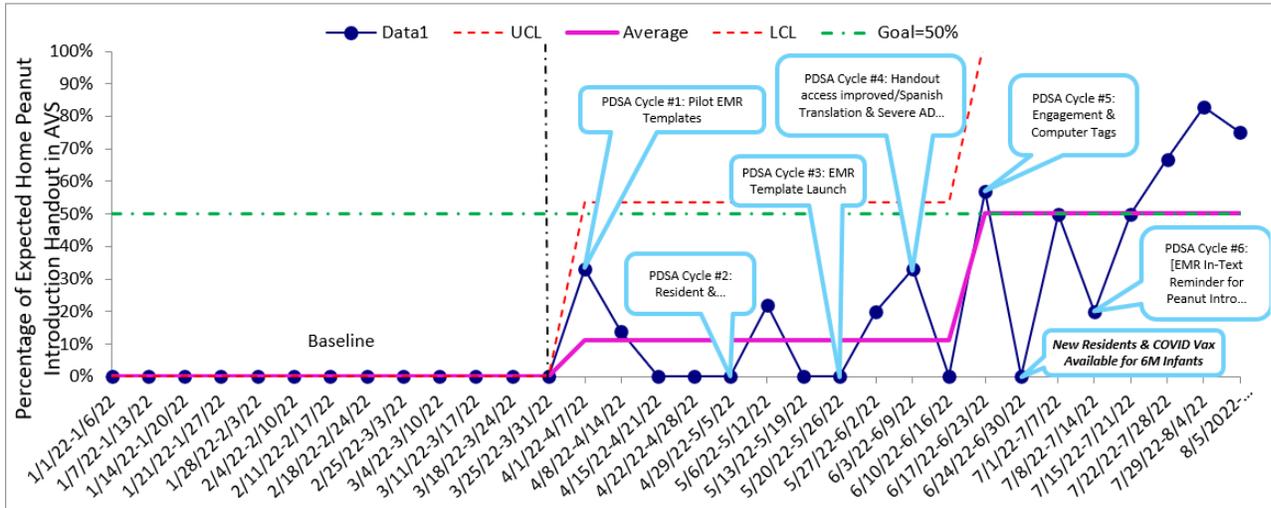


Table 1

Balancing Measures at Baseline and Project Implementation

	Baseline	QI Project	p-value*
DTaP Vaccination 6-month WCC	100%	100%	N/A
Average Time In-Room (minutes)	62	63	.80
Weekly Avg. # of 4, 6, 9-month WCC encounters	10	8	.15

* Obtained using 2-tailed, independent t-test

8. Table 2

Measures for Early Peanut Introduction in Infants to Prevent Peanut Allergy: Improving Guideline Adherence Through EMR Standardization

Measure Name	Type	Measure Calculation	Exclusion	Data Source	Baseline**	Goal	Collection Frequency
Mean percentage of documentation of clinically appropriate EPI guidance at 4, 6, and 9-month WCCs in patients' EMR	Outcome	Numerator: Number of 4, 6, and 9-month WCCs with provider documentation of EPI guidance in EMR note Denominator: Number of 4, 6, and 9-month WCCs	None	EMR and custom EPIC Report	9%	75%	Every 2 weeks
Mean percentage of expected home peanut introduction handout inserted in AVS for infants with no eczema or mild-moderate eczema	Process	Numerator: Number of 4, 6, and 9-month WCCs for infants with no eczema or mild-moderate eczema where EPI handout distributed in AVS Denominator: Number of 4, 6, and 9-month WCCs for infants with no eczema or mild-moderate eczema	Infants not yet introduced to solid foods	EMR and custom EPIC Report	0%	50%	Every 2 weeks
Percentage of sIgE* peanut orders placed and resulted during 4, 6, and 9-month WCCs for infants with severe eczema and/or egg allergy *Southpoint Pediatrics to use skin prick testing instead of serum IgE	Process	Numerator: Number of sIgE* peanut orders placed and resulted during 4, 6, and 9-month WCCs for infants with severe eczema (defined in work protocol) and/or egg allergy Denominator: Number of 4, 6, and 9-month WCCs in which infant has documented severe eczema (defined in work protocol) or egg allergy	None	EMR and custom EPIC report	0%	50%	Every 2 weeks
Avg in-room time (min) for 4, 6, and 9-month WCCs	Balancing	Mean in-room time across all 4, 6, and 9-month WCCs	Concurrent Sibling Visits	EPIC custom data report	60 min	≤5% increase	Every 2 weeks

