Optimizing the Behavioral Health of All Children : Implications for Policy and Systems Change

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Opportunities to Promote Children's Behavioral Health:
Health Care Reform and Beyond

Keck Center
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FAMILIES AND COMMUNITIES

Argument: Addressing MBD Disorders in Kids

- Growing prevalence and impact MBD disorders in children and youth is a big, complex problem
- This epidemic, at its most fundamental, has similar the causes are obesity epidemic:
  - Mismatch between evolutionary determined capacity to develop and adapt and the man-made environment that we are forcing children to adapt to
- Much can be done to better screen, diagnose and treatment MBD disorders; i.e. addressing the changing nature of marginal risk
- But to fundamentally address the causes of causes – need to move up stream, change the median risk

Argument: Addressing MBD Disorders in Kids

- Bad news: our health care system is not well positioned to do this historically, or currently
- Fixit, or incremental strategies focused on the marginal risk can be helpful, but real improvement will require more transformative changes
- The ACA provides some tools for incremental changes (improved screening, bundling payments, CMMI);
- Important to take advantage, and more importantly, achieve synergies, across agencies and approaches
- Real change require transformative analysis, approach and policy agenda

Framework to Rationalize different types of Change, Innovation, Improvement Strategies

- Fixit – fix broken parts and pieces
- Incremental Improvement
  - Evidence based improvements in services and care
  - Most of health care improvements fall into this category (new screening tool, MIECHV**)
- Transitions
  - New way of performing; Quantum leap;
  - Where innovations drives improvement
  - Requires nudges and jolts
  - 3.0 ACOs/HDOs, MIECHV, PedsNET, C3N, TECCS
- Transformation: Paradigm Shift
  - New Operating System

ACA Implementation

- Stimulating turbulent disruptions
- Creating potential for substantial health system innovation and improvement
- Rush to develop ACOs, unleashing market forces, significant delivery system changes
- Growing pressure for different types of payment reform

What ACA Reforms mean for kids

Positives:

- Expansion of parent health insurance
- No lifetime caps
- No discrimination based on pre-existing conditions
- Better access to preventive care
- Bundled payments

Negatives:

- Breakdown of regionalized care
- Squeeze on children's health services
- Challenges for children's hospitals
- Child benefit packages
- Second, third order consequences

Disincentives for Attention to Child Health

- Small proportion of overall expenditures
- Investments only show potential benefits after long time horizons
- Cross-sector finance conundrums
- Competitive health care markets are narrowly focused on short-term high cost patients
- Simple business & payment models that are not aligned with producing value for kids, families, and society

Optimizing Behavioral Health for All Children: The Challenge

- Epidemic of Mental, Behavioral and Developmental problems
  - 22% of adolescents have MH problems with impairment (long tail)
- 75% of cumulative prevalence of mental health problems have their onset before age 25 (LC/AR)
- Part of why the US is the sickest of rich nations, with the highest costs
- Most inefficient, low value, low ROI health system
- Old Outdated Operating System:
  - Resources flowing to the end of life span, with a focus on biomedical issues

Deeper challenges:

- Analytic challenge: how we understand and define the problem influences the strategies we employ, solutions we seek, and road map we commit to.
  - Need a life course health development approach
  - Paradigm shift in understanding the context of brain development & growing mismatch
- Scope and Scale Problem: this is a big complex problem which will not respond to incremental strategies and solutions
  - No magic bullet, no single cure all, not a service deficit
  - Complex adaptive systems problem
- Audacity Deficit: this requires major national effort, new narrative, leadership, measures, and approach

