Strategies to Achieve Alignment, Collaboration, and Synergy Across Delivery and Financing Systems

Effectiveness of Early Childhood Development Partnerships in Addressing Pediatric Health and Social Needs during the COVID-19 Pandemic

Research In Progress Webinar
April 27th, 2022 10:00am-11:00am MT/ 12:00-1:00 pm ET
Welcome: Carrington Lott, MPH – Program Manager at Systems for Action

Presenters: Margaret Paul, PhD, Assistant Professor at New York University Grossman School of Medicine

Q&A: Carrington Lott, MPH – Program Manager at Systems for Action
Margaret Paul is an assistant professor in the Department of Population Health at NYU Langone and a member of the Section on Health Choice, Policy, and Evaluation. Her interest in state and federal health policy combined with front-line experience in public health led her to pursue a doctorate in public health at NYU where her work was supported by a Robert Wood Johnson Foundation Junior Investigator Award.

Paul now works on designing and conducting rigorous, mixed methods evaluations of policy-relevant healthcare programs aimed at ameliorating health disparities. Her current major projects include an evaluation of a social determinants of health screening program in seven New York City-based pediatric primary care clinics and a study to develop and validate a tool to assess primary care structures and processes associated with high performance. In addition to her research, she provides evaluation technical assistance to grantees of the New York State Health Foundation and the New York Community Trust.
Suzanne Brundage, MSc is the Director of Population Health at PM Pediatrics and is based in Seattle WA. Prior to this role, Suzanne was the Director of the Children's Health Initiative at the United Hospital Fund in New York City and led the Partnerships for Early Childhood Development (PECD) initiative at UHF which funded the program partners as well as our evaluation. She has deep experience with both fostering and participating in multisector partnerships among health care institutions, policymakers and payers and is an expert in identify interventions and strategies to promote population health, particularly among young children and families.
Partnerships for Early Childhood Development (PECD)

- Study team based in the Department of Population Health at NYUGSOM: Maggie Paul, PhD, Carolyn Berry, PhD, Rachel Massar, MPH, and Kayla Fennelly

- Founded by the United Hospital Fund in April 2017 and chaired by Dr. Bernard Dreyer; initial cohort included 11 NYC-based clinic-community partnerships

- Goal: Initiate, expand or strengthen multisector partnerships focused on promoting early childhood development through social needs screening and referral programs targeted at families with children under the age of 5

Support for intervention and evaluation:

United Hospital Fund
Chad Shearer, SVP for Policy & Program
Lee Partridge, Senior Fellow

The Altman Foundation
Rachel Pine, Senior Program Officer

New York Community Trust
Irfan Hasan, Deputy VP for Grants

William J. and Dorothy K. O’Neill Foundation
Marci Lu, Senior Program Officer

Robert Wood Johnson Foundation S4A
Impact of COVID-19 on network
<table>
<thead>
<tr>
<th>Clinical Site</th>
<th>Community Partner(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYP/Columbia University Medical Center</td>
<td>Northern Manhattan Perinatal Partnership (Harlem location)</td>
</tr>
<tr>
<td>St. John’s Episcopal Hospital</td>
<td>Queens Family Resource Center</td>
</tr>
<tr>
<td></td>
<td>Ocean Bay Community Development Corporation</td>
</tr>
<tr>
<td>NYU Brooklyn Family Health Center</td>
<td>NYU Family Support Center</td>
</tr>
<tr>
<td>NYP/Queens</td>
<td>Public Health Solutions</td>
</tr>
<tr>
<td>Northwell Health</td>
<td>Single Stop (Child Center of New York)</td>
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<td></td>
<td>The INN</td>
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<tr>
<td>Mount Sinai</td>
<td>Children’s Aid</td>
</tr>
<tr>
<td></td>
<td>Little Sisters of the Assumption</td>
</tr>
<tr>
<td></td>
<td>New York Common Pantry</td>
</tr>
<tr>
<td>NYC H+H/Gouverneur</td>
<td>Henry Street Settlement</td>
</tr>
<tr>
<td></td>
<td>University Settlement</td>
</tr>
<tr>
<td></td>
<td>Grand Street Settlement</td>
</tr>
<tr>
<td></td>
<td>Educational Alliance</td>
</tr>
</tbody>
</table>
Study Components