**Please note that baseline data for individual sites will be calculated during baseline data collection prior to implementation. In its place, the baseline data numbers reflected in the table were those of our pilot project and I am making an assumption that other clinics in the same UNC system will have similar data. Goals numbers are the same as those used in the pilot project.

9. What ideas do you have for changes that will result in improvement?

QI methodology, PDSA cycles, and interprofessional collaboration in primary care settings improved documentation of EPI guidance at routine WCC encounters without impacting other measures at the UNC Children's Primary and Specialty Clinic during this pilot initiative. Broader PCP use of CDS tools and EMR standardization could further improve guideline adherence to prevent peanut allergy in infants. With the second iteration of this project, we hope to target additional outpatient primary care offices serving children in the UNC community. These offices include UNC Family Medicine at Southpoint, UNC Pediatrics at Southpoint, and UNC Pediatrics at Panther Creek.

While our pilot project provided a foundation for using our developed toolkit, consisting of three primary integration strategies, adapting the toolkit to new environments will require flexibility, adaptation, and innovation to meet the needs of other primary care locations. The following are the available elements of the toolkit and elements that may improve outcomes at new target locations.

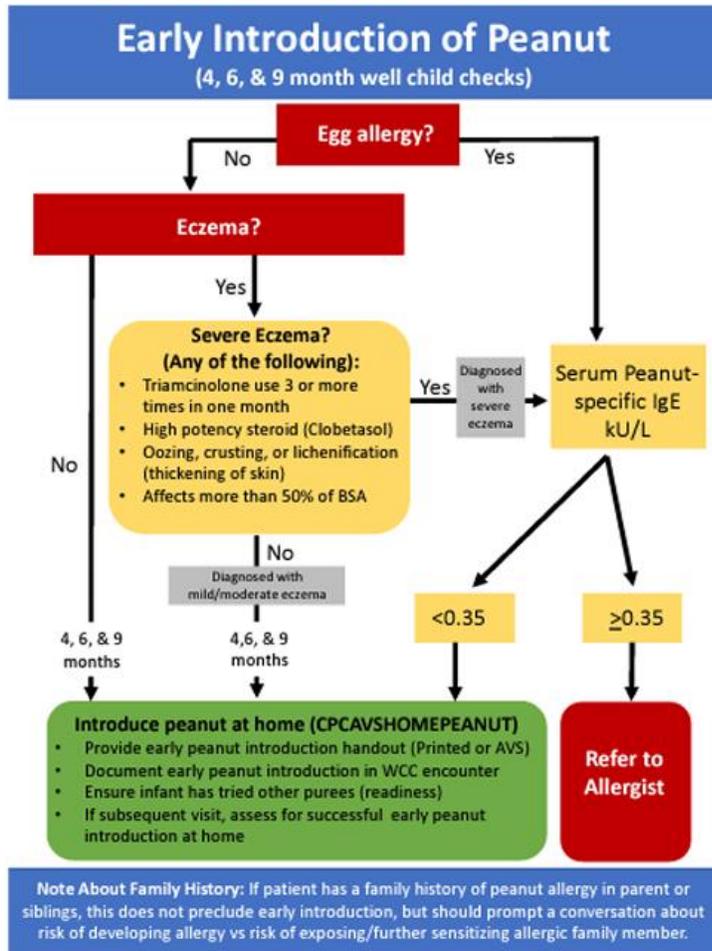
Standard Work Protocol

The EPI standard work protocol from our pilot project (Figure 4) was the algorithm designed to aid providers in distinguishing between high-risk and low-risk infants for peanut introduction at home. Laminated copies of the protocol hung throughout the provider workroom, where providers performed most of their charting during WCC encounters. If sites prefer access to the tool in patient rooms or elsewhere in the clinic for ease of access at risk assessment time, we can accommodate this. If other sites conduct a similar workflow, we can duplicate the accessibility of this tool.