Problems are staring us in the face

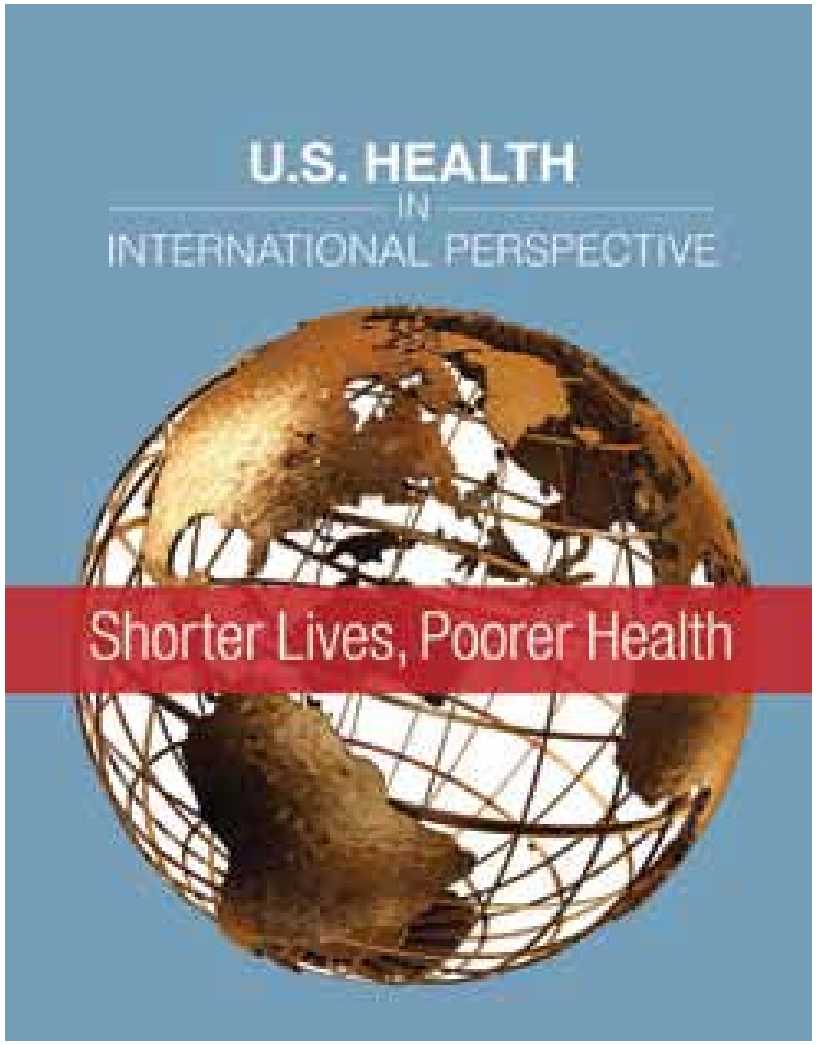
- Fail to recognize the causes;
- Causes have become part of the normative landscape
- Requires big levers to change:

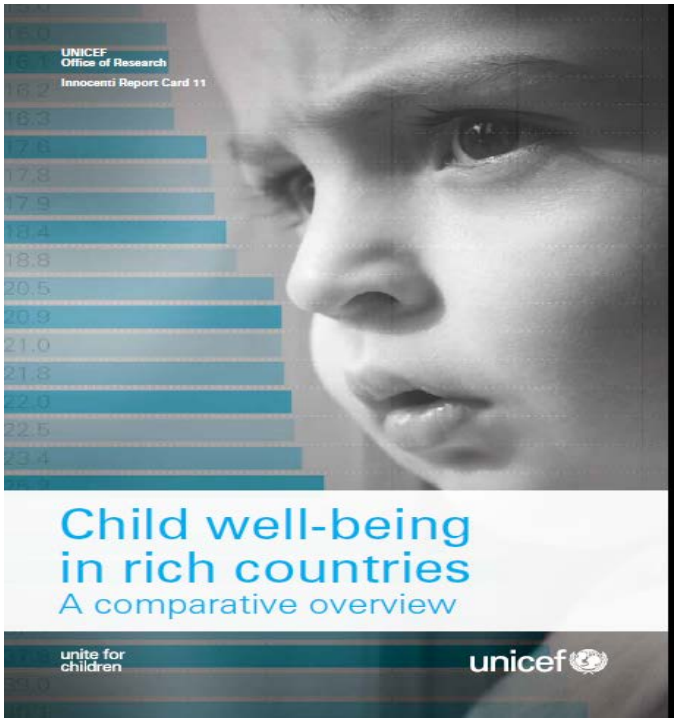
Rapid Rise in Disease Prevalence：

% of Adult Population Treated, By Medical Condition, 1987-2005:

Medical Condition	1987 %	2005 %
Mental Disorders	5.5%	18.8%
Hyperlipidemia	1.5%	14.4%
Hypertension	13.6%	22.0%
Diabetes	4.0%	8.0%
Pulmonary Conditions (OPD, Asthma)	9.5%	18.4%
Lupus/Other Related	4.85	6.0%
Arthritis	7.8%	13.6%
Back Problems	5.4%	13.2%
Upper GI	3.8%	10.7%
Heart Disease	8.1%	9.5%

