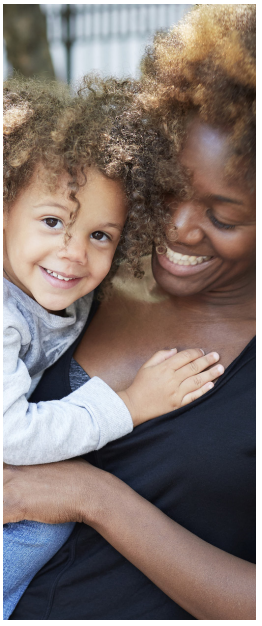
United Hospital Fund

Clinical-Community Partnerships for Better Health

Observations from New York City's Partnerships for Early Childhood Development Initiative



A SPECIAL REPORT

United Hospital Fund

Clinical-Community Partnerships for Better Health

Observations from New York City's Partnerships for Early Childhood Development Initiative

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UNITED HOSPITAL FUND

The Partnerships for Early Childhood Development Initiative is made possible through a funding collaborative consisting of UHF, the Altman Foundation, and The New York Community Trust.

About United Hospital Fund

United Hospital Fund works to build a more effective health care system for every New Yorker. An independent, nonprofit organization, we analyze public policy to inform decision-makers, find common ground among diverse stakeholders, and develop and support innovative programs that improve the quality, accessibility, affordability, and experience of patient care. For more on our initiatives and programs please visit our website at www.uhfnyc.org.

About the Altman Foundation

Founded in 1913 by Benjamin Altman, the mission of the Altman Foundation is to support programs and institutions that enrich the quality of life in New York City, with a particular focus on initiatives that help individuals, families, and communities benefit from the services and opportunities that will enable them to achieve their full potential. With a focus on vulnerable populations, the Foundation awards grants in the areas of Education, Health, Strengthening Communities, and Arts and Culture. For more information about the Altman Foundation please visit our website at www.altmanfoundation.org.

About The New York Community Trust

The New York Community Trust is committed to promoting healthy lives, promising futures, and thriving communities for all New Yorkers. We are the community foundation for New York City, Westchester, and Long Island—with a permanent endowment dedicated to improving our region through strategic grantmaking, civic engagement, and smart giving. Through our competitive grants program, made possible with money left to us by bequest, we fund programs that improve the lives of all New Yorkers, especially those most in need. For more information on The Trust, please visit our website at www.nycommunitytrust.org.

From the Learning Collaborative Chairman

One in five children in the United States are in families living below the federal poverty level. Almost one in two families—43 percent—are in financial distress, unable to cover basic needs such as food, housing, heat, health care, child care, and transportation to work.

The consequences of growing up in poverty, especially in early childhood, are long-lasting and intergenerational, with health problems ranging from low birth weight and poor growth through exposure to lead and other toxins and increased rates of chronic diseases such as asthma. Poor children also experience toxic stress, poor academic achievement, and significant behavioral problems.

In view of the magnitude of this problem, in 2016 the American Academy of Pediatrics (AAP) published the policy statement *Poverty and Child Health in the United States*. Among its important recommendations was a call for screening for risk factors within the social determinants of health, including asking about basic needs. Further, AAP recommended that pediatric practices connect families with resources in the community and develop collaborative relationships with community organizations to help families with these unmet needs.

To understand the real-life issues in implementing these recommendations, as well as to develop successful models for replication, United Hospital Fund, in a funding collaboration with the Altman Foundation and The New York Community Trust, launched Partnerships for Early Childhood Development, a groundbreaking practice collaborative bringing together 11 health systems and 17 community organizations in New York City to partner on screening, referrals, and feedback and to share their experiences in a learning collaborative. The systems developed and the lessons learned are likely to be models for pediatric programs across the country, and to jump-start both screening for social determinants of health and development of referral mechanisms and community partnerships in pediatric primary care, bringing the AAP policy recommendations to fruition. This important report describes the first year of that effort, including successful approaches and challenges, as well as directions for future study.

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Foreword

In 2015 United Hospital Fund released *Seizing the Moment: Strengthening Children's Primary Care in New York*. Reflecting the growing awareness of ages 0 through 5 as critical years for shaping children's lifelong health and well-being, the report presented a framework for fostering healthy early childhood development with evidence-based interventions that could be applied in pediatric practices.

UHF's Partnerships for Early Childhood Development initiative was launched a year later, building on one of the interventions noted in the earlier report: screening for risks associated with social determinants of health, making connections with community-based organizations to address identified needs, and closing the loop to ensure timely and effective feedback and follow up.

Supported by an innovative funding collaborative made up of UHF, the Altman Foundation, and The New York Community Trust, the initiative linked 11 New York City-based health care systems with one or more of 17 community partners to develop systematic approaches to that screen-and-follow-up challenge. In addition to each team's work, a ten-month learning collaborative brought all participants together to share best practices and their experiences.

The initiative is one of the first fruits of UHF's prioritization of clinical-community partnerships as a cornerstone of a high-quality health system—and improved health—for all. Even at this early stage, participants' experiences and observations provide lessons for not only pediatric practices seeking to develop such partnerships but also for health care providers serving other at-risk populations.

These are just first steps. A second round of grants will now allow eight providers to expand their efforts, focusing on continued screening and referrals, streamlining workflow and communications processes, and helping us identify best practices for building effective partnerships to advance health.

This report presents Year One participants' observations and insights, progress made, continuing challenges, and implications for health systems, policymakers, payers, and foundations. We hope you find it valuable both for its presentation of a model approach to one critical aspect of child health and for the larger possibilities for clinical-community partnerships that it portends.

Anthony Shih, MD, MPH
President
United Hospital Fund

Introduction

One result of the national health care debate has been wider recognition that many health outcomes are driven by factors outside of health care. Some of these factors, including community and family conditions, play an outsized role in influencing child health; decades of research have shown that unmet basic needs and toxic environments during critical periods of development can physically alter children's brains and affect their long-term health. How to turn this information into action, however, remains a question. Possibilities range from systemic changes such as increasing national investments in social services and public health to strategies that incentivize health care providers to be accountable for patient outcomes, even if doing so warrants addressing issues such as housing, transportation, or access to healthy foods.

One step frequently proposed is screening and addressing social determinants of health during regular doctor's visits. This approach may be particularly beneficial during early childhood, since nearly all children make multiple visits to a primary care provider in the first few years of life. In 2016 the American Academy of Pediatrics (AAP) recommended that all pediatricians begin screening their patients for risk factors to child health and well-being.[1] That same year, a randomized control trial at UCSF Benioff Children's Hospital suggested that screening for unmet resource needs in a primary care setting and assisted referrals can result in improvements in parent-reported child health status.[2]

But screening for social needs is challenging, and acting on such needs can be harder still. A recent national survey found that many children's health providers face real and perceived barriers to assessing families for risk factors and engaging with local resources for help. Some of these barriers include clinicians' unfamiliarity with family risk assessment tools or available community resources.[3] Increasing the level of screening for social needs in a primary care setting requires functional systems between clinical sites and social service organizations, and establishing partnerships that can routinely and reliably respond to patients' nonmedical needs. Building such systems in turn requires dedicated resources.

1 American Academy of Pediatrics. Poverty and Child Health in the United States, *Pediatrics*, 2016;137(4): http://pediatrics.aappublications.org/content/137/4/e20160339

2 Gottlieb LM, Hessler D, Long D, et al. Effects of Social Needs Screening and In-Person Service Navigation on Child Health: A Randomized Clinical Trial. *JAMA Pediatr.* 2016; 170(11):e162521. doi:10.1001/jamapediatrics.2016.2521

3 Szilagyi M, et al. Pediatricians' Perceived Barriers to Addressing Early Brain and Child Development and Inquiring About Child/Parent Adverse Childhood Experiences (abstract). Presented at the 2016 Pediatric Academic Societies Annual Meeting. https://www.aap.org/en-us/professional-resources/Research/research-findings/Pages/Pediatricians-Perceived-Barriers-to-Addressing-Early-Brain-and-Child-Development-and-Inquiring.aspx

The United Hospital Fund, with the Altman Foundation and The New York Community Trust, launched the Partnerships for Early Childhood Development (PECD) initiative[4] in 2017 to encourage innovation in this space and ensure that resources were available for child-serving organizations to build clinical-community partnerships. Through a place-based grant initiative and learning collaborative, PECD has supported 11 health systems and 17 community organizations in New York City. The aim was for each partnership to identify psychosocial needs among children ages 0–5, make linkages to services in the community, and lay a foundation for continued and robust partnership engagement. This report tells the story of the initiative's first year, focusing on what was done, the challenges that arose, and the insights that were gained. We hope it will be a helpful resource for providers, policymakers, and anyone else wishing to support or engage in similar partnership-building work.