The primary intent of the protocol is to remind providers that most infants will be eligible for home peanut introduction and should prompt them to provide the home early peanut introduction handout (Figure 5). On rare occasions, infants identified with severe eczema should receive a serum IgE to peanut through a venipuncture blood draw. One of the key barriers identified in our early literature review was the inconsistent definition of severe eczema. The work protocol defines our meaning of severe eczema based on topical steroid use and physical exam findings. Suppose providers at the practices have a different consensus on the definition of severe eczema or use topical steroids other than those listed in the protocol. In that case, this, too, can be adapted to the site needs and established flow. However, part of the goals for improved outcomes will hinge on leader facilitation to better help providers classify infant eczema according to the evidenced-based protocol.

Figure 4

Standard Work Protocol



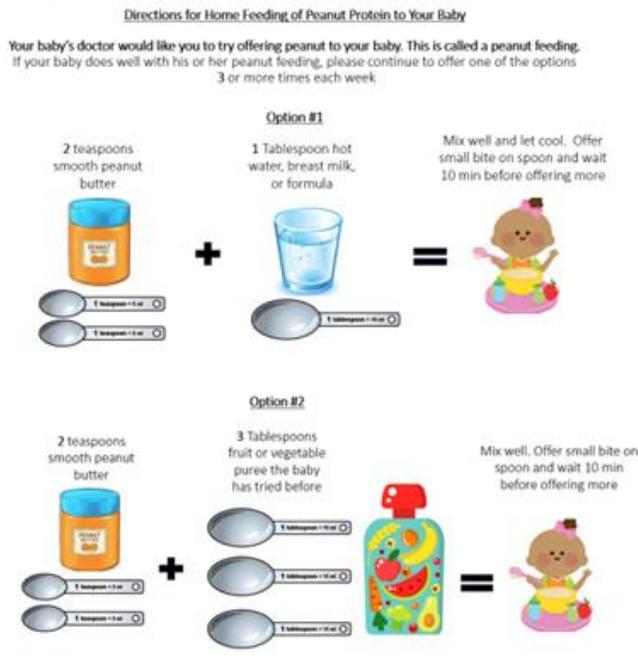
(Herlihy, 2022)

Early Peanut Introduction Handout

The addendum guidelines (Togias et al., 2017) aim to guide caregivers in introducing peanuts to infants at home. However, after careful assessment, the QI team determined that these instructions, as written, were too complex and deterred caregivers from attempting home EPI, even if recommended. Therefore, the project lead simplified the instructions for home introduction of peanuts. The project lead removed complicated measurements for preparation in the handout's adaptation. Additionally, the addendum guidelines offer three different types of peanut-containing foods. Still, the team felt the use of peanut butter was most practical and accessible to families, and thus we removed other forms of peanut-containing foods from the handout. The unique supplemental nutrition program known as WIC (Women, Infants, and Children) covers peanut butter, which aids in overcoming barriers to accessing this food and remains inclusive for families experiencing food insecurity. Our handout captures the same safety guidance from the addendum guidelines and simplifies the critical information in the adapted handout.

To ensure equity and access to these interventions, we translated the document into Spanish, as this represented 25% of the clinic's population. During assessments of the proposed new clinic sites, we plan to use resources and funding to further translate into languages needed to ensure all patients in the clinic's demographic receive access to the interventional material. Additionally, the pilot project had associated smart phrases with inserting this handout into the patient's after-visit summary (AVS). Still, other methods of dissemination preferred by the clinic, such as colored printouts or laminated versions for teaching parents and caregivers, would be possible.