20+% prevalence in last year, 20-25years lower life expectancy SED


U.S. HEALTH
IN
INTERNATIONAL PERSPECTIVE
Shorter Lives, Poorer Health



April 2013

		Overall well-being	Dimension 1	Dimension 2	Dimension 3	Dimension 4	Dimension 5
		Average rank (all 5 dimensions)	Material well-being	Health and safety	Education	Behaviours and risks	Housing and environment
			(rank)	(rank)	(rank)	(rank)	(rank)
1	Netherlands	2.4	1	5	1	1	4
2	Norway	4.6	3	7	6	4	3
3	Iceland	5	4	1	10	3	7
4	Finland	5.4	2	3	4	12	6
5	Sweden	6.2	5	2	11	5	8
6	Germany	9	11	12	3	6	13
7	Luxembourg	9.2	6	4	22	9	5
8	Switzerland	9.6	9	11	16	11	1
9	Belgium	11.2	13	13	2	14	14
10	Ireland	11.6	17	15	17	7	2
11	Denmark	11.8	12	23	7	2	15
12	Slovenia	12	8	6	5	21	20
13	France	12.8	10	10	15	13	16
14	Czech Republic	15.2	16	8	12	22	18
15	Portugal	15.6	21	14	18	8	17
16	United Kingdom	15.8	14	16	24	15	10
17	Canada	16.6	15	27	14	16	11
18	Austria	17	7	26	23	17	12
19	Spain	17.6	24	9	26	20	9
20	Hungary	18.4	18	20	8	24	22
21	Poland	18.8	22	18	9	19	26
22	Italy	19.2	23	17	25	10	21
23	Estonia	20.8	19	22	13	26	24
23	Slovakia	20.8	25	21	21	18	19
25	Greece	23.4	20	19	28	25	25
26	United States	24.8	26	25	27	23	23
27	Lithuania	25.2	27	24	19	29	27
28	Latvia	26.4	28	28	20	28	28
29	Romania	28.6	29	29	29	27	29

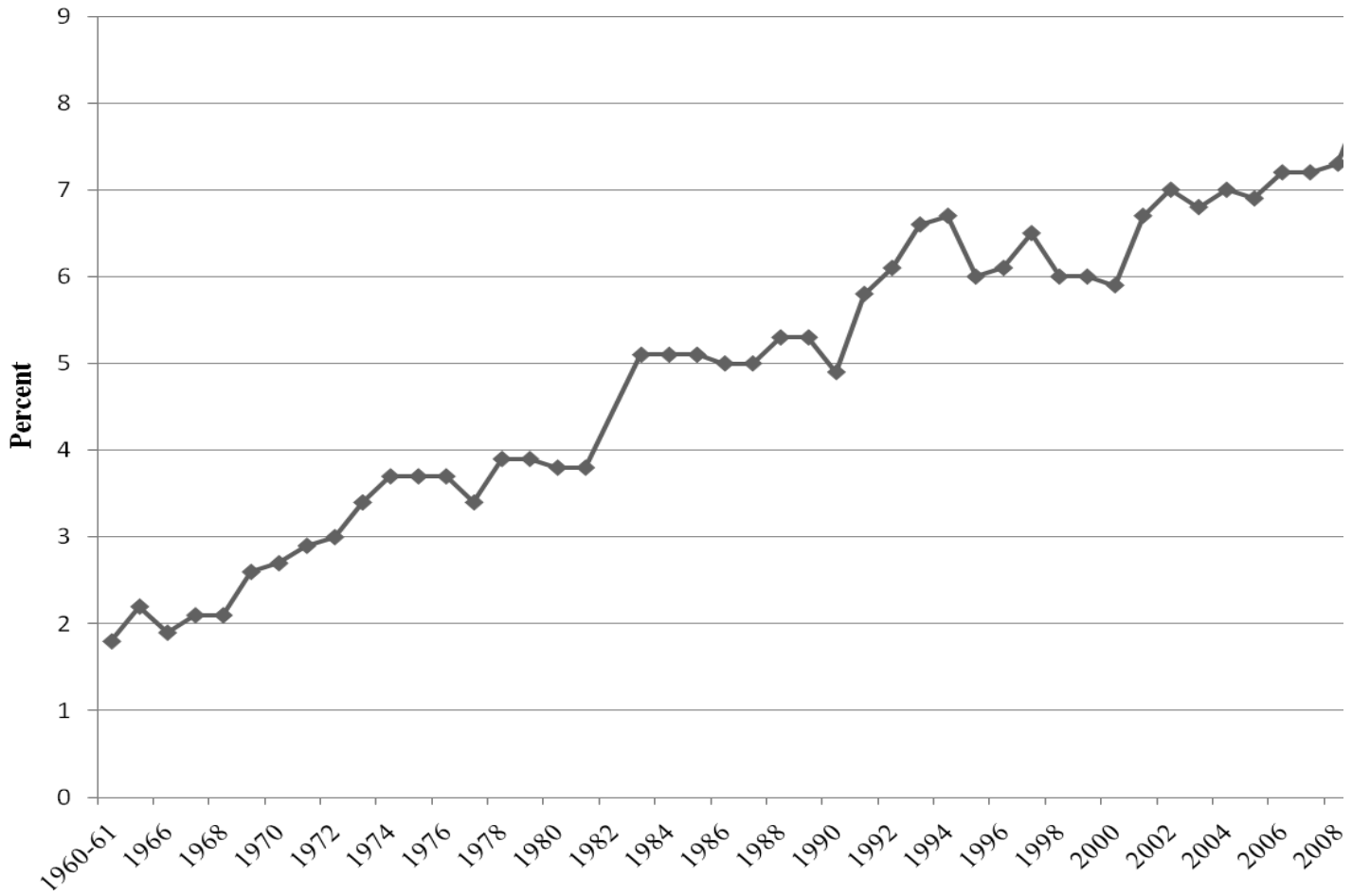
Lack of data on a number of indicators means that the following countries, although OECD and/or EU members, could not be included in the league table of child well-being: Australia, Bulgaria, Chile, Cyprus, Israel, Japan, Malta, Mexico, New Zealand, the Republic of Korea, and Turkey.