4 For more information about the structure and advantages of this three-part funder partnership, see Health Affairs article: https://www.healthaffairs.org/do/10.1377/hblog20170711.061001/full/

About the PECD Initiative

Under the initiative, hospital-affiliated primary care practices were given support to engage at least one community social service partner to establish a system of care in which:

- children under the age of 5 (and their families) are routinely screened for psychosocial risks to healthy development;
- families presenting with unmet needs are referred appropriately to the community-based social service partner or other services;
- results of that referral are communicated back to the clinical practice confirm that the family's needs are being addressed.

Table 1 lists the organizations participating in the initiative. Of the 11 primary care practices, 6 were "affiliated with" private academic medical centers or teaching hospitals, 2 with a public hospital system, and 3 with private community hospitals. Of the 17 community organizations participating, 11 were multi-service organizations, 2 were food banks or provided nutritional support, and 4 were other specialized service providers.

Table 1. PECD Project Teams

Primary Care Practice	Partnering Community Organization(s)
Bronx-Lebanon Hospital	Claremont Neighborhood Center Phipps Neighborhood
Episcopal Health Services, Inc./St. John's Episcopal Hospital	Family Resource Center of Eastern Queens Sheltering Arms
Interfaith Medical Center (Bedford Dental Center and Bishop Walker Health Care Center)	Saint John's Bread & Life
Montefiore Medical Center	Bronx Independent Living Services
Mount Sinai Health System/Icahn School of Medicine at Mount Sinai	Children's Aid's Dunlevy Milbank Clinic LSA Family Health Service food pantry New York Common Pantry
NewYork-Presbyterian/Columbia University Medical Center	Northern Manhattan Perinatal Partnership
NewYork-Presbyterian/Queens	Public Health Solutions
Northwell Health, Cohen Children's Medical Center	The Child Center of New York
NYC Health + Hospitals, Coney Island	New York City Health Bucks program
NYC Health + Hospitals/Gotham, Gouverneur Health	Educational Alliance Grand Street Settlement Henry Street Settlement University Settlement
NYU Langone-Brooklyn and its Family Support Services Center	OHEL Children's Home and Family Services

Learning Collaborative

In addition to grant support, PECD included a learning collaborative for teams led by UHF staff and chaired by Dr. Benard Dreyer, immediate past president of the American Academy of Pediatrics and chair of pediatrics at Bellevue Hospital in Manhattan. Both clinical providers and their community partners participated. The collaborative included three in-person meetings and four webinars (see Appendix A for more information), each of which was enthusiastically attended and resulted in rich conversation about the challenges of forming clinical-community linkages.

Evaluation

An evaluation team, based in the Department of Population Health at NYU Langone Health, was hired to develop an overarching PECD logic model and evaluation framework for teams to follow. The consultants identified common metrics to guide reporting across teams, assisted teams with their logic models and evaluation plans, and provided evaluation-related technical assistance to teams. The consultants also produced an evaluation report for the funders, which is drawn upon in the "Progress to Date" section. Common evaluation measures adhered to by all groups were:

- **Screening rate:** The proportion of individuals in the target population who were screened using the screening tool.
- **Referral rate:** The proportion of individuals who were referred to services out of those with positive screens.
- **Service provision:** The proportion of individuals who received services out of all those referred to services.
- **Referral feedback:** The proportion of individuals referred to services for which there was information transferred from the CBO back to the clinical team (sometimes referred to as "closing the feedback loop").
- **Partnership:** A descriptive assessment of the overall quality or strength of the clinical-community partnership.

As the evaluation team noted in its final report, "the evaluation measures used in this phase of the PECD initiative were developed with the intention of understanding how the program was working, not to assess changes in patient outcomes. This focus, combined with the relatively short program cycle from screening to referral and feedback, allowed teams to better understand the reality of their programs implementation in real-time, and to make changes as necessary along the way."

Project Design

Teams were given broad flexibility to design a project that best fit their clinical and community organization work environments, their relationship with the community, and their prior experience screening or addressing psychosocial needs. As a result, there was much variation in the projects. As Table 2 shows, some teams planned and initiated screening programs for the first time, whereas others expanded existing screening programs to new sites or to cover a wider range of needs. Similarly, some teams established new formal partnerships with local community-based organizations whereas others built upon existing partnerships. While all the projects involved a great amount of workforce training, some teams chose to hire new staff to carry out project activities, and others focused exclusively on building the capacity of existing staff. In addition, teams also differed in the screening tools they used, the psychosocial needs they screened for, their approaches to keeping track of families, and the kinds of support they provided families. (See Appendix B for a more detailed description of each project, and Appendix C for questions the teams considered when setting up a referral process.)

Table 2. Varying Uses for Grant Funds: Primary Approaches by Different Participants[5]

	Primary use of grant funds	A	B	C	D	E	F	G	H	I	J	K
Screening & Referral	Plan and initiate screening and referral at clinic	X	X	X	X	X	X					
	Expand existing screening and referral program to new sites							X	X		X	
	Expand existing program to cover wider range of risks								X	X	X	
Partnership	Establish formal new partnership with CBO(s)	X	X	X	X	X	X		X			
	Strengthen existing partnership with CBO(s)							X	X	X	X	X
Staffing	Build staff buy-in and train the workforce: clinic or CBO staff, including residents, or volunteers	X	X	X	X	X	X	X	X	X	X	
	Hire new staff to facilitate screening and referral process within PCP and/or between PCP and CBO and/or with families	X						X		X	X	
Follow-up	Establish formal tracking system, preferably using electronic technology	X	X	X	X	X	X	X	X	X	X	
	Obtain feedback from families about screening and referral system								X	X	X	X

5 Team names in Table 2 and Table 3 are masked because project activities and data collection were undertaken for quality improvement purposes, not for publication purposes.

Funding

UHF, the Altman Foundation, and The New York Community Trust provided $703,000 for the year-long project's grants and a learning collaborative. The 11 grantees were provided one year of funding ranging from $20,000 to $70,000, depending on the scope and depth of activities they proposed. However, the clinical sites were required to pass a meaningful portion of their budget—on average 33%—to their community partners to cover staff time and other costs associated with the project.

Part I: Progress to Date

The PECD initiative involved a large group of health care providers and social service organizations deeply committed to transforming their relationships with each other and developing new models of care for serving families. In the one-year grant period, all teams[6] successfully introduced or expanded the use of validated screening questions for psychosocial needs, and integrated processes for referring families to community services. Additionally, each team made progress toward developing or refining feedback systems between provider and community partner.

Table 3 presents the overall screening and referral numbers from the participating teams. As of March 1, 2018, the teams conducted 5,534 screens for psychosocial needs related to healthy child development. The number of families screened by teams varied from under 100 to nearly 1,500 families. While this variation reflects the wide range of initial screening targets, it is also the case that some teams had trouble hitting their targets. The two most common reasons identified for not meeting the screening targets were a shortened implementation period (a delayed start, most commonly due to Institutional Review Board approval timelines) and a lack of engagement from the clinical or office staff designated to assist in screening activities.

Screening rates also varied widely by team, from 6% to 100%. This large range can be in part explained by caseload size differences and data collection issues. For example, the team with the lowest screening rate had more eligible visits (11,321) than any other team. Project staff from the team with the screening rate of 100% questioned the quality of their screening numbers because their screening tool was built into their electronic health record system as a step that could not be skipped, making it likely that some providers checked the required box indicating screen completion without having administered the screening tool.

Of the 5,534 screens administered, 1,890 came back positive, meaning that the family was identified as having at least one psychosocial need. Of the nine teams that regarded their screening numbers as valid, the positive screen rate ranged from 19% to 90%, varying with different types of psychosocial needs screened for and levels of need among families. Unfortunately, data were not widely available on the number of families screening positive for multiple needs. However, one site found that between March 2017 and December 2017 (not the full study period), 45% of families who screened positive for at least one need were identified as having multiple needs.

6 As is common with grant initiatives of this scale, one grantee shifted priorities over the course of the grant cycle. This grantee developed an individualized evaluation plan, and although it continued to participate in learning collaborative, its findings are not included in this report.