1) Establish core set of process measures to monitor implementation throughout study
2) Conduct a formative evaluation during early-stage implementation
3) Conduct a time-limited “deep-dive” process evaluation in 4 sites, including interviews and observations
4) Assess outcomes via a pre/post caregiver survey
5) Post-pandemic supplement: Conduct additional qualitative research to assess impact of COVID-19
Our S4A Project

Goal: Assess COVID-19 related implementation changes at each site and across the collaborative network as a whole

Approach:

• **Analyze implementation data and caregiver survey data** to assess of the extent to which COVID-19 impacted the demand for services throughout the crisis and the overall functionality of the existing system with respect to identifying, referring, and addressing the needs of families

• **Caregiver interviews** with caregivers as well as leadership, providers, and staff involved in screening, referring, and providing services to families

• **Photo-elicitation interviews (PEI) with caregivers** to understand their perspectives on aspects of their communities which help and/or hinder health and wellbeing

• **Key informant interviews** with broad network of stakeholders
1) Poverty is disproportionately experienced by children in the US. A large majority of children in the US are seen at well-child exams during their first year of life, whereas children do not begin engaging in the education system until age three at the earliest. Children of low-income families are more likely to miss these visits; however, the large majority of low-income children attend at least some well-child visits.

2) Early childhood is a critical time for intervening on upstream risk factors, including social risks, and pediatric primary care is a reliable and easy touch point to assess and address needs.

3) Many social needs are recurring and well-child visits offer an opportunity to rescreen and follow-up with families in a systematic manner at regularly scheduled visits. The American Academy of Pediatrics recommends 13 well-child visits between birth and age six.

4) Pediatric clinics are especially well-positioned to engage in social needs screening and referral as these practices generally have a long history of engaging with CBOs due to early childhood referrals.
Intervention Model and Research Questions

Pediatric primary care clinic staff identify new and recurring social needs among families by (re)screening during well-child visits.

Clinic staff act as resource navigators to connect families with social needs to local community-based organizations.

Community-based organizations engage with families and provide services to address their social needs.

Key Research Questions

- **Primary**: Do screening and referral interventions based in pediatric primary care clinics lead to reductions in social needs among families?
- **Secondary**: What are effective implementation strategies?
- **And now**: How did the COVID-19 pandemic impact the network of clinics and service providers? Parents and families?
Framework of pathways by which social needs interventions may impact health outcomes

- Identify unmet social needs
  - Unmet social needs
    - Social needs screening
    - Re-screening to identify new/recurring needs

- Address unmet social needs
  - Connection to resources
    - Decreased social needs
  - Social needs referral

- Improve outcomes
  - Improved adherence to recommended care
  - Improved well-being (e.g., stress reduction)
  - Increased resources in the household
  - Re-screening to identify new/recurring needs
  - Improved health, including clinical and utilization outcomes

Green links are supported by data
Blue links require further study
Red links will be examined in this study
Timeline of Critical Study Events

Phase 1
April 2017
- Logic model
- Core processes
- Formative evaluation

Phase 2
August 2018
- TA + monitoring
- Site visits, observation
- Interviews across workflow
- Process data analysis

Phase 3
Jan 2020 – Oct 2022
- Pandemic halts project
- Interviews
- Revise study design
- Parent surveys
- Process data analysis
- Recent interviews
- Photo elicitation interviews
- System-level interviews
### Core Implementation Measures Captured by the PECD Network