Changing Pattern of Childhood Morbidity

- Increase in chronic health problems (16%-33%)
  - Not Hemophilia, Cancer, Congenital Heart Disease
- Growing prevalence of mental health disorders (15-22+%)
- Greater appreciation of role and impact of neuro-developmental health problems – learning, language (10-17%)
- Growing number of children with multiple conditions (co-morbidities) e.g. asthma, obesity, ADHD

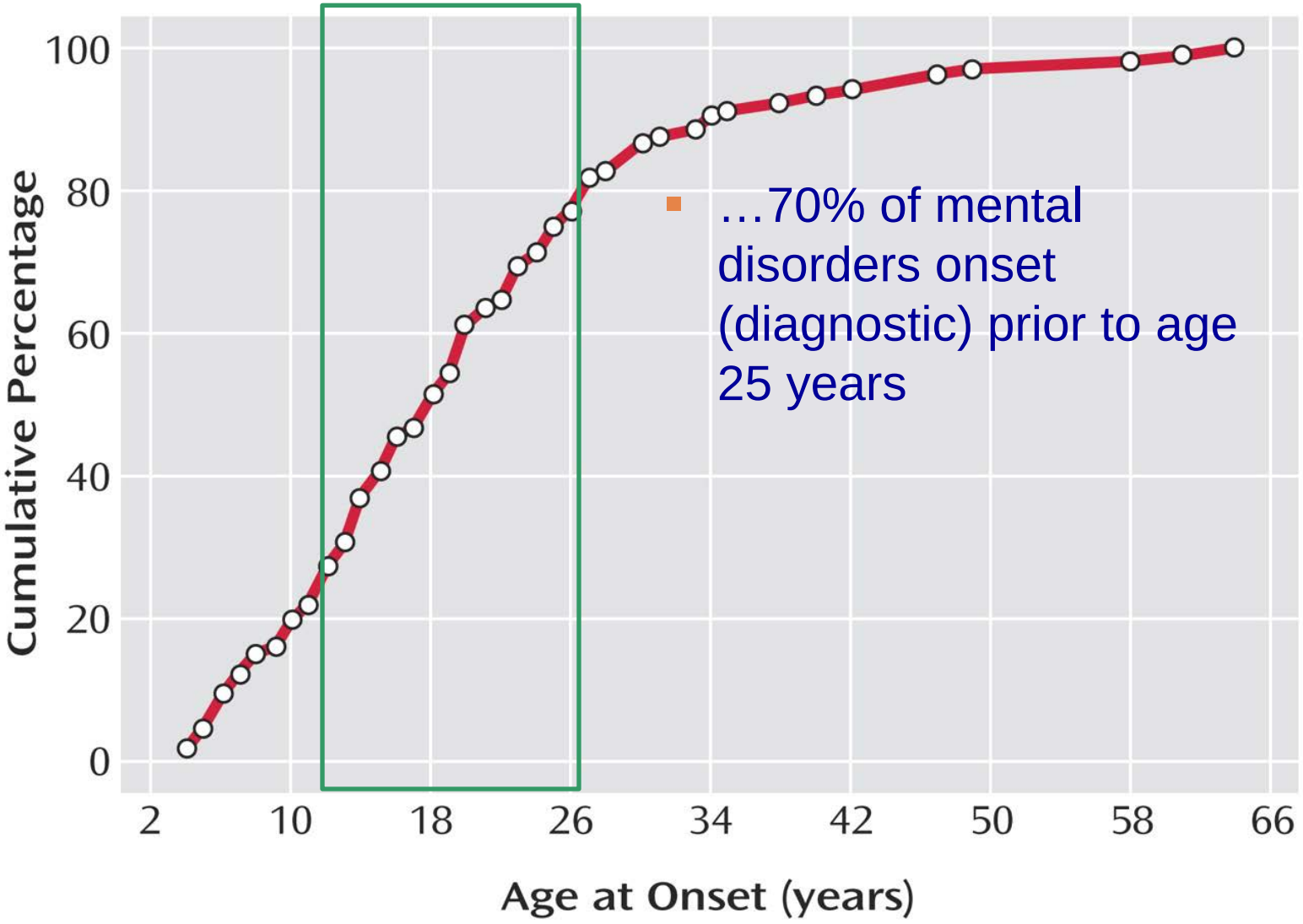
Trends in Childhood Disability- U.S.

