Aligning Health and Social Systems to Expand Evidence-Based Home-Visiting

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

Research-In-Progress Webinar
July 8, 2020
12-1pm ET
Agenda

Welcome: Chris Lyttle, JD

*Deputy Director for Systems for Action*

Presenters: Venice Ng Williams, PhD, MPH & Greg Tung, PhD, MPH

*Colorado School of Public Health*

Chris Arestides, MPH, BSN, RN

*Nurse-Family Partnership*

Q&A: Chris Lyttle, JD
Venice Ng Williams is a mixed-methods prevention researcher at CU Anschutz's Prevention Research Center for Family & Child Health and Adjunct Instructor in Health Systems, Management & Policy at the Colorado School of Public Health. She holds a PhD in Health Services Research. Her research relates to improving the implementation of Nurse-Family Partnership through cross-sector collaboration and systems integration. Venice has a range of experience in health services research, including conducting health impact assessments to inform child welfare policy, evaluating systems-change interventions with Urban Indian health centers and developing collegiate tobacco control policies.
Dr. Tung’s research interests relate to how scientific evidence is incorporated into policy and program decision making, with a special emphasis on injury prevention. He works on a diverse range of injury topics, including the prevention of youth violence, suicides, poisonings and child abuse. Dr. Tung's research interests also include the integration of health services and public health systems, with a focus on non-profit hospital community benefit activities. He is a mixed methods researcher and utilizes both quantitative (e.g. longitudinal, multi-level, and time-to-event analysis) and qualitative (e.g. case studies) methods. Dr. Tung is also faculty in the Program for Injury Prevention, Education and Research (PIPER).
Chris Arestides, MPH, BSN, RN is manager of healthcare integration and strategic partnerships at the Nurse-Family Partnership National Service Office.
Principal Investigator and Co-Investigators
- Venice Ng Williams, PhD, MPH
- Greg Tung, PhD, MPH
- Mandy Allison, MD, MSPH, MA

Project team
- Mike Knudtson, MS
- Connie Lopez, BSN, RN, MA
- Carol Franco, MA

Collaborators/Advisory Committee:
- David Olds, PhD
- Chris Arestides, BSN, RN, MPH
- Jade Woodard, MPA
OUR PROJECT

- Study Purpose:
  - To examine the effects of *multi-sector financing and delivery strategies* in expanding the *reach and impact* of the Nurse-Family Partnership® (NFP) program across the United States using a *mixed-methods* approach.
Adverse pregnancy outcomes are more common in the US than any other developed country. This is compounded among women living in poverty.
“There is a magic window during pregnancy...it’s a time when the desire to be a good mother and raise a healthy, happy child creates motivation to overcome incredible obstacles including poverty, instability or abuse with the help of a well-trained nurse.”

- David Olds
<table>
<thead>
<tr>
<th>Year</th>
<th>1977</th>
<th>1990</th>
<th>1994</th>
</tr>
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<tbody>
<tr>
<td>Location</td>
<td>Elmira, NY</td>
<td>Memphis, TN</td>
<td>Denver, CO</td>
</tr>
<tr>
<td>Participants</td>
<td>400</td>
<td>1,138</td>
<td>735</td>
</tr>
<tr>
<td>Population</td>
<td>Low-income whites</td>
<td>Low-income Blacks</td>
<td>Large proportion of Latinx</td>
</tr>
<tr>
<td>Studied</td>
<td>Semi-rural area</td>
<td>Urban area</td>
<td>Nurses vs. paraprofessionals</td>
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Community replication began in 1996, overseen by National Service Office (NSO)

Outcomes include:
- Reduced pre-term birth
- Increased breastfeeding
- Increased child immunizations
- Improved educational and employment outcomes

https://www.nursefamilypartnership.org/about/proven-results/published-research/
Principles of Replication:

1. Develop it well
2. Test thoroughly before investment
3. Replicate carefully
4. Improve continuously

Link to additional information on replication including national and international implementation research:
https://www.nursefamilypartnership.org/about/proven-results/
NFP IMPLEMENTATION

- NFP NSO contracts with and provides support to states and local organizations that deliver the program
  - State and county departments
    - Public Health
    - Social Services
  - Community-based organizations
  - Health care
    - Hospitals and health systems, Managed care
    - Federally Qualified Health Centers
    - Visiting Nursing Associations (VNAs), Other healthcare related organizations
NURSE-FAMILY PARTNERSHIP® IS A COMMUNITY HEALTH PROGRAM THAT TRULY CHANGES LIVES – FOR GENERATIONS TO COME.

317,000+ FAMILIES SERVED
Since replication began in 1996

41 STATES
the U.S. Virgin Islands and some Tribal communities

5x $ RETURN
Every $1 invested in NFP saves $5.70 in future costs for the highest-risk families served

https://www.nursefamilypartnership.org/about/
History of NFP funding
Original trials funded by Bureau of Community Health Services, RWJF, W.T. Grant Foundation, The Colorado Trust

1970s-90s

Replication funded by US Department of Justice in 6 locations

1990s

Foundation support: RWJF, Edna McConnell Clark Foundation, The Colorado Trust
State & Local investments

2000s

Federal investments through Maternal, Infant & Early Childhood Home-Visiting (MIECHV)
Pay for Success

2010s

Health-related: health system financed, Medicaid, substance use/mental health
Social services: Family First Prevention

Present
NFP FUNDING SOURCES

Medicaid
MIECHV- Federal Grant
State and Local General Funds and Grants
Private Philanthropy
Tobacco Settlement
Pay for Success/Social Impact Bond
Managed Care
TANF/Public Welfare
Child Abuse Prevention
Juvenile Justice
Substance Abuse and Mental Health
School Readiness
Hospital Systems

NFP only reaches a small percentage of the women and children who could benefit and are eligible for the service…
NFP Healthcare Integration

- NFP Integration with healthcare is part of the NFP National Service Office Strategic Plan
- Includes both healthcare payment and delivery systems

Healthcare Delivery
- Operational structure of NFP and how nurses function within healthcare
- Use of Electronic Health Records
- Placement and engagement of NFP within health systems

Healthcare Payment
- Medicaid payment
- Working with Managed Care
- Exploring payment arrangements
OUR PROJECT

- Aim 1. Assess degree of collaboration by site between NFP and cross-sector providers including healthcare systems and social services
- Aim 2. Estimate the relationship between site-level collaboration and program outcomes
- Aim 3. Identify and disseminate best practices of successful collaboration with health systems and social services
CONCEPTUAL MODEL

Systems Alignment
• Shared mission/goals
• Leadership/champions
• Shared resources
• Financial mechanisms

Organizational Collaboration

Increased Care Coordination

Client Immediate Needs Met

Improved Client Self-Efficacy

Anticipated Outcomes

Interpersonal Factors
• Perceived need/value
• Relational coordination
• Knowledge/awareness

Client characteristics
Nurse characteristics
Agency characteristics
Research Question: Has systems-level collaboration between NFP and other cross-sector providers changed in response to “naturally-occurring” efforts to facilitate enhanced collaboration?

- Longitudinal survey methodology
- NFP nurse collaboration with other healthcare and social service providers
- Measures relational coordination and structural integration
MEASURING COLLABORATION

Relational Coordination = high quality relationships + high quality communication

Relationships
- Shared goals
- Shared knowledge
- Mutual respect

Communication
- Frequent
- Timely
- Accurate
- Problem-solving

Shared physical space
Structural Integration
- Shared data/information
- Shared funding
- Shared policies

https://rcanalytic.com/rctheory/

Dedrick & Greenbaum 2011
AIM 2: COLLABORATION & OUTCOMES

Research Question: What is the relationship between improved NFP-community provider collaboration and program outcomes?