<table>
<thead>
<tr>
<th>Measure</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening rate</td>
<td>The proportion of individuals in the target population assessed for SDOH needs using the administered screening tool.</td>
</tr>
<tr>
<td>Positive screens</td>
<td>The proportion of individuals in the target population with positive screens, defined as having at least one reported SDOH need.</td>
</tr>
<tr>
<td>False negatives/missed positives</td>
<td>The proportion of individuals in the target population with negative screens (i.e., identified no needs) who report having one or more needs later in the visit (e.g., during conversation with providers and/or staff).</td>
</tr>
<tr>
<td>Referral rate</td>
<td>The proportion of individuals referred to services out of those with positive screens.</td>
</tr>
<tr>
<td>Refusal rate</td>
<td>The proportion of individuals who refuse all services out of those who are referred to services. This measure combines two points of refusal: patients with positive screens who refuse to be referred to the community partner and patients who refuse services once contacted.</td>
</tr>
<tr>
<td>Service provision</td>
<td>The proportion of individuals who received services to which they were referred out of those referred to services</td>
</tr>
<tr>
<td>Referral feedback</td>
<td>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”)</td>
</tr>
<tr>
<td>Site</td>
<td>Screening rate</td>
</tr>
<tr>
<td>------</td>
<td>----------------</td>
</tr>
<tr>
<td>A</td>
<td>999/2,561 (39%)</td>
</tr>
<tr>
<td>B</td>
<td>RedCap: 210/unknown EPIC: 600/unknown</td>
</tr>
<tr>
<td>C</td>
<td>672/766 (88%)</td>
</tr>
<tr>
<td>D</td>
<td>2,616/unknown</td>
</tr>
<tr>
<td>E</td>
<td>1,050/1,291 (81%)</td>
</tr>
<tr>
<td>F</td>
<td>736/unknown</td>
</tr>
<tr>
<td>G</td>
<td>1,572/1,911 (82%)</td>
</tr>
</tbody>
</table>

Total screened in Y3 (sum num col 2): 8,455
Positive screens in Y3 (sum num col 3): 3,958
Caregiver Surveys

- Phone-based surveys administered by study team
- Caregiver Surveys
  - Phone-based pre/post surveys at program and comparison sites
  - Caregivers with positive screens verbally consented to participate and received a $10 gift card incentive
  - Time 1: September 2020-March 2021 (n=209; 48% of parents who agreed to be contacted)
  - Time 2: March 2021-August 2021 (n=129; 62% follow-up rate)
Survey Results: Demographics

- **Gender**
  - 99% Woman
  - 1% Man

- **Avg. Age:** 32 years old

- **Race**
  - 22% Black
  - 62% Hispanic or Latino
  - 15% Other

- **Language**
  - 39% English only
  - 40% Spanish only
  - 17% Both Spanish and English
  - 4% Other

- **Avg. # Adults in household:** 2
- **Avg. # Children in household:** 2
- **Avg. Child age:** 4 years old

- **Insurance**
  - 78% Medicaid
  - 1% Medicare
  - 4% Private
  - 2% Other
  - 15% None/Uninsured

- **Relationship to child**
  - 98% Mother
  - 1% Father
  - 1% Grandparent

- **Mother’s education**
  - 18% Less than HS graduate
  - 46% HS graduate/GED
  - 37% Some College/College graduate/Grad school
Survey Results: Recollection and Comfort with Screening; Connection to Services

Screening
- 88 (68%) program participants remembered being screened for non-medical needs
  - 82 (93%) participants who remembered being screened felt comfortable or very comfortable with being asked about non-medical needs
- For those who did not remember being screened, 66% reported they would feel comfortable or very comfortable being asked about non-medical needs at the clinic

Connection to Services
- 73 (57%) program participants who remembered being screened reported that someone from the clinic spoke with them about local organizations/resources to help with their needs
  - 46 (63%) reported making contact with local organizations
    - 33 (72%) received services
### Survey Results: Social Needs