(Limitation of Activity due to Chronic Conditions for U.S. Children, NHIS, 1960-2009)



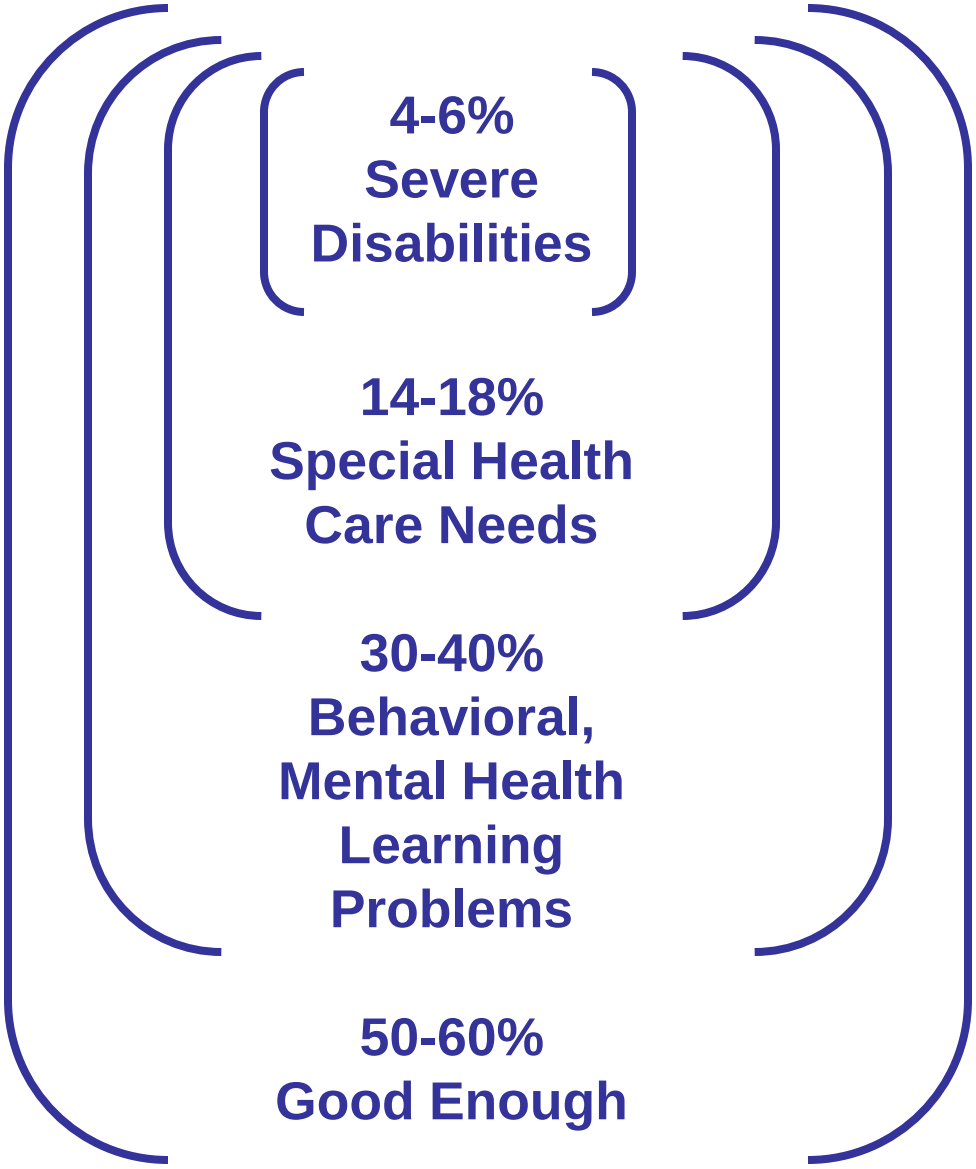
From Halfon, Houtrow, Larson, Newacheck Future of Children 2012

