Leveraging the Healthcare System to Impact Educational Disparities

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Welcome

The Rohit and Harvanit Kumar Conference on the Economics of Early Childhood Education

Leveraging the Healthcare System to Impact Educational Disparities
Differences in Foundational Brain Development
Start Early and Accrue Over Time

0-1 YEARS
As early as nine months old, infants born into poverty score lower on cognitive development measures than do their more affluent peers.

1-3 YEARS
This disparity triples by the age of two, and grows significantly through a child’s early years.

3-5 YEARS
Each year ~1M low-income students enter kindergarten lacking key competencies to be ready to learn, with many preschool interventions occurring too late.

ADOLESCENCE AND ADULTHOOD
This results in a cascade of consequences for cognitive and social-emotional development, academic attainment, occupational status, and later-life health and social well-being.

Sources:
Why the Healthcare System

- Existing infrastructure
- Near-universal access and entry points
- Repeated and predictable touchpoints
- Trusted source of information and guidance
- Reach of Medicaid and CHIP
- Ability to collect, analyze, and use data
The Basis for the Conference

- What are specific ways the healthcare sector can advance parental knowledge of child development and impact educational disparities?

- What are some current programs that work through the healthcare sector and their impact?

- How can we use the science of scaling to replicate, scale, and fund evidence-based programs?
TMW History at-a-Glance

- Developed TMW-Home Visiting (1.0) curriculum
- Launched TMW-Home Visiting (1.0) RCT
- Dana began research outside of operating room
- University of Chicago Women's Board seed grant
- Completed TMW-Home Visiting (1.0) RCT
- Published first peer reviewed article
- Hosted White House convening: Bridging the Thirty Million Word Gap
- Received IES grant for Project ASPIRE
- Published Thirty Million Words: Building a Baby's Brain
- Began strategic planning for TMW Center with Bridgespan
- Launching TMW-Home Visiting RCT
- Completed strategic planning
- Launched Newborn Implementation study
- Published Thirty Million Words: Building a Baby's Brain
- Began strategic planning for TMW Center with Bridgespan
- Launched TMW-Home Visiting RCT
- Completed strategic planning
- Launched Newborn Implementation study
- Announced Palm Beach County, Florida as CWDP partner
- Convened first conference
- Launched TMW-Well Baby RCT
- Completed TMW-Newborn RCT
- Launched TMW-Well Baby RCT
- Completed TMW-Newborn RCT
- Launched TMW Center for Early Learning + Public Health
- Issued RFP for CWDP community
- Projected launch of CWDP in Palm Beach County, Florida
- Projected completion of TMW-Well Baby RCT
- Projected completion of TMF-Home Visiting RCT
- Projected completion of TMF-Home Visiting (2.0) longitudinal RCT

Conceptualization and Testing
Dana observes systemic problem among patient population and steps out of the operating room to put stress on research, strengths, and skills to work to address.

RCTs and Early Implementation
Initial development and piloting of core concepts (3Ts), key messaging and essential tools for asset-based, parent-centered curricula.

Community Level Approach
Launch the TMW Center and partner with a US community to embed TMW suite of interventions across already existing systems with a 5-year goal to reach 60% of children birth to age three and their families. Develop a model that can be used in other parts of the country. Explore other community-wide partnerships.
So Where Is Our Work Headed?

TMW Center: Mission, Strategic Priorities, and Promising Findings
The TMW Center for Early Learning + Public Health aspires to create a population-level shift in knowledge and behavior of parents and caregivers to optimize foundational brain development in children, birth to five years of age.
TMW Center for Early Learning + Public Health: What We Are

• Joint venture between the University of Chicago Biological Sciences and Social Sciences Divisions

• Co-Directed by Dana Suskind, MD and John List, PhD:
  • Physician who specializes in developing and testing interventions for parents and caregivers;
  • Economist who uses large field experiments and behavioral economics to understand which interventions along the education continuum, particularly in preschool years, have significant or lasting outcomes

• Advance public health approach to early learning informed by behavioral economics
TMW Center for Early Learning + Public Health: Strategic Priorities

- Develop and test evidence-based interventions and tools in early childhood
- Demonstrate community-wide proof points
- Advance the field
  - Advance the science of scaling;
  - Catalyze the field of health, education, and social services leaders
TMW Interventions at-a-Glance

**TMW-Newborn** – Video shared with parents on maternity ward during Universal Newborn Hearing Screening

**TMW-Well Baby** – Videos shared with parents in pediatric clinic at well-child checks at 1, 2, 4, and 6 months

**TMW-Pediatrics** – Single web-based program for pediatricians and support staff

**TMW-Let’s Talk!** – 4- or 8-session facilitated-program implemented with parents in group setting

**TMW-Home Visiting** – Flagship 12-session multimedia curriculum with coaching, goal setting, and language tracking

**TMW-Early Childhood Educator** – Web-based 8-module professional development program for early childhood professionals in home- and center-based child care centers

**Cog-X** – Comprehensive curriculum for preschool educators with Parent Academy component
# TMW-Well Child: Study Overview

<table>
<thead>
<tr>
<th>Sample: Parents of Low SES</th>
<th>TMW Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>234</td>
<td>230</td>
</tr>
<tr>
<td>Parent Age</td>
<td>M=27.6; SD=5.9</td>
<td>M=26.6;SD=5.8</td>
</tr>
<tr>
<td>Oral Language Skills ≤5th Grade</td>
<td>64.9%</td>
<td>70.4%</td>
</tr>
<tr>
<td>Link/WIC Recipient</td>
<td>82.5%</td>
<td>79.7%</td>
</tr>
</tbody>
</table>