<table>
<thead>
<tr>
<th>Category</th>
<th>Baseline</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total needs reported</td>
<td>2.4</td>
<td>3.2</td>
</tr>
<tr>
<td>Number that had 0 needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did not pay full rent/mortgage</td>
<td>10%</td>
<td>12%</td>
</tr>
<tr>
<td>Evicted for not paying rent</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>Evicted for other reasons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did not pay utility bills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilities services turned off</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone service disconnected</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food Stamps/WIC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clothing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The chart shows the percentage of respondents reporting each need, comparing baseline and post-test results.
Survey Results: Social Needs continued

- Baby supplies: Baseline 14%, Post Test 19%
- Health insurance: Baseline 10%, Post Test 19%
- Could not afford medical care: Baseline 7%, Post Test 15%
- Transportation: Baseline 8%, Post Test 15%
- Cash Assistance: Baseline 16%, Post Test 28%
- Legal Assistance: Baseline 5%, Post Test 16%
- Childcare: Baseline 5%, Post Test 30%
- Tutoring: Baseline 9%, Post Test 14%
- Afterschool/summer activities: Baseline 9%, Post Test 13%
- Job training/employment programs: Baseline 12%, Post Test 13%
- Educational services: Baseline 9%, Post Test 9%
- Exercise/fitness activities: Baseline 16%, Post Test 15%
- Food insecurity: Baseline 15%, Post Test 15%
## Survey Results: Parent wellbeing

<table>
<thead>
<tr>
<th>Survey Item</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caregiver concern for child development</td>
<td>n=105</td>
<td>n=121</td>
<td></td>
</tr>
<tr>
<td>Any concern</td>
<td>49 (47%)</td>
<td>43 (36%)</td>
<td>P=0.123</td>
</tr>
<tr>
<td>Caregiver self-efficacy</td>
<td>n=127</td>
<td>n=129</td>
<td></td>
</tr>
<tr>
<td>Total score</td>
<td>27.4 (sd 2.9)</td>
<td>27.3 (sd 2.1)</td>
<td>P=0.683</td>
</tr>
<tr>
<td>Perceived stress (PSS-10)</td>
<td>n=128</td>
<td>n=129</td>
<td></td>
</tr>
<tr>
<td>Total score</td>
<td>14.5 (sd 7.7)</td>
<td>13.6 (sd 6.6)</td>
<td>P=0.344</td>
</tr>
<tr>
<td>Depressive symptoms (PHQ-9)</td>
<td>n=128</td>
<td>n=129</td>
<td></td>
</tr>
<tr>
<td>Total score</td>
<td>4.3 (sd 5.3)</td>
<td>3.3 (sd 5.1)</td>
<td>P=0.002</td>
</tr>
</tbody>
</table>
## Survey Results: Adverse experiences due to COVID-19

<table>
<thead>
<tr>
<th>Survey Item</th>
<th>September 2020-March 2021 N= 248</th>
<th>March 2021-August 2021 N= 165</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member of household lost job</td>
<td>131 (53%)</td>
<td>70 (42%)</td>
</tr>
<tr>
<td>Had to move/relocate from home</td>
<td>34 (14%)</td>
<td>22 (13%)</td>
</tr>
<tr>
<td>Increase in mental health issues among household member(s)</td>
<td>137 (55%)</td>
<td>46 (28%)</td>
</tr>
<tr>
<td>Increase in community violence</td>
<td>49 (20%)</td>
<td>25 (15%)</td>
</tr>
<tr>
<td>Household member hospitalized with COVID-19</td>
<td>28 (11%)</td>
<td>15 (9%)</td>
</tr>
<tr>
<td>Household member passed away from COVID-19</td>
<td>14 (6%)</td>
<td>4 (2%)</td>
</tr>
<tr>
<td>Disruption in childcare</td>
<td>87 (35%)</td>
<td>48 (29%)</td>
</tr>
<tr>
<td>Reduced income</td>
<td>175 (71%)</td>
<td>107 (65%)</td>
</tr>
<tr>
<td>Problems accessing healthcare</td>
<td>31 (13%)</td>
<td>25 (15%)</td>
</tr>
<tr>
<td>Difficulty getting food for family</td>
<td>74 (30%)</td>
<td>53 (32%)</td>
</tr>
<tr>
<td>Difficulty paying bills</td>
<td>119 (48%)</td>
<td>68 (41%)</td>
</tr>
</tbody>
</table>
### Survey Results: COVID-19 Distress and Optimism