Figure 5
Home Early Peanut Introduction Handout



Please remember a few things...

- Never Give your baby whole peanuts or peanut pieces or chunky peanut butter
- Give the first peanut feeding at home (not daycare or restaurant)
- Only feed your baby peanut butter when he or she is healthy
- Make sure 1 adult can focus his or her attention on the baby for 2 hours after feeding peanut the first time



What should you watch for? What are signs of an allergic reaction?

- A new rash or a few hives (welts) around the mouth

Stop feeding the peanut food and call your doctor's office or 911 if your baby has more serious symptoms of an allergic reaction...

- Lip, face, or tongue swelling
- Vomiting (throwing up)
- Many hives (welts) over the body
- Lots of coughing or trouble breathing
- Change in skin color (pale/blue)

(Herlihy, 2022)

EMR Changes

There were several changes to the clinic's provider template for 4, 6, and 9-month WCC encounters during our pilot project. First, members of the QI team adapted the templates for these WCC encounters in EPIC to remove unnecessary history collection, objective assessments, and anticipatory guidance. These templates can be duplicated or modified based on the new site assessments and individual provider preferences.

Second, for each 4, 6, and 9-month WCC visit template or 'smart phrase' for the associated visit, the QI lead included an anticipatory guidance section for EPI screening around the same template section discussing nutrition. The EPI screening involved multi-select smart lists, including solid food introduction, peanut introduction, and other risk factors for the development of peanut allergy. The template then prompted the provider to select a low, moderate, or high-risk level for the infant related to the development of peanut allergy. Based on the risk stratification, the provider chose from another smart list to guide the family towards home introduction or direct the provider to order a sIgE to peanut.

Third, we modified the skin physical exam findings template to include a specific detailed skin assessment smart list detailing the presence or absence of typical morphologic features of eczema on specified areas of the infant's body. This focus on standardizing and improving eczema classification is essential to adequately stratify infants into the correct risk category for the development of peanut allergy (Herlihy, 2022). We hope to find sites familiar with smart lists and phrases and will work with site champions to design 4, 6, and 9-month WCC templates that incorporate essential elements of EPI. In contrast, maintaining other important note elements deemed necessary to the sites.

10. How has this problem been addressed successfully elsewhere?

The most similar and arguably successful effort to improve EPI guideline adherence is the iREACH program, a CDS bundle utilizing EMR features and handouts to aid providers in early peanut introduction in primary care settings. In a sample of 143 WCC encounters at 4 and 6 months, results showed better adherence to guidelines (52.4%) with the use of the iREACH bundle compared to the control clinic (14.1%) without the bundle ($p < .001$) (Bilaver et al., 2019). This comparison used a similar sample size and population as our QI project and showed that using CDS tools, including EMR features, improved adherence in a primary care setting. QI projects without CDS tools in the EMR did not perform as well as those with EMR bundles.

11. How will high-performance management tools be used to support the work?

Practice Facilitation

Primary care practices often lack the resources to invest in infrastructure and training, which are both crucial elements of QI success. Practice facilitation is an implementation strategy and high-performance management tool to assist clinics with developing the capacity for sustained performance of QI interventions. The research literature supports that practice facilitation increases the likelihood of success in QI initiatives, increases provider adherence to evidence-based guidelines, and improves care quality metrics in many clinical settings (Walunas et al., 2021). Facilitators support practice change by empowering clinic members to be involved in decision-making while creating an environment that promotes continuous improvement through respect, inclusion, and neutrality (Agency for Healthcare Research and Quality [AHRQ], 2013). The IHQI project manager will serve as the practice facilitator and engage in activities

consistent with its model, such as kickoff meetings, goal setting, maintaining initiative momentum, and planning for sustainability and transfer of project ownership.

Audit and Feedback

Using the tailored EPIC report and chart audits, the project manager will summarize the data every two weeks during the implementation period as a feedback mechanism for the clinic providers. Results will aid in determining modifications for subsequent PDSA cycles and praise QI successes in the clinics.