Table 3. Rates of Screening, Positive Screens, Referrals, Service Use, and Feedback

PECD team	Screening period	Screening rate	Positive screen rate	Referral rate	Service use rate	Feedback rate
A	3/2017-2/2018	153/2,160 (7%)	94/153 (61%)	55/94 (59%) ✓	12/55 (22%)	26/55 (47%)
B	7/2017-1/2018	720/1,307 (55%)	317/720 (44%)	19/22 (86%)	163/317 (51%) ✓	6/6 (100%)
C	10/2017-1/2018	92/235 (39%)	35/92 (38%)	25/35 (71%)	20/25 (80%)	DNR
D	9/2017-2/2018	950/950 (100%) ✓	25/950 (3%)	25/25 (100%) ✓	17/25 (68%)	25/25 (100%) ✓
E	6/2017-2/2018	94/115 (82%) ✓	25/94 (27%)	25/25 (100%) ✓	3/25 (12%)	21/25 (84%) ✓
F	Phase 1: 7/2017-12/2017 Phase 2: 1/2018-2/2018	Phase 1: 275/2,279 (12%) Phase 2: 136/512 (27%)	Phase 1: 223/275 (81%) Phase 2: 122/136 (90%)	Phase 1: DNR Phase 2: 106/122 (87%)	Phase 1: DNR Phase 2: DNR	Phase 1: DNR Phase 2: DNR
G	10/2017-2/2018	HL: 95/110 (86%) ROR: 104/194 (54%)	HL: 18/95 (19%) ROR: DNR	HL: 10/18 (56%) ROR: 44/104 (42%)	HL: DNR ROR: 87/44 (197%)	HL: 0/10 (0%) ROR: 0/87 (0%)
H	4/2017-2/2018	674/11,321 (6%)	208/674 (31%)	199/208 (96%) ✓	DNR	DNR
I	7/2017-2/2018	773/1,038 (74%) ✓	219/773 (28%)	74/117 (63%)	51/74 (69%) ✓	DNR
J	3/2017-3/2018	1,468/3,336 (44%)	604/1,468 (41%)	61/DNR	42/61 (69%)	DNR
Totals	3/2017-3/2018	5,534 total screens	1,890 positive screens	643 referrals	395 families used services	78 times feedback loop was closed

Notes: Findings should be interpreted with the following details in mind. First, neither UHF nor the NYU evaluation team had access to raw data, thus numbers in tables and this summary reflect results provided by teams in the final reports to UHF. Second, both start and end dates for data collection differed across projects and likely affected the quality and quantity of data reported. Third, this initiative was a pilot project, and it was common (and often desirable) for teams to change their protocols as necessary to develop successful interventions and to monitor and evaluate the processes. Therefore, in some cases, the measures as reported by sites represent activities that changed over time. Fourth, the pilot projects differed substantially in scope, target populations and relevant social determinants screened for, availability of systems for identifying participants and sharing data, etc. Therefore, it is not surprising that the values of final metrics are highly variable across projects. Fifth, due to substantial differences in terms of activities and data collection parameters across sites, we are unable to report meaningful averages for the entire initiative, and we urge caution in interpreting ranges and comparing statistics across sites.

DNR = Did not report. HL = Health Leads. ROR = Reach Out and Read. ✓= Stated goal met.

B While this team screened for a range of psychosocial needs, its referral and feedback rates pertain to mothers who screened positive for depression, which was the team's original focus. Many other families who screened positive for other needs received referrals and one-time supports.

D This team questioned the validity of its screening rate and positive screen rate because the automatic screening built into the EHR system made it impossible to know how often providers checked off the required box indicating the screen was completed without actually having asked the screening questions.

F This team had two screening sites but only one was able to provide referral and service use rates.

G This team had a Health Leads (HL) program and a Reach Out and Read (ROR) program. Regarding its ROR program's service use rate (197%), it is feasible to provide reading resources without a referral, so the numerator can exceed the denominator.

I This team calculated its referral rate based on the number of families who said they wanted help for their psychosocial need.

J This team's rates were estimated based on a sampling strategy. It added TB and lead to its screening program in 10/2017. The team was unable to provide a denominator for its referral rate because its community partner had eligibility requirements that not all referred families met.

Collectively, teams made a total of 643 referrals to community partners. Referral rates ranged from 42% to 100% and were higher than screening rates and positive screen rates for most teams. While far more difficult data to collect and track, there were 395 documented cases in which families made it to the community partner and received services, and 78 cases in which the referral loop was closed. These dropoffs likely reflect providers' inability to adequately track those who do seek care, as well as families' reluctance to seek services or the various hurdles that may keep them from doing so. Closing the feedback loop and strengthening approaches to help families who want help connecting to community services will be a focus for Year 2 of PECD.

Given the central focus of clinical-community partnerships in this initiative, teams were required to assess the overall quality or strength of their partnerships—in terms of the number of successful partnership meetings and phone calls over the course of the initiative and a qualitative description of the partnerships in their final reports to UHF. These descriptions included narrative summaries of the partnerships' successes and challenges from the perspectives of both clinical providers and community partners. While these descriptions are qualitative and not suitable for inclusion in Table 3, they point to some relevant and positive characterizations. First, there was considerable variation in the strength of partnerships at the start of the initiative. Some teams started with a history of working together, while others had no shared history. A few clinical providers even started the grant year still in search of a community organization to partner with. Second, no matter where the teams started out, they universally reported that PECD has enhanced their partnerships and has resulted in better care for the families they serve.

The NYU evaluation team identified four common challenges related to PECD teams' ability to track performance on defined measures and to reach their screening and referral targets.

1. **Defining the population eligible for screening.** While all teams had well-defined target populations for their screening programs, several teams found that actually identifying their target population in practice was difficult at times. The NYU evaluation team observed, "This is largely due to the nature of the clinical setting, in which no-shows and walk-ins are common and scheduling data from the electronic medical record is difficult to use."

2. **Encountering unexpected program delays.** While in many cases teams projected a relatively low screening rate because they were piloting new processes, some sites encountered start-up delays in hiring or receiving appropriate Institutional Review Board approval, which shortened their implementation period. Difficulty engaging fellow clinical or office staff in screening activities also caused delays.

3. **Grappling with screening tool shortcomings.** Social need screening tools are not perfectly predictive of family need. Teams found that individuals could have a negative screen but might later report a need during the clinical encounter that led providers to make a referral to their community partner. According to the NYU evaluation team, participants "ultimately ended up adjusting their program to adapt to this reality instead of changing or adjusting their screening tools and/or screening administration procedures."

4. **Obtaining reliable data to report on service provision and referral feedback.** The NYU evaluation team noted, "the measures around CBO service provision and referral feedback were among the more challenging measures for teams to capture in large part because putting systematic data collection systems and processes in place were obstacles." To exchange information between clinical and community sites, teams used various methods, including phone calls, emails, and separate spreadsheets that were discussed at partnership meetings.

Despite these challenges, the evaluation team concluded that the start-up period was a success, with each team having "managed to implement some sort of new screening and referral process that was to some degree systematic if not always comprehensive."

Most Common Psychosocial Needs

Using several different screening tools (Table 4), teams identified and addressed a wide range of psychosocial risks, including food insecurity, household utility needs, environmental hazards (e.g., mold or rodents in the home), maternal depression, exposure to domestic violence, adult education needs (most often GED or ESL courses), child care needs, and child behavioral or developmental concerns. Typically, if a clinic site was screening for food insecurity, its partner was either a food bank or a community partner that could assist with Supplemental Nutrition Assistance Program (SNAP) or Women, Infants, and Children (WIC) benefits. Sites that were screening for multiple needs partnered either with a multi-service agency or with several specialized agencies (such as community-based mental health clinics or education-focused social service providers).

Table 4. Screening Tools Used in PECD Projects

Screening Tool	Used by
Health Leads	Bronx-Lebanon Hospital Center St. John's Episcopal Hospital NYU Langone Hospital—Brooklyn
Hunger Vital Signs	Interfaith Medical Center Mount Sinai Health System NYC H+H Coney Island Hospital
Combination of tools	NY-Presbyterian/Columbia[a] NY-Presbyterian/Queens[b] Northwell Health[c]
WE CARE	NYC H+H Gouverneur[d]

Notes:

a NY-Presbyterian/Columbia's tool includes questions from the Survey of Well-being of Young Children (SWYC), Hunger Vital Signs, and the Woman Abuse Screening Tool (WAST).

b NY-Presbyterian/Queens' tool includes questions from PHQ-2 and the Clinical Community Integration (CCI) questionnaire co-developed by Queens and Public Health Solutions.

c Northwell Health created a tool that pulls questions from a number of existing tools to screen families for unmet basic needs and adverse childhood experiences.

4 Gouverneur used WE CARE but is in the process of incorporating child-specific questions into the PRAPARE screening tool and will use that tool going forward.

Adult Education and Quality Child Care

Social needs screening tools are not diagnostic tools, but the data from PECD teams do offer some indication of the needs of NYC families with young children. Disaggregated data on the prevalence of specific types of psychosocial needs were made available to UHF from eight teams. These data reveal that adult education and child care were the two most common social needs across teams. Four teams screened for both adult education needs (such as GED or ESL classes or workforce training) and child care

"One key turning point during the project was during an encounter with a single infant and her family. Her caregiver, a young mother, indicated needs in all six domains on the WE CARE screening tool…. In talking with this mother, it became clear that her cycle of poverty revolved around a need for child care—with this she could find employment, have an income, and improve her housing and food instability. As child care was one of our most commonly indicated needs among screened patients, we realized that it deserved special attention. It was this encounter that prompted us to delve deeper into ways to connect and guide families through the complex child care system."

—Dr. Marion Billings, Gouverneur

needs, and one team screened for adult education needs but not child care needs. More than a third (36%) of all screens asking about adult education came back positive, and more than a fifth (21%) of all screens asking about child care came back positive. Additionally, the teams that screened for these needs consistently found them to be among the most common psychosocial needs for their patient populations.