- Random effect (mixed) models with client-, nurse-, and site-level factors
- Compare healthcare-financed sites vs. social service-financed sites
OUTCOMES

- Infant health
- Maternal behaviors
- Program Implementation
Research Question:
What is the relationship between collaboration and program outcomes among Black, African-American and Latinx clients in the program?
AIM 3: BEST PRACTICE MODELS

Research Questions: *Which highly collaborative NFP sites are the top performers based on identified program outcomes in Aim 2?*

*What are the best practices, activities, and dynamics to collaboration among high-performing NFP sites?*

- Positive deviance approach to identify high-performers
- Conduct qualitative case studies
- Create best practice models of collaboration (including financing mechanisms)
What do we already know?
Positive associations with client retention
Positive associations with smoking cessation
Mixed associations with childhood injury
<table>
<thead>
<tr>
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<td>Intra-class correlation</td>
<td>0.059</td>
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<td>Observations</td>
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| Intra-class correlation | 0.059                     | 0.084                       | 0.029                     | 0.058           | 0.040             |
| Observations           | 36900                     | 28917                       | 9604                      | 26264           | 26264             |

*p<0.05, ** p<0.01, ***p<0.001
Collaboration matters but the exact dynamics are challenging and complicated to interpret

- Better coordination with substance use and integration with Child Welfare may improve client retention
- Additional research is needed to understand the relationship between collaboration and maternal-reported behaviors (i.e. smoking and ED use)
What will we learn?
Additional evidence that collaboration improves outcomes

- Effects of systems alignment including financial mechanisms

- Measure collaboration changes over time

- Health equity and trauma violence informed care
IMPLICATIONS

- Integrate findings into NFP nursing practice and site development
- Maximize nurse productivity to serve families experiencing adversity
- Relevant for coordination and systems integration efforts in other public health, healthcare, and social service settings
Commentary

Chris Arestides, BSN, RN, MPH
IMPLICATIONS FOR NFP HEALTHCARE INTEGRATION

- Integration of the model within healthcare payment and delivery systems:
  - Aligns with nursing practice and may impact nurse satisfaction
  - May improve maternal and child health outcomes
  - Assists families in managing their health and their experience of care
  - Improve NFP sustainability
  - And reduce overall healthcare costs.

- NFP Healthcare Integration Goals:
  - Increase provider awareness and engagement with NFP
  - Generate/sustain payment through healthcare payment mechanisms
  - Improve coordination of care
  - Build skills and satisfaction of NFP nursing workforce
QUESTIONS?

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Chris Arestides, BSN, RN, MPH
chris.arestides@nursefamilypartnership.org
Questions?

www.systemsforaction.org

@Systems4Action
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.
$1 million is available for research investigating the effectiveness of existing, currently operating system alignment mechanisms in mitigating social, economic and health disruptions associated with the COVID-19 pandemic. Applications must leverage ongoing or recently completed research on the system alignment mechanism of interest.

2020 S4A Supplemental Research on COVID-19 Response & Recovery Call for Proposals

Letters of Intent due July 20, 2020
Proposals due August 5, 2020
Upcoming Webinars

July 22 | 12 pm ET
Transit and Treatment: Effectiveness of Transit System to Improve Substance Abuse and Mental Health in Connecticut
Jeffrey P. Cohen, PhD and Carla J. Rash, PhD
University of Connecticut

August 5 | 12 pm ET
Investigating Systems Alignment of Multi-Sector Agencies to Address Child Maltreatment in St. Louis
Melissa Jonson-Reid, PhD & Trisha Kohl, PhD, Washington U in St. Louis
Acknowledgements

Systems for Action is a National Program Office of the Robert Wood Johnson Foundation and a collaborative effort of the Colorado School of Public Health, administered by the University of Colorado Anschutz Medical Campus, Aurora, CO.