12. Please describe how your project addresses each of the five elements reflected in the Quintuple Aim for Health Care Improvement.

Improved Health – Early peanut introduction has been shown to reduce the relative risk of peanut allergy by 86% (DuToit, 2015). The overall reduction in the incidence of peanut allergy through primary and secondary prevention can prevent the quality of life limitations documented in those with food allergies and reduce episodes of anaphylaxis caused by peanuts. Only one in five children will outgrow peanut allergy (Cosme-Blanco et al., 2020), and allergic reactions to peanuts are the leading cause of anaphylaxis in children (Du Toit et al., 2015). Peanut allergy correlates with higher rates of accidental exposure, more severe allergic reactions, and approximately 7-14% of peanut-allergic individuals experience accidental ingestions each year (Lieberman et al., 2020).

Enhanced patient experience –Parents of infants navigate multiple developmental milestones in the first year of life, including weaning to solid foods. Incorporating evidence-based knowledge and guidance into this portion of the visit should add value to the patient experience, reassuring their child's providers are knowledgeable about peanut allergy prevention.

Enhanced clinician and staff experience -Using smart lists, phrases, and embedded prompts should reduce the burden of recall to cover anticipatory guidance related to peanut allergy. Suppose clinics are open to streamlining WCC templates before the launch of the QI project. In that case, we are willing to have innovative planning meetings to ensure note templates are optimized for all visit goals, not just EPI discussions.

Health equity- The UNC medical umbrella provides services and access to underserved communities and populations in North Carolina. We designed our home introduction handout to include only peanut butter, rather than more expensive options offered in the addendum guidelines, to ensure those families with food insecurity could access peanut butter through WIC. We estimate that self-pay or Medicaid populations will be similar across our intervention clinics compared to our pilot clinic, which comprised 50% Medicaid or self-pay.

Reduced costs – Families living with peanut allergies can suffer financial and psychological burdens, including needing to shop at expensive specialty stores for allergen-safe food, bullying at schools, friction in caregiver relationships, limitations in extracurricular activities, and the cost of epinephrine auto-injectors (Bilaver et al., 2016). From 2004 to 2006, there were approximately 9,500 hospital discharges per year with a diagnosis related to food allergy among children under the age of 18 years (Jackson et al., 2013). These data represent both costs to individuals and costs to the healthcare system.

13. Please describe the support and engagement from leadership for the work you are proposing. Please indicate leaders with whom you have consulted about this proposal.

My direct supervisor and Division Chief for Pediatrics Allergy and Immunology, Dr. Edwin Kim, has verbalized support for this initiative. Please reference his attached letter of support. We have discussed the time commitment for participating in IHQI scholars throughout the year, and we both feel the experience could benefit our Division in future QI endeavors.

Additionally, Dr. Katherine Jordan, the Clinical Director of the UNC Children's Primary and Speciality Care Clinic, continues to offer leadership support for this project. She was instrumental in the pilot launch of the initiative and has been the primary contact for outreach to other primary care clinic locations. We have firm commitments from leadership at UNC Children's Panther Creek and UNC Pediatrics at Southpoint. We have a tentative commitment from UNC Family Medicine at Southpoint. These physician champions have discussed this project with other providers and stakeholders in their respective clinics before agreeing to participate.

14. Who will comprise the project team?

Clinical Leadership:

- Dr. Priyanka Rao, Physician Provider at UNC Pediatrics at Panther Creek
- Dr. Elizabeth Blyth, Physician Provider at UNC Pediatrics at Southpoint
- Dr. Laura Gay, Physician Provider at UNC Family Medicine at Southpoint

Day-to-Day Leadership:

- Dr. Lauren Herlihy, Certified Pediatric Nurse Practitioner, Division of Allergy & Immunology

Quality Improvement Specialist:

- IQHI Project Manager (TBD)

Project Sponsor:

- Dr. Katherine Jordan, Assistant Professor and Medical Director of UNC Children's Primary and Specialty Clinic

Information Technology Support:

- June Thompson, HCS-IT Data and Interoperability Developer

Other Team Members:

- Mikalan Krause, RN Nurse Manager at UNC Pediatrics at Southpoint
- Dr. Edwin Kim, Division Chief Pediatric Allergy & Immunology

15. How will you ensure sufficient time to dedicate to the project over the scholar year?

I successfully implemented the pilot QI project during my full-time faculty position as a part of my DNP program. I have supportive colleagues who echo my drive behind this initiative and the goal for the further spread of EPI guidance. I am accustomed to self-scheduling my tasks, working around my clinic patients, and finding time during off-hours to stay on top of projects and professional duties. I keep a paper planner and outlook calendar and block dedicated time to ongoing projects and tasks.

16. What factors do you anticipate will foster and hinder improvement?

We hope to foster improvement by developing and maintaining relationships with the clinical leadership and other clinical providers at our intervention clinics. Previously, we incentivized providers with gentle reminders about the project by placing candy in the

workrooms. Additionally, soliciting ongoing feedback from our clinical leadership for seamlessly integrating our initiatives into the existing workflow will be important in fostering improvement. We will not want our project and interventions to come across as an agenda that conflicts with their day-to-day operations. If the providers feel burdened, we will want to adjust how they use the CDS bundle. Additionally, given that the providers are the most who will most frequently interact with the smart tools, we will emphasize their shared feedback as highly valuable. We will welcome suggestions and make necessary tweaks to our tools.

Even in the early stages of this proposal, we heard from UNC Pediatrics at Southpoint that they prefer to use skin prick testing in place of serum IgE blood draws as a part of their screening process. We discussed that we could modify our algorithm to meet their site-specific needs to direct providers to skin test infants for peanut if they meet the criteria for severe eczema and/or egg allergy. The addendum guidelines allow for both procedures. We used this opportunity to impress upon these participating clinics our willingness to meet their needs to engage with the interventions using innovative problem solving.

Rigidity in practice providers who perceive a lack of impact of the initiative, prefer to use existing note templates due to familiarity and ease, or provider gaps in understanding EMR functionality with advanced smart lists and phrases may hinder improvement efforts. We anticipate many of these hindrances and will plan accordingly to ensure education on the project's background and clinical significance, piloting the CDS bundle, and feedback throughout the initiative to address all concerns or reservations about the project.

17. What ideas do you have for sustaining the improvement?

Sustainability requires continued buy-in from project champions. While we have identified clinical leadership at each clinic location, sustainability planning towards the end of the project will focus on providers who most consistently used the CDS bundle of tools. Along with clinical leadership, identifying providers who are most likely to continue using the toolkit will be essential to continue these efforts. To highlight the robust sustainability of the pilot project, documentation of EPI guidance since leadership handoff in August was 83% in December 2022 compared to 75% at the time of leadership handoff. Therefore, we feel the CDS tools need little upkeep to remain effective in practice and continue to achieve outcomes.

18. Implementation Timeline

Task	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
EPIC report design (IT analyst)	X													
Baseline data collection (Retrospective 3 months)	X													
Develop Data Collection Spreadsheets	X	X												
Develop SPCC Charts (QI Macros)							X							
Modify WCC Note Templates	X				X*				X*			X*		
Modify Smart Lists/Phrases	X				X*				X*			X*		
Modify Work Protocol	X				X*				X*			X*		
Pilot Test CDS Bundle Functions		X												
Launch CDS Bundle Functions			X											
Distribute Work Protocols			X											
Educations/Engagement Sessions		X					X							
Audit/Feedback Report to Site Leaders				X		X		X		X				
Data Collection/Update Spreadsheets			X		X		X		X		X		X	
Analyze Data													X	
Sustainability Planning													X	
Data Presentation Elements (SPCC, Tables, Figures)													X	
Present to IHQI														X

**Modification of notes, smart lists, and work protocol as needed*

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