For most psychosocial needs, teams felt they had reasonable supports and services to offer families; offering support for quality child care and adult education services, however, proved more difficult. These needs were more prevalent than expected, and teams found it harder to link families to services because of limited capacity or complicated enrollment processes. One team collaborated with its community partners, some of whom operate child care programs, to develop a "decision tree" to guide providers on how to appropriately refer to a child care program based on eligibility status. These approaches, while taking advantage of available resources, do not address the larger question of whether there is sufficient supply of quality child care and adult education classes to meet demand. National data and local research conducted by the Citizens Committee for Children show that there are widespread quality child care deserts.[7]

Spotlight: Bringing on More Partners

NYP Queens and Public Health Solutions discovered significant need among families at the Jackson Heights Family Health Center and the Theresa Lang Children's Ambulatory Center for continuing education courses for parents (40% of families screened), quality child care (23% of families screened), and food supports (13% of families screened). Public Health Solutions initially helped facilitate referrals to community supports for these needs, but then brought in additional partners to help address these issues and better support families. Going forward, the Hunger Free Zone, the NYC Office of Adult and Continuing Education, and the Day Care Council of New York, Inc. all plan on bringing resources into NYP Queens' clinics. Public Health Solutions will still be available to assist families with these needs as necessary, but the integration of some resources into the clinic will enable NYP Queens and Public Health Solutions to focus their efforts on developing a high-quality referral pathway to evidence-based home visiting and family support models.

7 Research conducted by the Center for American Progress suggests 60% of New Yorkers live in a "child care desert", defined as an area with little or no access to quality child care. https://www.americanprogress.org/issues/early-childhood/reports/2017/08/30/437988/mapping-americas-child-care-deserts/ (or https://childcaredeserts.org/?state=NY for detailed maps). See also:

— Citizens' Committee for Children. When There Is No Care: The Impact on NYC Children, Families and Economy When the Mayor Eliminates Child Care for 17,000 Children. 2011. https://www.cccnewyork.org/wp-content/publications/CCCReport.ChildCare.April2011.pdf.

— Citizens' Committee for Children. Testimony on Access to Quality Child Care Presented to the New York State Senate Finance Committee on Children and Families, the New York State Assembly Committee on Children and Families, and the New York State Assembly Legislative Taskforce on Women's Issues. 2017. https://www.cccnewyork.org/wp-content/uploads/2017/05/testimony.childcare.state2017.pdf.

Food Insecurity

The AAP's 2015 recommendation that all pediatric practices universally screen for food insecurity made data on this topic of particular interest. All teams screened for food insecurity either using the one-question Vital Sign or two-part Hunger Vital Sign (either singularly or as part of a broader screening tool). On average, 18% of all screens were positive for food insecurity. There was a broad range, however, from a low of 6% to a high of 32%, and it is unclear why.

Teams with lower rates felt the results suggested that their clinic or community organizations in their service area had been successful in mobilizing food and nutrition resources for families, particularly SNAP and WIC benefits. Teams strongly felt such screening should continue to ensure families get the nutritional services they need. Anecdotally, participants found that most food insecurity needs became visible when a family needed to recertify for benefits, and they speculated that food insecurity rates would increase if data were collected on the adolescents they serve. Additionally, one team found nearly a nine-percentage point increase in the rate of positive food insecurity screens using the two-question Hunger Vital Sign questionnaire compared to the single-question vital screen. Understanding variability in food insecurity is an area for potential future research.

Spotlight: Deploying the Dentists

In a pioneering move for a dental clinic, the Bedford Dental Clinic at Interfaith Medical Center in Brooklyn began screening all children under the age of five for food insecurity in June 2017. Working through a community health worker, the dental clinic referred families to St. John's Bread & Life to receive emergency food aid and for help obtaining federal food assistance. Addressing food insecurity is uncommon in dental practices and one of the project benefits was raising awareness among dental providers and staff of the definition, identification, and oral health consequences of food insecurity in young children. The director of social services at St. John's Bread & Life attended monthly dental staff meetings to educate on these issues, which, according to the project director, made a world of difference in the comfort level among the pediatric dental residents with the screening process.

Child Behavioral, Developmental, and Emotional Challenges

While most teams focused on social needs, several teams also sought to respond to the psychological needs of children and families. Overall, almost a third (31%) of all screens for child behavioral, developmental, and emotional challenges came back positive—the second most common need overall. This domain included cases of parental concern for behavioral, developmental, and emotional challenges, as well as cases where learning difficulties or other psychological challenges were identified by the pediatrician. The high prevalence of psychological needs found by PECD teams aligns with national literature suggesting child behavior is the most pressing priority among parents during pediatric visits.[8] It is also consistent with emerging models of care like Healthy Steps and Help Me Grow that seek to prevent mental health and developmental challenges in early childhood and provide greater support for parents when those needs arise.

Table 5. Most Common Psychosocial Needs Across PECD Teams

Social Need	Positive Screening Rate	Number of Screens Administered
1. Adult education[a]	36%	1,218 (4 out of 8 teams)
2. Child behavioral, developmental, and emotional challenges	31%	1,340 (4 out of 8 teams)
3. Child care	21%	1,283 (5 out of 8 teams)
4. Food support	18%	3,259 (8 out of 8 teams)
5. Housing support[b]	12%	1,057 (5 out of 8 teams)
6. Domestic violence	5%	2,184 (4 out of 8 teams)
7. Maternal depression[c]	4%	2,604 (3 out of 8 teams)

Notes: Disaggregated data on the prevalence of specific types of psychosocial needs were made available to UHF from eight teams.
a Adult education includes needs for GED or ESL classes and workforce training.
b Housing support includes needs for improved housing condition or housing stability.
c Maternal depression includes families with a positive score of 3 or greater on their PHQ-2 screen.

8 Young KT, K Davis, C Schoen, and S Parker. 1998. Listening to parents. A national survey of parents with young children. Arch Pediatr Adolesc Med 152(3): 255-62. https://www.ncbi.nlm.nih.gov/pubmed/9529463

Part II: Early Observations and Lessons Learned

From the outset, the PECD initiative has offered lessons about building clinical-community partnerships to care for families. There was significant variation between teams in their approach to clinical-community partnership. While eight teams followed a general model of screening in primary care and providing a referral or warm handoff to a community organization, two teams took a different approach. Bronx-Lebanon Medical Center, which has experience screening for social needs in its family medicine practices, used PECD funding to help the Claremont Neighborhood Center introduce a screening and referral program for social needs at its child care sites. Interfaith Medical Center used funds to screen for food insecurity in its Bedford Dental Clinic. Teams also differed in whether they used care management or navigation support to assist families in completing referrals, and how that care management was structured.

The following observations focus on three areas that have broad implications for clinical and community sites looking to form or strengthen partnerships to advance early childhood development: workflow and information exchange, workforce and family engagement, and advanced protocols and partnerships. Across each of these topics, we summarize the general experience of participants and note where they may have varied.

Workflow and Information Exchange

The bulk of each team's effort related to designing, testing, and refining workflows for screening families, making appropriate and effective referrals (including care navigation in most cases), and communicating information back to the referring partner about the status of family engagement in those services. Integrating clinical-community handoffs into already busy workflows is challenging in and of itself. Teams found their efforts to streamline their workflows were stymied by several technological barriers that resulted in inefficient workarounds or burdened staff, which decreased the likelihood that teams could exchange information about families and made it harder to improve and extend their care.

Observation #1: Workflows Are Often Hindered by Paper-Based Screening Procedures and Electronic Health Record Workarounds

Most teams implemented the screening process by giving the caregiver a paper-based questionnaire at intake to complete in the clinic waiting room.[9]

9 A few teams screened families through in-person interviews with a medical assistant or physician in the exam room. While this approach decreased paper flow issues, and in some cases enabled directly documenting screen results into the EHR, the process was also considered burdensome for longer questionnaires and resulted in other challenges documented in the "Staff Buy-In" section. Every approach has tradeoffs.

The paper form was then given to the physician—either by the caregiver or by a member of the primary care team—to discuss during the clinic visit.

With up to 200 children seen daily at some pediatric sites, the process of transferring the right forms—including consent forms and any additional screening forms for that particular well child visit—often led to "paper flow management" issues. Teams reported having to closely monitor the screening forms to ensure that the results were not lost in the shuffle and that they got to the provider in time for a meaningful discussion to occur during the primary care visit. To adapt a common health care saying, "getting the right screen, in the right place, at the right time" was a universal challenge. At the same time, consistent with national research in this area, most teams felt that families were more likely to disclose sensitive information when they independently completed a form than when being interviewed by a health care provider.[10] All teams screening in primary care stated their ideal process would include families independently completing a screening tool in the language they prefer on a tablet during intake, with results automatically tabulated and integrated into the patient's EHR in time for face-to-face discussion with a provider. Teams who attempted off-site screening through a patient portal did not feel it was a promising approach.