Mental Health Disorder Across the Life Span



- …70% of mental disorders onset (diagnostic) prior to age 25 years

Children & Adolescents at Risk



Adversity & the Loss of Health Potential

- Health Development is a Robust but Fragile System
- Adversity & Prosperity have a dramatic effects on health development
- Adversity comes in many forms; economic, social, environmental, familial, behavioral
- ACE's - 44.8% of children (0-17) have one, and 22% have two or more ACEs, steep social gradient
- Over 40% of children live in low income families, and over 40% live in families with one parent
- Rising rates of mental, behavioral and developmental problems are indications of growing levels of adversity

Changing Context & Growing Mismatch of Health Development:

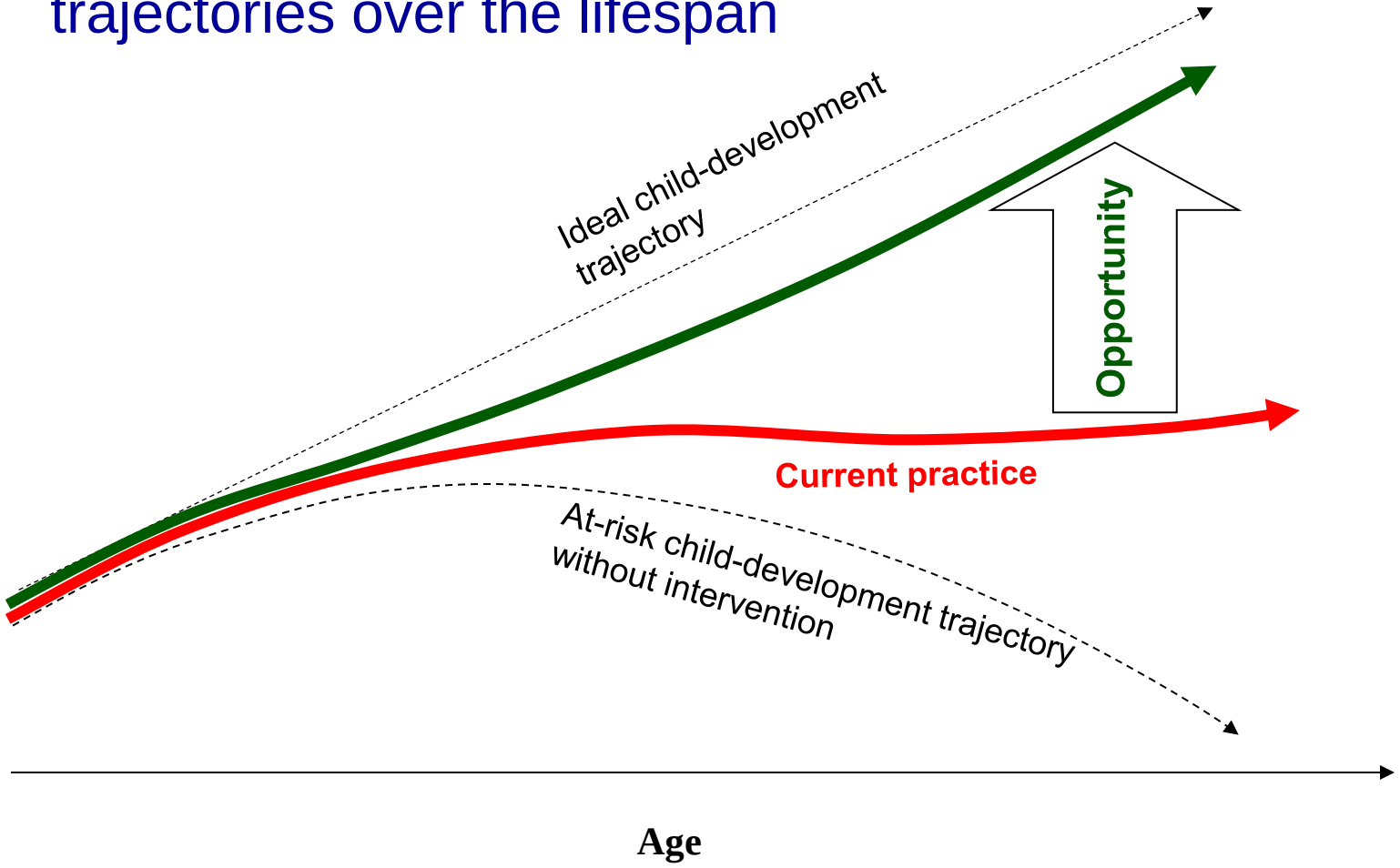
- Insufficient resources for families & child rearing
  - time, income, & services
- Increased family instability & long term uncertainty
  - Families are less stable, secure, supported
  - Deep uncertainty re: future, destabilizing for adolescents,
- Increased inequality
  - Steep social gradient, status drops at every level
- Decreased Supportive Scaffolding
  - Compensate, buffer, uncouple ACEs from outcomes
- Massive Cultural Changes/Revolutions
  - Technology –social development of children and adol.
- Growing MISMATCH – health development needs and complex modern context (evo/devo)

