Communities of Opportunity: Integrating Early Childhood Systems to Prevent Adversity and Promote Wellbeing

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Disclosures

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A lonely road

For the poor in the Deep South’s cities, simply applying for a job exposes the barriers of a particularly pervasive and isolating form of poverty
It takes a village . . .
Four Boston Public Schools test positive for elevated lead levels in drinking water

Thirty-eight schools with active water fountains were tested.

Boston Latin Academy was one school that had drinking fountains with elevated lead levels.
Goal: Develop strategies to reduce disease risk after ACEs

From S. M. Mason
• Perinatal programming

• Lifecourse social determinant

• Intergenerational

• Indirect effects

• Cumulative effects

Morbidity and mortality


Jun et al 2008; Harville, Boynton-Jarrett et al, 2010


Image courtesy of The Life Cycle of a Human

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Abiding Risk

It’s not stress that kills us, but our reaction to it.

--Hans Seyle
STRESS AND THE GENERAL ADAPTATION SYNDROME

BY

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With the concept of the general adaptation syndrome we have attempted to integrate a number of seemingly quite unrelated observations into a single unified biologic system. I would draw attention briefly to the work of Claude Bernard, who showed how important it is to maintain the constancy of the “milieu intérieur”; Cannon’s concept of “homoeostasis”; Frank Hartmann’s “general tissue hormone” theory of the corticoids; Dustin’s observations on the “caryoclastic poisons,” the “post-operative disease,” the curative action of fever, foreign proteins, and of other “non-specific therapeutic agents”; the “nephrotoxic sera” of Masugi; and to the “Goldblatt clamp” for the production of experimental renal hypertension.

At first sight it would seem that all these observations have little in common and that there is no reason to attempt their integration into a unified system of physiological and pathological events. Yet most of my research work has been devoted to the construction of bridges between these and many additional facts, since they were thought to be interconnected in nature. Through the comprehension of their unity we hoped to learn how to use them better for the understanding of life and the treatment of disease.

An adaptive response - in fact, we shall never truly “understand” this phenomenon, since the complete comprehension of life is beyond the limits of the human mind. But there are many degrees of “elucidation.” It seems that the fog has now been just sufficiently dispersed to perceive the general adaptation syndrome through that measure of “twilight” which permits us to discern the grandeur of its outlines but fills us with the insatiable desire to see more.

We realize that many lines in our sketch will have to be hesitant, some even incorrect, if we try to put on paper now what we still see only vaguely. But a preliminary map—albeit largely incomplete and partly inaccurate—is needed now by those eager to exploit this field which holds so much promise for all who suffer from stress. I hope that these pioneers in uncharted territories will accept my partial and distorted map in the spirit in which it is offered, to complete and rectify it.

It is in this sense that I should like the reader to consider the following synopsis of what I think I see.

Principal Facts and Theories upon which the General Adaptation Syndrome Concept is Based
McEwen and Stellar, NEJM, 1998
Phenotypic Plasticity

Genetic potential

Behavioral Response

Affective Regulation

Activities, Lifestyles

Psychological Response

Socio-Emotional Development

Mental Health

Physiological Response

Neurobiology Hormones

Physical Health

Childhood Adversities

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Biological Sensitivity to Context

Boyce, WT, Ellis BJ, 2005

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Trauma and the individual

Blue Nude  Pablo Picasso, 1902
Adversity and Health and Wellbeing
PLACE MATTERS
Neighborhood Effects

Compositional Collective

Contextual

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Trauma and the community
Community Trauma

- **Socio-cultural environment**
  - poor social cohesion, low civic engagement, low collective efficacy and social capital

- **Built Environment**
  - Deteriorated, unsafe public spaces

- **Opportunity Structures**
  - Intergenerational poverty
  - Underemployment/unemployment
  - Poor educational and enrichment opportunities
  - Concentrated disadvantage
  - High mobility

The Prevention Institute, Adverse Community Experiences and Resilience

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Impact of Community Trauma on Health and Developmental Trajectory
The ‘Long-Arm’ of Childhood
What shapes the landscape of opportunity?

- Community assets
- Social Networks

- Community Violence
- Social & Physical disorder

- Built Environment
- Structural Racism

- Residential Segregation
- Social Capital

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EQUITY & OPPORTUNITY
Equality does not mean Equity

Clusters of Risk

Violent Crime Rate  
Child Obesity Rate  
Child Hypertension Rate

Local Moran’s I Spatial analysis with False Discovery Rate adjustment
RESILIENCE
Developmental progress requires stable, responsive relationships.
Ecological Systems Theory

Bronfenbrenner, 1986
Protective Factors

• Characteristics of the event
• Characteristics of the individual
• Caregiving System Assets
• Community Assets

• Knowledge of:
  – Historical Trauma
  – Intergenerational Trauma
  – Structural Barriers
  – Social Context

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Modifiable Resilience Factors

- Parenting
- Social Support
- Maternal Mental Health
- Self-Care Skills and Routines
- Trauma Understanding
- Social Capital and Community Assets

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Resilience: Individual or Collective?
• Resilience results from a complex interplay between the child’s social supports, cultural and societal resources as well as individual temperament, knowledge, experiences and skills
Community-level Strategies
Community Strategies

Daro and Dodge, 2009
Reorient our focus

Paradigm shift from childhood adversity to child health equity
Reorienting our focus

- How do we create community-level and systematic approaches to achieving child wellbeing?