Once a screen was administered and results were discussed with a family, teams frequently used workarounds to document the result of the screen and indicate whether a referral to a community partner had been initiated. Few teams used EHRs with a field for documenting social needs; and even those that did still could not use the data field to document where the family was referred to or what the outcome of the referral was, and instead had to rely on a "notes" section in the EHR to document that information. Most teams used stand-alone REDCap or Excel databases to document and track which patients were referred to community services in order to make this information easier to retrieve.

Observation #2: Sharing Information Between Clinical and Community Sites Can Be Labor-Intensive

Securely sharing referral information with a community partner—as opposed to solely providing a family with information about where to seek services in the community—was often a multi-step, labor-intensive process that relied on a mix of technologies. Providing information back to the clinical provider about which families had connected to services was even harder. It was not

10 A meta-review of the literature on the effects of mode of questionnaire on data quality found that self-administered questionnaires can increase respondents' willingness to disclose sensitive information compared to face-to-face or telephone interviews. That said, all modes of questionnaires have tradeoffs, including pros and cons in cognitive burden and respondent preference. Ann Bowling. Mode of questionnaire administration can have serious effects on data quality, Journal of Public Health, Volume 27, Issue 3, 1 September 2005, Pages 281–291, https://doi.org/10.1093/pubmed/fdi031

uncommon for a workflow to look something like this: (1) the pediatrician enters a note about the family's social needs into a population health database and places the completed paper form in a bin; (2) a care coordinator or other member of the care team collects the completed form and scans the form into the EHR as an attachment; (3) the same staff member then faxes a referral to the community partner; (4) a dedicated staff member at the community referral site adds the family name and referral information into a separate database, and later notes whether the family engaged in services; and (5) clinic and social service organization staff speak in person or by phone to manually compare databases.

Five teams relied on manually comparing separate databases of who was referred to services and which families were served by the community organization. Three teams relied on the caregiver reporting back to the referring entity, and two were unable to implement any routine process for closing the feedback loop.

This process understandably frustrated clinic staff, who questioned the ability to scale up or sustain such a complicated process. They felt their inability to securely communicate hindered their ability to provide care management outreach through the community organization. Nearly all teams expressed a desire for a seamless two-way communication channel through which they could make referrals to community partners and report back on the outcome of that referral. Such a channel would enable them to use their face-to-face communication as an opportunity to manage family care together rather than catch up on database management. All teams agreed that good technology should support the clinical-community partnership but not replace the relationship itself.

Spotlight: New Tools for Communication

While nearly all teams currently struggle to exchange information between the clinical care site and the community-based organization, a few may soon introduce technologies to make it significantly easier to track patients across the care continuum. New York Presbyterian/Columbia and Gouverneur Health plan to introduce NowPow,[11] and other teams are exploring the possibility of using Epic Community Connect to share data with community partners. Meanwhile, teams are using quality improvement methods to better manage paper-based screens. St. John's Episcopal Hospital, dependent on a paper-based screen for now, established checkpoints throughout the office workflow (at the registration desk, during vital signs check, and by the attending physician in the exam room) to ensure that the forms were completed and collected.

11 NowPow is a commercially available SaaS platform (Software as a Service) for health and social service referrals. The software enables health care providers to identify community-based resources for patients based on the patient's conditions, address, age, gender, and preferred language. The provider can electronically prescribe referrals to community resources, and in advanced versions of the software the referral sender and referral receiver can communicate through a secure messaging platform.

Workforce and Family Engagement

Observation #1: Enhancing the Primary Care Team's Workforce Capacity Is Critical

Another challenge teams faced was enhancing their workforce to accommodate additional responsibilities related to the clinical-community partnership. Teams tried different approaches depending on the availability of on-site personnel and the likelihood of being able to sustain new personnel. Some recruited and trained stipend-based volunteers through universities and AmeriCorps; some hired community health workers or "engagement specialists" to work jointly between the clinic site and community organization; some embedded new responsibilities with existing staff positions. This last option was often facilitated by the existence of an already augmented primary care team – for example, the presence of a care coordinator or Healthy Steps Specialist – but in other cases attempts were made to incorporate new responsibilities into a much leaner staffing structure through revision of staff responsibilities. Workforce enhancements were also needed by community-based organizations to track referral sources and report back to clinic sites.

It remains to be seen which, if any, of these approaches will be most effective and sustainable. Because a significant portion of current workforce responsibilities is related to operations – for example, scanning completed screens into the EHR – some staffing needs could be reduced through technological efficiencies. But certainly not all. All teams found a need for well trained staff to assist families at some stage in the process, whether it be at the point of screening or providing a linkage to community services, in addition to staff who can oversee and develop the clinical-community partnership. Those staffing needs, which are permanent and will only grow if social needs screening is scaled up, require sustainable sources of funding. In a promising step towards sustaining new workforce responsibilities, Northwell Health is considering using money from its general pediatrics budget to finance its FAMNEEDS program, which trains and pays university students to assist in social needs screening and follow up with patients.

Spotlight: Community Health Worker

NYP Columbia and the Northern Manhattan Perinatal Partnership (NMPP) successfully instituted the new role of an early childhood-focused community health worker (CHW). The CHW spends half her time in the pediatric practice and half her time at the community site. The two organizations together designed a streamlined process through which the CHW would work with families with needs related to social determinants of health and assist them in engaging with NMPP programs. The organizations also developed training materials to ensure a smooth onboarding process. NYP Columbia and NMPP currently meet weekly with the CHW, in a co-management structure, to discuss her caseload and jointly plan care for families.

Observation #2: Developing Workforce Capacity Requires Training and Buy-In

Teams repeatedly expressed how well screening for social determinants of health fits with pediatrics, which as a discipline has long encouraged looking at family and community dynamics in addition to a biomedical model of health. Yet teams still found an ongoing need to raise awareness of the social determinants of health among physicians, nurses, medical assistants, and administrative leaders, and to elevate the importance of screening and referring for social needs among the competing priorities of a busy clinic environment. Staff training needs included education on how psychosocial needs can affect child health and development, education on the programs and services provided by the community partner and how those offerings may help families, training on the newly implemented workflow, and training on physician communication skills. Training needs were ongoing: necessary during periods of staff turnover, but also useful for building and maintaining buy-in among staff who may have been initially reluctant to participate in the project. Teams found that having the community partner come into the clinic site and present information about their organization and services to clinic staff helped facilitate buy-in for the project, as did providing clinic staff with administrative data and sharing stories of families whose needs were addressed through referrals. Providing clinic staff with data and stories of families successfully connecting to community services was a major part of why teams felt it necessary to close the feedback loop on referrals.

Spotlight: Building Partnership Into Medical Residency Programs

Through a pilot organized by the Greater New York Hospital Association, Mount Sinai rotates its pediatric residents through its community partner site as part of an effort to integrate social determinants of health curricula into medical training. Mount Sinai reports residents feel more equipped to provide information to families, answer their questions and encourage them to seek help because of the training. Overall, Mount Sinai reports increased enthusiasm among these providers for screening for social determinants of health.

Observation #3: Achieving Buy-In with Families Requires Trust and Engagement

Closely related to the issue of staff training is the challenge of developing trust and engaging families. Teams reported that once caregivers understood why they were being asked about nonmedical needs they were often eager to discuss them with their child's primary care provider. Yet the data show that some families were reluctant to complete screens or follow up on referrals. Teams openly wondered how they could improve their engagement efforts. They identified several reasons why families may be reluctant to complete a social needs screen or act upon a referral: being pressed for time, having prior negative experiences with social services, and being afraid of involvement by child protective services or immigration enforcement.

"We spent four months developing a protocol on how we would engage families. It's more than motivational interviewing. It also requires trying to identify if the family agrees with the referral, and understanding their expectations."

—Dr. Omolara Uwemedimo, Cohen Children's Hospital (Northwell Health)

Serving an immigrant-rich city, all teams independently identified fear among immigrant families of increased scrutiny or reprisal by federal agencies as a singular challenge to effectively engaging families. While the documentation status of family members is not asked for by pediatric providers – nor is collection of this information recommended – teams suspect these caregivers are less likely to disclose sensitive information and seek community services. This raises unresolved and disconcerting questions about the ability in the current political climate to sufficiently connect children who are U.S. citizens to services and benefits they have a right to obtain.

Teams deployed several tactics to better understand family perspectives related to screening and referral options, including patient feedback surveys, focus groups, and parent advocates or advisory councils. Findings from those efforts were just beginning to roll in at the time of this writing, and they are expected to inform improvement activities in the next phase of PECD. At least two teams also modified their screening tools to include questions about whether families desire help with the needs they have identified, and most teams coached providers or clinic staff on how to solicit family preferences during the clinical encounter rather than unilaterally recommending a referral.

Spotlight: Immigrant Concerns

Northwell Health employed a multi-pronged strategy for being responsive and attentive to the concerns of immigrant families. Each of the 10 volunteer navigators trained by Northwell is bilingual, and has received coaching on how to explain the purpose and intent of the social needs screen in a culturally sensitive manner. Clinic staff received basic training on immigrant rights, which helped providers feel better equipped to engage in conversations in which legal immigration issues may emerge. Northwell also incorporated patient reaction surveys into its screening process, and established a caregiver advisory group that meets jointly with staff from Northwell and the Child Center of New York.