<table>
<thead>
<tr>
<th>Survey item</th>
<th>September 2020-March 2021 N= 248</th>
<th>March 2021-August 2021 N=165</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall distress</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No/ A little distress</td>
<td>97 (39%)</td>
<td>59 (36%)</td>
</tr>
<tr>
<td>Some/ Extreme distress</td>
<td>151 (61%)</td>
<td>105 (64%)</td>
</tr>
<tr>
<td><strong>Overall optimism about next 6-months</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not at all/A little optimistic</td>
<td>68 (28%)</td>
<td>32 (19%)</td>
</tr>
<tr>
<td>Somewhat/Very optimistic</td>
<td>86 (71%)</td>
<td>131 (79%)</td>
</tr>
</tbody>
</table>
## Survey Results: Concern due to COVID-19

<table>
<thead>
<tr>
<th>Survey item</th>
<th>September 2020-March 2021</th>
<th>March 2021-August 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child(ren)’s education</td>
<td>n= 248</td>
<td>n= 149</td>
</tr>
<tr>
<td>Somewhat or very concerned</td>
<td>158 (64%)</td>
<td>104 (70%)</td>
</tr>
<tr>
<td>Economic future</td>
<td>n= 247</td>
<td>n= 162</td>
</tr>
<tr>
<td>Somewhat or very concerned</td>
<td>165 (67%)</td>
<td>121 (75%)</td>
</tr>
<tr>
<td>Ability to pay rent and other bills</td>
<td>n= 248</td>
<td>N= 164</td>
</tr>
<tr>
<td>Somewhat or very concerned</td>
<td>153 (62%)</td>
<td>114 (70%)</td>
</tr>
<tr>
<td>Having to move due to potential eviction</td>
<td>n= 247</td>
<td>n= 163</td>
</tr>
<tr>
<td>Somewhat or very concerned</td>
<td>121 (49%)</td>
<td>91 (56%)</td>
</tr>
</tbody>
</table>
### Survey Results: Concern due to COVID-19 continued

<table>
<thead>
<tr>
<th>Survey item</th>
<th>September 2020-March 2021</th>
<th>March 2021-August 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Not being able to put food on table</strong></td>
<td>n= 248</td>
<td>n=164</td>
</tr>
<tr>
<td>Somewhat or very concerned</td>
<td>122 (49%)</td>
<td>90 (55%)</td>
</tr>
<tr>
<td><strong>Not being able to work</strong></td>
<td>n= 248</td>
<td>n= 163</td>
</tr>
<tr>
<td>Somewhat or very concerned</td>
<td>160 (65%)</td>
<td>106 (65%)</td>
</tr>
<tr>
<td><strong>Getting sick</strong></td>
<td>n= 246</td>
<td>n= 164</td>
</tr>
<tr>
<td>Somewhat or very concerned</td>
<td>173 (70%)</td>
<td>122 (74%)</td>
</tr>
</tbody>
</table>
Caregiver Interviews

• We interviewed 13 caregivers across 7 sites
• All interviewees identified as mothers, most reported having multiple children and just over half were employed in some way
• Most had been seen at the participating clinic in some way and were happy with care
• Nearly all felt comfortable answering social needs screening questions in clinical settings and 11 of the 13 felt strongly that screening and especially referral should be managed by a staff member or provider rather than a less intensive intervention (i.e., handouts/resource sheets alone).
• Post-referral challenges included various aspects of access (e.g., CBO hours not aligning with work schedule)
• If connected, caregivers were happy with the resources they received and some even referred friends for services
• Most caregivers who were connected to services reported that they still required assistance for new and/or recurring needs
Caregiver Photo-elicitation Interviews

• Photo-Elicitation Interviewing (PEI) is an interview method that allows participants to guide a discussion using photographs that they have taken themselves.