Poor Performance of Child Health System

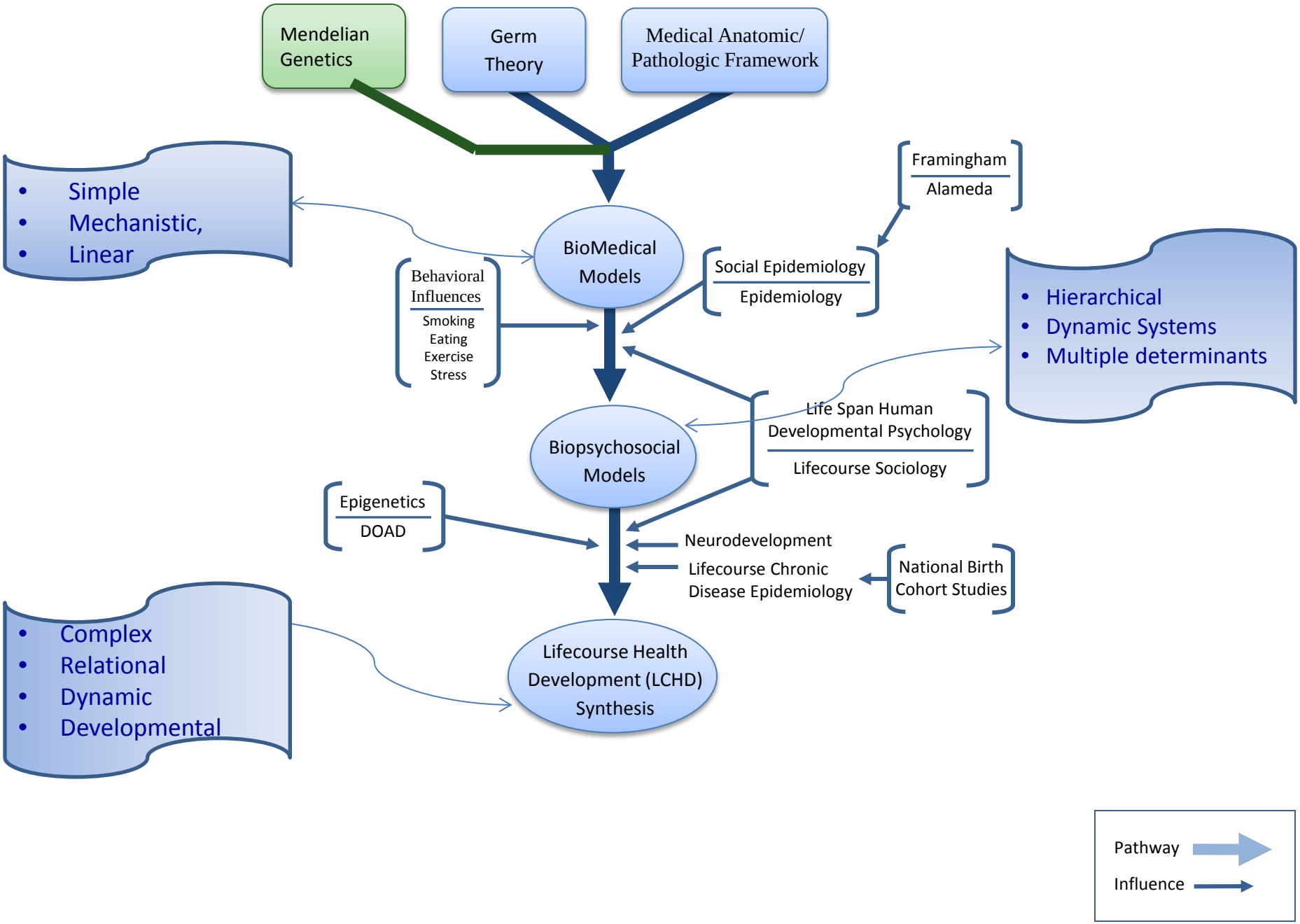
- Fragmented service delivery
- Difficulty accessing services and huge inequities
- Low and Uneven quality
- Models of care is outmoded and don’t match current needs, or capability
- Limited local responsibility
- Operating under enormous constraints