Advanced Protocols and Partnerships

Observation #1: Responding to Multiple Needs Adds Complexity

As noted earlier, teams screened either for food insecurity alone or for multiple social needs. Many teams felt it was logical to focus first on food insecurity before branching out to other social needs. But teams also found shifting from food insecurity screening to multi-issue screening is a big leap that requires new and broader partnership arrangements, systems for dealing

with a higher volume of screens and referrals, and technology that is flexible enough to add new screening domains over time. Taking an iterative, gradual approach to screening for social needs should be planned for carefully, and can't be viewed as just "adding on" additional issues or partners.

Determining how to help families with multiple needs and varying levels of urgency presented a challenge. Teams agreed that engaging families in decision-making about which need to address first should be the foundation for sorting through this challenge. Several teams also instituted protocols, ranging from engaging an on-site social worker to directly reaching out to a community partner via text, for assistance with urgent or emergency situations. The most pioneering work included a few teams, in addition to implementing the core screen and referral process, designing supports and services that could be integrated into the clinic setting as alternatives to referrals for "lower-risk" or "lower-need" families. This work, while in its infancy, involves developing risk stratification methods and offering different combinations of integrated and off-site supports for families within each risk group.

Spotlight: Tailoring Responses by Level of Risk

NYP Columbia screens for child behavior issues, maternal depression, domestic violence, food insecurity, and environmental safety concerns at all well-child visits. NYP Columbia and its community partner, Northern Manhattan Perinatal Partnership, use a risk stratification model to provide care for psychosocial issues in which patients with "lower-level risks" are provided services within the clinic and patients with "higher-level risks" are referred for more intensive care and services. For example, patients who have mild child behavior concerns, but do not meet criteria for a mental health diagnosis, are provided with parenting advice from a pediatric provider, social worker, or community health worker. Patients with significant child behavior concerns or who have maternal stress or depression may be referred for parenting classes or psychological evaluations at NMPP. Providers received training on this approach, and supportive material is posted throughout the clinic to guide decision-making. Risk level is documented within each patient's health record using a field initially created for children with special health care needs.

Observation #2: Social Service Organizations Can Also Benefit from Clinical-Community Partnerships, but Greater Investments in the Sector Are Needed

Clinical-community partnership development also led to insights about needed improvements and investments on the social service delivery side. It was common for community partners to discover "silos" among their own programs, and a need to more comprehensively screen for unmet needs among families engaged in programs like child care. Other social service providers had not appreciated that confirming receipt of care with a provider could help cement a referral relationship and help track outcomes for families. Community partners also reported that participating in continuous improvement activities (e.g., Plan-Do-Study-Act cycles) with their clinical partners was useful training for making improvements within their own institutions.

"This partnership was highly valuable to us and allowed us to try out a new service delivery model outside of our norm, to expand our reach, and to focus on adjusting our program flow to improve referral outcomes."

—Rachel Schwartz, Public Health Solutions

The PECD requirement that health care organizations share grant funding with their community partners proved important for allowing social service staff to be meaningfully involved in the project. But more investment is needed to help social service organizations develop efficient and effective working relationships with health care institutions. Just as primary care practices have required substantial investments to modernize operations, investments in information technology, population data analytics, personnel, and quality improvement skills – in addition to basic funding to sustain and scale program delivery – are needed to support social service agencies in this work as well.

Spotlight: Large-Scale Rollout by Northwell & CCNY

Northwell/Cohen Children's Medical Center and its community partner, The Child Center of New York (CCNY), jointly decided to introduce social needs screening in both primary care *and* across all 70 CCNY social service programs; CCNY also integrated health screenings by pediatric attending physicians and residents into its early childhood programs. Additionally, Northwell is using New York Delivery System Reform Incentive Payment (DSRIP) money to integrate an electronic health record system at CCNY so social needs and medical information can be seamlessly shared. The changes initiated by CCNY have resulted in new strategic opportunities to integrate health and social service programming.

Observation #3: Forming Strong Clinical-Community Partnerships Requires Time and Investments

Underlying each of the above challenges and successes was the foundational work of building a clinical-community relationship that was truly collaborative. Health care and social service providers often don't have time to get to know one another, plan together, and envision a long-term goal for their community, yet we heard these initial steps paid dividends down the road as teams faced obstacles in their work.

Setting aside meeting time to help one another understand service delivery within their institution through detailed descriptions or mapping exercises, visiting one another's sites, and decoding language differences between health care and social services agencies were important activities for developing stronger relationships. Critically, teams established short-term project goals—typically the number or percent of families screened or referred over the project period—as well as a vision for what they could achieve together in five years.

When teams invested time in these foundational activities, the benefits were often apparent in gains that extended beyond the establishment of a

referral pathway. Notable examples included joint development of materials for use in residency training programs and educating families, development of decision trees about how to navigate complex services in the community, inclusion of staff from both sites in operation reviews, co-management of staff, and participation in one another's strategic planning activities.

Spotlight: Direct Investment in the Bronx

Uniquely among PECD teams, Bronx-Lebanon's project focused on directly investing in the capacity of its community partners to identify and address social needs. At the Claremont Neighborhood Center (CNC) this meant providing technical assistance on implementing a modified Health Leads screening tool, and providing a Community Health Worker to work with families. At Phipps Neighborhoods this meant investing in "neighborhood reading rooms" as a referral site and strategic partner for Bronx-Lebanon's Reach Out and Read programs. Building on a historically strong relationship with CNC, Bronx-Lebanon staff now feel at ease dropping into CNC to speak about project progress and updates. Communication with Phipps, once sporadic, now occurs several times a week. The team credits these transformations to the hard work of breaking down perceived barriers and to a culture in which all managers, staff, and employees are encouraged to build personal relationships across organizations.

Observation #4: PECD Activities Can Affect Enterprise-Level Activities

Some projects, though developed specifically for this initiative, ended up having a broader impact on their organization as a whole. Examples include:

- Gouverneur was selected by OneCity Health as a pilot site for NYC Health + Hospitals' social determinants of health demonstration project. OneCity Health and Gouverneur will incorporate child-focused questions into the PRAPARE screening tool (Gouverneur used the WE CARE screening tool in Year 1 of PECD) and will work with NowPow to ensure family-serving community organizations are included in the NowPow directory of services. Support from OneCity Health, along with external grant support, will help Gouverneur scale up its screening and referral process to its entire clinic.
- NYP Columbia is introducing screening to three additional pediatric clinics, for a total of four clinics that together field 15,000 well-child visits annually.
- NYU Brooklyn is introducing its pediatric questions into NYU Lutheran's Epic screener, which initially only had adult-focused questions. The screen will be rolled out to all NYU Lutheran sites.
- Northwell Health has committed to sustaining Cohen Children's volunteer patient navigator program, and it is expanding the social needs screening process pioneered at Cohen Children's to all its internal medicine practices.

Part III. Implications for Practice and Policy

Even in its first year, the PECD initiative has yielded valuable information about the challenges and rewards for building meaningful clinical-community partnerships. And while evidence emerges about which approaches to screening and handoff for social needs are most successful, there is also much that can be done to support innovation and lay the foundation for successful programs.

Foundations and Other Conveners

Anyone in the position of funding or encouraging clinical-community partnerships should insist that sufficient time is allotted for partnership teams to focus on the foundational work of coming to a common goal, understanding each other's services and organizational culture, and determining how the team will work together and align their systems. Several clinical and community organization participants noted that they have many "partnerships on paper"—often signed memorandums of understanding—but no actual relationship with those organizations. A key tactic in enabling time to be spent on partnership development is budgeting for staff time specifically for this purpose and providing protected time for teams to get to know one another—for example, through learning collaborative structures. Participants also noted the importance of budgeting funds to specifically support the time and effort of community organization participants.

While virtual learning collaboratives may be less time consuming for participants and allow for participation across broader geographic areas, our teams repeatedly stated how much they valued the opportunity for face-to-face learning. This was particularly important for partnership-building, as few team members had met in person prior to our first collaborative. Developing a collective goal—in this case, ensuring that all 570,000 children under age of five in New York City are healthy and thriving—may also help teams bond with one another and be more willing to honestly share lessons and challenges.

Health Systems

Many social service providers are eager to work with health systems to help them achieve better outcomes for their patients. Some physician leaders and clinical staff are also eager to work with those in other fields to address the needs of patients more holistically and reduce clinician burnout. Health system leadership is essential for supporting these early adopters and embracing social service partners. One simple step health system leaders can take is to identify early adopters within their organization and ensure that enterprise-level investments in building clinical-community partnerships flow down to those adopters. Many large health systems have publicly committed to improving population health and have purchased technologies

that make it significantly easier to exchange information between health care settings and community service providers. It remains to be seen, however, whether those investments will be used to support the most willing and engaged providers at the forefront of this work. This is especially true for pediatric primary care providers, many of whom have the potential to be the innovative leads for their health system but may not receive priority support for this work because they tend to have fewer high-cost or high-need patients than internal medicine or specialty practices. Health systems also need to be careful not to develop social determinants of health strategies based solely on the needs of adult patients, as the needs of young children and family-serving community partners can be different.