• The main purpose of PEI is to record which images subjects select to share, how they organize the images, and describe those images in relation to their lives.

• These responses allow us to glean insights into the everyday experiences of people without relying on the structure of an interview guide.

• Note: PEI is distinct from photovoice, which is a method used in CBPR to gather similar data interpreted as a group to inform community-level needs, decisions, etc.
Example: Recent PEI Session

- Noise pollution
- Likes the busy environment with people walking and train nearby

- Housing issue: heat does not work well
- Relies on space heater
Example: Recent PEI Session

- Park nearby home great for exercise, relaxation, play for children, meditation
- Grocery store nearby is affordable and accepts food stamps
Key Findings: Implementation

• This work is possible but requires:
  • real clinic-CBO partnerships with trust and open communication
  • substantial investment/resources
  • thoughtful integration into existing, busy workflows

• Establishing trust with caregivers of patients is also possible, but needs to be approached in a thoughtful way
  • Caregivers value assistance, discussion
  • Staffing matters

• Tracking implementation is challenging, particularly across agencies

• Contextual factors including the availability of services in a given community have a direct impact on every aspect of program implementation and potential for impact
Key Findings: Impact of COVID-19 (1/2)

• Clinics and partners adapted to meet new reality of providing care during a pandemic
  • Substantial increase in needs among families
  • Able to adjust to daily changes in community resources
  • Used opportunity to increase outreach to families and institute/update public-facing resources
• Families participated in screening during COVID-19 - suggests perception of programs as a real and needed resource in the community
• Importance of local network – 7 sites, each operating within a different context (population, resources) within the same city
• Key pre/post survey findings: decrease in number of needs (1) + depression (PHQ9)
Key Findings: Impact of COVID-19 (2/2)

- Telehealth perceived as a positive addition to clinic operations by caregivers in all sites
  - Show rates for telemedicine appointments close to 100%; offering telemedicine increased access for most when appropriate
- Some adaptations seem to be more efficient than business as usual/pre-pandemic care – e.g., most providers, staff, and caregivers liked SDOH screening prior to visit via telephone
- Pandemic heightened awareness and NYC experienced spike in resources to meet growing needs in some cases (e.g., food insecurity) but not others (e.g., housing) – long-term impact unclear
Next Steps

- Conclude caregiver PEI; code and analyze data
- Conduct qualitative interviews with broader network of stakeholders
- Papers
  - Implementation findings (under review)
  - Evaluation approach
  - Impact of COVID-19 on families (survey data)
  - Findings from caregiver interviews (qualitative)
  - Findings from PEI with caregivers
- Upcoming conferences
  - AcademyHealth Annual Research Meeting
  - APHA (abstracts under review)
Future Research

• Exploring role of public health agencies in assisting small/solo primary care practices with screening and resource navigation
• Partnering with former PECD site on evaluating a NYC-based public health corps CHW-led social needs screening and referral intervention in pediatric primary care clinic
• Developing and evaluating a social needs screening and referral program in adolescent primary care clinics to identify best practices, unique challenges, etc. for this population
Suzanne Brundage, MSc
Thank you!

For questions for the research team email Margaret.Paul@nyulagone.org
Questions?

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If you would like to receive a certificate of completion for today’s ResProg webinar, please complete the survey at the end of the session.

One will be emailed to you.
Upcoming Webinars

May 18th

Changes in Capacity to Absorb Clinical-to-Community Referrals during the COVID-19 Pandemic

from The Glasser/Schoenbaum Human Services Center and Visible Network Labs
Acknowledgements

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