  - How do we foster powerful and impactful cross-sector coordination of efforts?

  - How to we foster relationships between organizations that are complimentary, create coordinated work, and shared aims?
Vital Village Community Engagement Network

1. To cultivate community settings that promote healthy childhood emotional and social development and support well-being.
2. Improving the quality of data and tools to promote family and community safety.
3. Support social emotional learning, protective factors.

- Building community capacity to promote healthy social and emotional development in early childhood.
- Integrating a trauma-informed framework for preventing childhood adversity.
- Early childhood health and education.
Vital Village Network Theory of Change
Mobilizing Community Resilience

• Create momentum (sustain)
  – Align and connect local efforts
  – Enhance existing efforts with a trauma-informed framework

• Community of Practice (spread)
  – Share, modify, and adopt best practices
  – Peer learning

• Strategically address policy barriers (scale)
  – Translation of local, state, federal policy
  – Policy opportunities

Changing Minds, FUTURES without Violence

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EVIDENCE-BASED THERAPIES AND MENTAL HEALTH SERVICES ARE NECESSARY BUT NOT SUFFICIENT
An Ecological Approach is Necessary

• Trauma symptoms are adaptations to environmental conditions

• Safety and social connections are fundamental to healing

• Coordinated opportunities for promoting prevention.
Can a trauma-informed focus help align work across sectors and enhance existing efforts?

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ALIGNMENT
Are Systems of Care Working In a Synergistic and Efficient Way for Families?
Working Across Sectors
Shared Understanding of Root Causes

- Alignment
- Shared systems
- Ongoing communication
- Mutual accountability
Can you engage a broader community in supporting a shared aim?
Neighborhood-Level Interventions to Improve Childhood Opportunity and Lift Children Out of Poverty

Megan Sandel, MD, MPH; Elena Faugno, BS; Angela Mingo, MCRP; Jessie Cannon, BS; Kymberly Byrd, MPH, MSW; Dolores Acevedo Garcia, PhD, MPA-URP; Sheena Collier, EdM; Elizabeth McClure, MS; Renée Boynton Jarrett, MD, ScD
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CULTIVATE A LEARNING SYSTEM
Hubs of Innovation

in each community

Create a system to allow resources, communication, and opportunities to collaborate to be accessible.
The role of shared data in integrated efforts and systemic change

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COMMIT TO IMPROVEMENT AND SUPPORT IT SYSTEMATICALLY

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Establish a platform for tracking benchmarks of child wellbeing.

Leverage existing data for meaningful use.

Centralized and shared existing data

Web-accessible data dashboard

Cultivate cross-sector collaboration

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Our Plan
Opportunity Varies across Boston Neighborhoods

**Boston Metro Area**
- Boston is among the most inequitable metro areas in neighborhood opportunities for Hispanic and Black children.
  - 6 in 10 Hispanic children and over half of Black children live in very low opportunity neighborhoods in Boston.

[Child Opportunity Index](www.vitalvillage.org)
Opportunity Varies across Boston Neighborhoods

Violent Crime Rate

- Childhood adversities affect chronic disease risk.

- High violent crime rate is associated with very low Child Opportunity
  - 2009 Boston Police Department violent incidents (robbery, assault, murder)
  - Aggregated census-tract level crime rates as incidents per square mile.
Opportunity Varies across Boston Neighborhoods

Clustering of Violent Crime

- Patterning of risk for low opportunity and crime is regional

- Clustering of census tracts with high violent crime rates (green highlight) overlaid clustering of very low Child Opportunity

Child Opportunity Index and High Violent Crime Clusters
Child Opportunity Index & Obesity Rate

- BMC aggregate EMR data on obesity for children ages 3-18 years old.

- Rates of obesity correlate with very low opportunity (COI), but outliers are present.

- Census tract violent crime is significantly associated with rates of
The Geography of Opportunity

• Child Opportunity Index allows exploration of:
  – Multiple neighborhood-level factors
  – Adjacent geographic regional context

• Identification of positive deviance and outliers

• Enhanced opportunity for:
  – Comprehensive metrics and evaluation tools within place-based efforts
  – Comparison across place-based efforts
  – Population-level change surveillance model

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The Arc of History

Image courtesy of Ekua Holmes, Roxbury, MA
There’s no place like home
Achieving Equity
Collaborative Leadership for Equity

- Leadership Development
- Knowledge, skills, training, self-care
- Cross-sector collaboration
- Co-design
- Alignment
- Shared Data
- Common metrics
- Leading for outcomes
- Leading together
- Leading from within

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When spiders unite they can tie down a lion.
--Ethiopian Proverb