Policymakers and Payers

Policymakers, particularly state Medicaid officials, have played a large role in increasing awareness of and enthusiasm for addressing social determinants of health. Some commercial payers have been enthusiastic supporters as well, and they are often quick to note that value-based payment may provide opportunities to support social service organizations partnering with health care providers. While it is true that a shift to value-based payment can be a game-changer, payment reform alone is not sufficient. Redistribution of existing health care dollars is unlikely to provide sufficient investment in community-based organizations to both support service provision and make up for years of underinvestment in social service infrastructure and organizational capacity. Concerted effort is needed to reinvest in the social service sector to ensure that community-based organizations can be strong partners for health care systems, and that sufficient services are available in the community. Policymakers can also develop government-sponsored learning collaborative structures for partnership development, and help partnerships identify opportunities for reimbursement. Finally, through initiatives like New York's "First 1,000 Days on Medicaid," policymakers can highlight the important role poverty and social conditions play in influencing long-term health and well-being, and develop cross-sector programming aimed at building systems of care for early childhood.

Part IV. Next Steps

The first year of the PECD initiative focused on forming clinical-community partnerships and piloting new screening and referral processes. Phase II of PECD, planned to begin July 2018, will focus on strengthening these systems of care, streamlining processes, and closing the loop on referrals. Measuring the initiative's effect on families, including engagement in community services and changes in family-reported child health status, continues to be a long-term goal for the initiative. While an initiative-wide evaluation may be several years away, several teams are laying the foundation to evaluate their own efforts. Those findings will be reported on in our Phase II update.

Spotlight: Moving Towards Outcomes

NYU Brooklyn's involvement in PECD led to new opportunities to evaluate its process for social determinants of health screening and referrals within the primary care setting. Over the next year NYU Brooklyn will evaluate the performance of its screening and referral process through measures of engagement in community resources and family satisfaction with the process. It will also evaluate the impact of successful referral to social services on health care utilization and reported health outcomes for *parents* using the CDC's Healthy Days Core Module,[12] which asks questions about perceived physical, emotional and mental health, and limitations on daily activities. This research will hopefully lead to new findings on the ability of primary care-based social determinants of health screening and referral programs to improve quality-of-life related outcomes or reduce health care expenditures.

12 Centers for Disease Control and Prevention. Health-Related Quality of Life. October 30, 2017: https://www.cdc.gov/hrqol/hrqol14_measure.htm

Appendix A

Description of Learning Collaborative Sessions

Date	Activity	Purpose
4/4/17	Webinar #1	To welcome everyone to PECD and provide an introduction to PECD staff and participants, as well as an overview of the learning collaborative goals and structure.
5/25/17	In-Person Meeting #1	To provide an opportunity for teams to learn about one another's projects and engage in partnership building activities between health care providers and social service organizations. Included a presentation on child well-being by Jennifer March of the Citizens' Committee for Children.
7/25/17	Webinar #2	To provide teams with technical assistance in developing evaluation plans for their projects. Led by Carolyn Berry of the NYU Langone School of Medicine and select PECD teams.
8/10/17	Webinar #3	To showcase a health care system that integrated social determinants of health screening, patient priorities, and follow-up steps into its Electronic Health Record. Led by Michaela Frazier of the Institute for Family Health.
9/28/17	In-Person Meeting #2	To identify what has been working well in teams' projects, what has been less successful, and what might be improved going forward. Included a presentation on teams' evaluation progress by the NYU evaluation team.
12/4/17	Webinar #4	To provide teams with information and resources on caring for immigrant families. Led by Claudia Calhoon of the New York Immigration Coalition.
1/23/18	In-Person Meeting #3	To reflect on project accomplishments and provide teams with guidance on developing audience-specific persuasive messages to help them advance their work. Included a workshop on persuasive messaging led by Ed Walz of the communications firm Springboard Partners.

Appendix B: Description of Team Projects

Bronx-Lebanon Hospital Center ($69,778)

Community Partner:	Claremont Neighborhood Center (CNC) and Phipps Neighborhood
Social Needs:	Early Learning and Literacy, Housing, Food Insecurity, Health Care Navigation, Legal, and Utility Needs
Screening Tool:	Health Leads (Modified)
Screening Schedule:	Families at CNC day care sites
Project Highlights:	Bronx-Lebanon helped CNC pilot use of its electronic Health Leads screening tool, in partnership with the national Health Leads organization, at CNC's two child care sites. Bronx-Lebanon's community health worker introduces families to the screening tool and helps them access community resources. Bronx-Lebanon also expanded its Reach Out and Read program at two family medicine clinics using its community health worker and an intern from Phipps to identify early learning needs, distribute literacy kits, and encourage families to use the Phipps Reading Room. Standard processes for closing the feedback loops are still being developed. Currently, for the Health Leads pilot, the community health worker follows up with families to confirm receipt of care and, when appropriate, documents results in the EHR for Bronx-Lebanon patients. For the Reach Out and Reach program, families are requested to inform their physician that they are participating in the program.

Episcopal Health Services, Inc./St. John's Episcopal Hospital ($19,995)

Community Partner:	Family Resource Center of Eastern Queens and Sheltering Arms
Social Needs:	Early Learning and Literacy, Housing, Safety at Home, Food Insecurity, Health Care Access, Emotional and Behavioral Challenges, Parenting Classes, Utility Needs
Screening Tool:	Health Leads (Modified)
Screening Schedule:	Every well child visit for children ages 1-5
Project Highlights:	St. John's reviewed a community needs assessment to select a screening tool and introduced a screening process at its pediatrics clinic for the first time. Families receive a paper-based screen at intake and discuss their results with their provider. St. John's faxes referrals to its community partners using its EHR system. The community partners follow up with families to confirm receipt of care and document results in an Excel spreadsheet. An updated spreadsheet is faxed to St. John's every two weeks.

Interfaith Medical Center, Bedford Dental Clinic ($70,000)

Community Partner:	St. John's Bread & Life
Social Needs:	Food Insecurity
Screening Tool:	Hunger Vital Signs
Screening Schedule:	Every dental exam visit
Project Highlights:	Bedford Dental Clinic trained staff and providers on food insecurity screening and introduced a screening process for the first time. Pediatric dental residents administer the screen to families, either in written format or through interview depending on the caregiver's preference. Bedford sends referrals to St. John's Bread & Life via secure emails. St. John's then follows up with families about scheduling an appointment. St. John's has an internal system for monitoring use of their services. When referred families are connected to food supports and other services, they are reported on at the next monthly partnership meeting. Families that are Interfaith patients are first referred to Interfaith's Bishop Walker Health Center for a full nutritional assessment.

Mount Sinai Health System/Icahn School of Medicine at Mount Sinai ($70,000)

Community Partner:	New York Common Pantry, Little Sisters of the Assumption Family Health Service, Children's Aid's (CA's) Dunlevy Milbank Clinic
Social Needs:	Food Insecurity, Environmental Health Issues, Government Entitlements, Adult Literacy, Child Learning Issues, Housing Issues, Smoking Cessation
Screening Tool:	• Hunger Vital Signs with additional questions about WIC and SNAP usage • Piloting a Mount-Sinai developed screening tool for additional social needs
Screening Schedule:	• Mount Sinai: Families screened at least once annually • CA: Every well child visit between 0-5 years
Project Highlights:	Mount Sinai helped CA introduce a screening process at CA's Dunlevy Milbank Clinic to screen families for food insecurity for the first time. Hunger Vital Signs is incorporated into the EHR system of both Mount Sinai and CA, and is administered through provider interview in the exam room. When a family screens positive for food insecurity Mount Sinai and CA provides the family with information on accessing community partner resources. At Mount Sinai, a social worker is available to help families who need additional assistance. Both Mount Sinai and CA are still developing standard processes for closing the loop on referrals. Currently, their community partners inform them when they serve a family who has reported being referred from either clinic site. This information is shared with Mount Sinai and CA during quarterly partnership meetings. Mount Sinai is also piloting an expanded screening tool in its pediatric clinic using a social worker to screen families in the waiting room. The screens are administered using a mobile web-based technology.