![Study Timeline Diagram](image)
## Anticipatory Guidance Received: 1 Month

Anticipatory guidance topics parents reported hearing at 1 month well-child check:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeding</td>
<td>79%</td>
</tr>
<tr>
<td>Infant Weight</td>
<td>70%</td>
</tr>
<tr>
<td>Brain Growth</td>
<td>24%</td>
</tr>
<tr>
<td>Infant Learning</td>
<td>12%</td>
</tr>
<tr>
<td>Learning to Talk</td>
<td>9%</td>
</tr>
</tbody>
</table>
SPEAK Knowledge at 1 Month

- **66%**: Believed infants learn little about language in the first 6 months of their life.

- **68%**: Unaware that infants benefit from early exposure to number/counting, shape/size, and match talk in first year.

- **72%**: Had a misconception that watching educational TV is beneficial to young children’s learning.
Knowledge (Early Childhood) by Group Over Time

* TMW > Control, controlling for baseline knowledge and oral language skills
Differences between TMW and Control: Parent and Child Behaviors

TMW parents were more likely to engage in positive parenting behavior (e.g. sensitivity to cues, social emotional growth fostering, and cognitive growth fostering) than Control parents at 9 months of age, controlling for parent oral language skills.

<table>
<thead>
<tr>
<th>Parent Behavior</th>
<th>TMW M (SD)</th>
<th>Control M (SD)</th>
<th>df</th>
<th>F</th>
<th>p-value</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity to Cues</td>
<td>8.42 (1.30)</td>
<td>8.04 (1.33)</td>
<td>(2, 312)</td>
<td>8.51</td>
<td>0.004</td>
<td>0.027</td>
</tr>
<tr>
<td>Respond to Child's Distress</td>
<td>8.51 (2.04)</td>
<td>8.60 (2.20)</td>
<td>(2, 312)</td>
<td>0.20</td>
<td>0.652</td>
<td>0.001</td>
</tr>
<tr>
<td>Social Emotional Growth Fostering</td>
<td>7.04 (1.36)</td>
<td>6.71 (1.42)</td>
<td>(2, 312)</td>
<td>5.61</td>
<td>0.018</td>
<td>0.018</td>
</tr>
<tr>
<td>Cognitive Growth Fostering</td>
<td>10.15 (2.68)</td>
<td>9.46 (2.69)</td>
<td>(2, 312)</td>
<td>7.02</td>
<td>0.008</td>
<td>0.022</td>
</tr>
</tbody>
</table>

TMW infants were more likely to use communicative cues when interacting with parents than control infants at 9 months of age.

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<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Clarity to Cues</td>
<td>8.29 (1.22)</td>
<td>7.97 (1.51)</td>
<td>(1, 315)</td>
<td>4.34</td>
<td>0.038</td>
<td>0.038</td>
</tr>
<tr>
<td>Responsiveness to Parent</td>
<td>7.89 (2.26)</td>
<td>7.45 (2.31)</td>
<td>(1, 315)</td>
<td>2.95</td>
<td>0.087</td>
<td>0.009</td>
</tr>
</tbody>
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Community-Wide Demonstration Project

- TMW Center is partnering with Children’s Services Council of Palm Beach County, Florida, to embed TMW’s integrated set of evidence-based interventions in existing health, education, and community social service systems.

- **Goal:** to reach at least 60% of children, birth to three, and their families within 5 years.
TMW Center’s Community-Wide Public Health Approach to Early Learning
Develop and test evidence-based interventions and tools in early childhood.

Demonstrate community-wide proof points.

Advance the field:
- Advance the science of scaling;
- Catalyze the field of health, education, and social services leaders.
## What To Expect Today

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>9:30 – 10:45</td>
<td><em>Understanding the U.S. Healthcare System: Incentives, motivations and opportunities</em></td>
<td>Diane Alexander, Donna Cohen Ross, Jocelyn Guyer, Dana Suskind, Moderator</td>
</tr>
<tr>
<td>10:45 – 11:15</td>
<td>Break</td>
<td></td>
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<tr>
<td>11:15 – 12:30</td>
<td><em>Principles of Implementation Science: HealthySteps as a model and case study</em></td>
<td>Rahil Briggs, Allison Metz</td>
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<tr>
<td>12:30-1:30</td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>1:30 – 3:30</td>
<td><em>What we can learn from current approaches that leverage the healthcare system to improve child outcomes</em></td>
<td>Amanda Feinstein, Perri Klass, Dayna Long, Alan Mendelsohn, Marc Hernandez, Moderator</td>
</tr>
<tr>
<td>3:30 – 4:00</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>4:00 – 5:00</td>
<td><em>Impacts of Early Childhood on Health and Life Outcomes</em></td>
<td>James Heckman, John List, Moderator</td>
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<tr>
<td>5:30 – 6:30</td>
<td>Reception</td>
<td></td>
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Housekeeping

- Our conference is being live-streamed in a room upstairs and virtually for those who couldn’t make it.

- All of our sessions will take place in this room. During breaks and lunch, feel free to move about the building.

- If you have questions, or need directions, feel free to ask a staff member with a “Staff” name tag

- Twitter hashtags
  - #TMWCenterConvenes2018
  - #LeveragingHealthcare
  - #ImpactingEdDisparities
  - #ECE