NewYork-Presbyterian Hospital/Columbia University Medical Center ($70,000)

Community Partner:	Northern Manhattan Perinatal Partnership (NMPP)
Social Needs:	Child Behavior and Development Issues, and Family Stressors Including Maternal Depression, Food Insecurity, and Domestic Violence
Screening Tool:	• Survey of Well-being of Young Children (SWYC) • PHQ-2 • Hunger Vital Signs • Woman Abuse Screening Tool (WAST)
Screening Schedule:	Every well child visit
Project Highlights:	NY-Presbyterian/Columbia used quality-improvement methods to improve upon its pre-existing screening process at the Rangel Health Center. Families receive a paper-based screen upon intake, medical assistants ensure the form is completed, and pediatric providers review, document, and act on the screen. NYP/Columbia and NMPP co-developed the role of an early childhood-focused community health worker who splits her time between both sites and helps families access care at NMPP. Currently, the feedback loop is closed through weekly case management discussions including the community health worker and staff from both Columbia and NMPP. NYP/Columbia developed a risk stratification system to determine whether a family is low-risk and can be served through resources in the clinic or whether the family is high-risk and needs a referral for more intensive support. NYP/Columbia is expanding its screening process to three more of its pediatric clinics.

NewYork-Presbyterian/Queens ($70,000)

Community Partner:	Public Health Solutions (PHS)
Social Needs:	Maternal Depression, Food Insecurity, Caregiver Support, Intimate Partner Violence, Breastfeeding Support, Literacy and Education, Immigration/Legal Support.
Screening Tool:	PHQ-2 and Clinical Community Integration (CCI) questionnaire (developed by NY-Presbyterian/Queens and PHS)
Screening Schedule:	Currently, families are screened at 1-month, 2-month, 4-month, 6-month well child visits and annually from ages 1-5. However, the screening schedule will be reduced in the near future because of concerns that the current schedule is too burdensome.
Project Highlights:	NY-Presbyterian/Queens and PHS co-designed a screening tool to introduce a screening process at two of Queens' pediatric clinics: Jackson Heights Family Health Center and the Theresa Lang Children's Ambulatory Center. At both clinics, families complete a paper-based screen in the waiting room and pediatric providers review the screen with families during the clinic visit. Results of the PHQ-2 are documented in the EHR and the remaining responses are documented later by a care coordinator. The care coordinators fax referrals to PHS via the EHR system. PHS follows up with families about scheduling an appointment. At the appointment, the family is assessed and connected to PHS programs such as the Nurse-Family Partnership, Maternal Infancy Community Health Collaborative, and WIC and SNAP enrollment. Monthly reports on the status of each referral are sent by PHS to Queens. Queens learned from its screening results data that there was a high-than-expected need for childcare and adult education, and co-developed with PHS a plan to bring resources for those needs into the clinical settings.

Northwell Health, Cohen Children's Medical Center ($65,000)

Community Partner:	Child Center of New York (CCNY)
Social Needs:	Employment, Childcare, Education, Housing, and Utilities
Screening Tool:	FAMNEEDS (Developed by Northwell)
Screening Schedule:	Every 1-month, 9-month, 15-month, and 30-month well child visit, and annually from ages 3-5
Project Highlights:	Northwell expanded its FAMNEEDS program at its pediatric clinic using premedical student volunteers—or "navigators"—to screen families in the waiting area. CCNY also introduced social needs screening at its nearly 70 locations in NYC. After families share and discuss their results with the pediatric provider, Northwell's navigators follow up with families to discuss their needs and help families access community resources. If it is determined that their needs can be met by CCNY's Single Stop case management services, the navigator sends an e-referral to CCNY. Northwell's navigators follow up with families to confirm receipt of care and document results in REDCap. CCNY's engagement specialist also keeps track of the status of referrals. The feedback loop is closed through monthly meetings between Northwell's FAMNEEDS program coordinator and CCNY's engagement specialist. Northwell is in the process of expanding its FAMNEEDS program to its internal medicine department. Northwell also plans to use part of its DSRIP funding to bring an EHR system to CCNY.

NYC Health + Hospitals, Coney Island Hospital ($40,000)

Community Partner:	Instead of engaging a community partner, Coney Island focused instead on connecting families to the NYC-sponsored Health Bucks program
Social Needs:	Food Insecurity
Screening Tool:	Hunger Vital Signs
Screening Schedule:	Every well child visit
Project Highlights:	Coney Island introduced a food insecurity screening process for the first time. The screens are incorporated into the EHR system and administered through provider interview. Coney Island's pediatricians refer food insecure families to an on-site program coordinator for help enrolling in the Health Bucks program. The program coordinator informs pediatricians of which families enrolled in the program.

NYC Health + Hospitals/Gotham, Gouverneur Health ($40,000)

Community Partner:	Educational Alliance, Grand Street Settlement, Henry Street Settlement, and University Settlement
Social Needs:	Adult Education Needs (GED/ESL), Employment, Childcare, Food Insecurity, Housing, Health Insurance, Public Assistance/Welfare Programs, Immigration/Legal Aid, Intimate Partner/Family Violence, Any Other Social Need Identified by Family
Screening Tool:	WE CARE (Modified). However, Gouverneur is in the process of incorporating child-specific questions into the PRAPARE screening tool and will use that tool going forward.
Screening Schedule:	Every well child visit
Project Highlights:	Gouverneur piloted a screening process at its pediatric clinic using a public health intern to provide families with a paper-based screen in the waiting area. Going forward the responsibility for providing families with the self-administered screen will shift to Patient Care Associates (medical assistants). Currently, Gouverneur's public health intern discusses screening results with families and helps them access community resources. If it is determined that their needs can be met by a community partner, the intern helps the family connect with the partner. A public health associate is available to help families who need additional assistance. Gouverneur's public health intern follows up with families to confirm receipt of care and informs pediatricians of results. Introduction of NowPow will streamline this process. Gouverneur learned from its data that there was a higher-than-expected need for childcare, and co-designed with its partners a decision tree to refer families to the most appropriate childcare resource. Gouverneur has been invited by OneCity Health to participate in a broader social services integration pilot that will help Gouverneur expand its screening process.

NYU Langone Hospital—Brooklyn ($66,789)

Community Partner:	OHEL Children's Home and Family Services
Social Needs:	Food Insecurity, Childcare, Housing Conditions, Legal, Program Enrollment, Education, Housing, Domestic Violence Needs, and Behavioral Problems
Screening Tool:	Health Leads (Modified)
Screening Schedule:	Every well child visit
Project Highlights:	NYU Brooklyn introduced a screening process at its pediatric clinic in which medical assistants provide families with a paper-based screen at intake. Families complete the form either in the waiting area or exam room. The medical provider reviews screening results and discusses with families which needs should be prioritized. In addition to forming a new partnership with OHEL to help families access parent-child therapy sessions, NYU Brooklyn also established a new relationship with its Family Support Center to help families access a broader range of community resources. The Family Support Center follows up with families, OHEL, and any other referral site to confirm receipt of care. Family Support Center then informs pediatricians of results. NYU Brooklyn hired an AmeriCorps volunteer to assist with screening and referrals, and is integrating its screening tool into its EHR.

Appendix C: Worksheet for Building a Clinical-Community Referral Process

During the project design phase of the PECD initiative, teams found discussing the following questions helpful in developing their programming. These questions were all voiced during learning collaborative meetings, either as open questions for discussion or as questions that were recalled as having been useful to teams during planning sessions. While the list may seem daunting, all teams were able to develop and test practical solutions across the continuum of care.

Screening Families	**Notes**
What screening tool or combination of tools will be used?	
Have teams mapped the areas of identified needs to a partner's programs or services, and does the community partner have capacity to accept more referrals?	
How will a team know whether families want help with any of the issues they identified and the family's priorities when multiple needs are identified?	
What is the institution's policy around obtaining consent for sharing information with social service providers, and how is consent obtained?	
Who identifies eligible families, how is the screen introduced to families and when?	
How is the screening instrument administered?	
Who ensures the screen is completed?	
How are staff reminded to screen?	
How frequently are families re-screened?	

Engaging Families and Training Staff	**Notes**
How is family consent to share screen results or protected health information obtained?	
Who speaks with the family about the screening results, and how does that person receive the results of the screen?	
Are staff knowledgeable about social determinants of health, and are they trained to effectively engage families?	
How will the needs of low-literacy or ESL families be addressed?	
Have the reasons families might not want to disclose information, such as immigration status, been considered?	

Documentation and Referral/Navigation	Notes
How and where are screening results – and the corresponding action – documented? Can that information be retrieved to run administrative reports and provide feedback to staff or to analyze with community partners?	
What resources or referrals can be given to patients from outside the community partners service area?	
Do all families receive the same level of referral or support, or is there a risk stratified or tiered approach?	
What's the protocol for handling urgent situations?	
What information is given to the family about referred services?	
What family information, if any, is sent to the care manager and/or community partner? How? Who at the community partner receives and maintains this information?	
How often are families contacted, and by what means? How many attempts should be made to contact a family?	

Engagement in Services/Closing the Referral Loop	Notes
How is engagement in services defined?	
How will it be known which families came from the referring partner?	
Where will information about referred families be maintained within the community organization?	
How will information about these referred families be shared back to the referring partner and with what regularity?	
Do both the clinical and community team members have the skills and protected time to conduct continuous quality improvement?	
How will clinical providers and social service staff continue to build their relationship and refine their system of care?	