Not Optimizing Healthy Development

Addressing the factors shaping health development trajectories over the lifespan



Evolving Conceptual Models of Health Development



Life Course Health Development

Changing Context: Multiple Factors, Dimensions, & Levels Dynamically Transacting

Variable Adaptive Responses: Plasticity & Optimization of Regulatory Processes

Dynamics of Health Development: Phases, Trajectories and Outcomes

Dynamic Relational Environment

Time Specific Biological, Behavioral Embedding

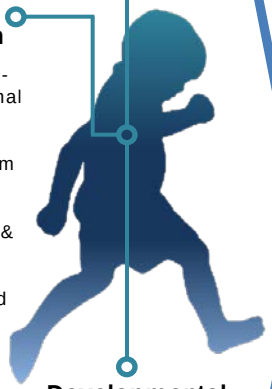
Emergent

Influences

Time Dependent, Cumulative Effects

Behavioral Adaptation
- Responsiveness
- Self Regulation
- Temperament

Biologic Adaptation
- Hypothalamic-Pituitary Adrenal Axis
- Sympathetic Nervous System
- Metabolic Processes
- Inflammatory & Immune Responses
- Allostatic Load
- More



Developmental Adaptation
- Plasticity
- Selective Optimization
- More

Emergent

Effects

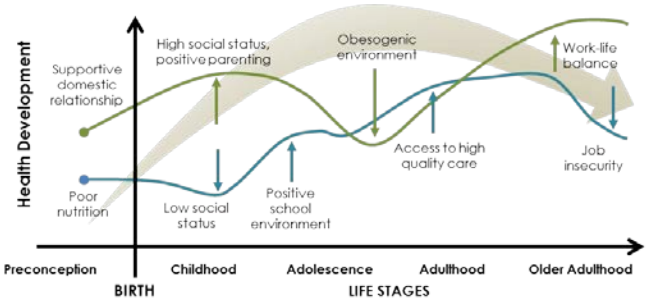
Health Development Trajectories

Patterns of changes in health assets over time, affected by environmental and intrinsic factors.

1 LATENT EFFECTS
Resulting from experiences, particularly during sensitive periods, that influence health later in life.

2 PATHWAY EFFECTS
Resulting from experiences that set people on certain health development trajectories.

3 CUMULATIVE EFFECTS
Resulting from experiences that accumulate over time & manifest in health. (Combination of latent and pathway effects)



Phases of Health Development

Generativity | **Acquisition** | **Maintenance** | **Decline**

Life Course Health Development Core Principles

1. Health development is an **emergent property** of living systems.

2. Health develops **continuously over the lifespan.**

3. Health development is a **complex, non-linear process** that results from person-environment interactions that are **multidimensional, multidirectional, and multilevel.**

4. Health development is highly **sensitive to the timing and social structure** of environmental exposures.

5. **Evolution enables and constrains** health development pathways and plasticity.

6. Optimal health development **promotes survival, enhances thriving and protects against disease.**

7. The **cadence of human health development results from synchronized timing** of molecular, physiological, behavioral, cultural and evolutionary processes.

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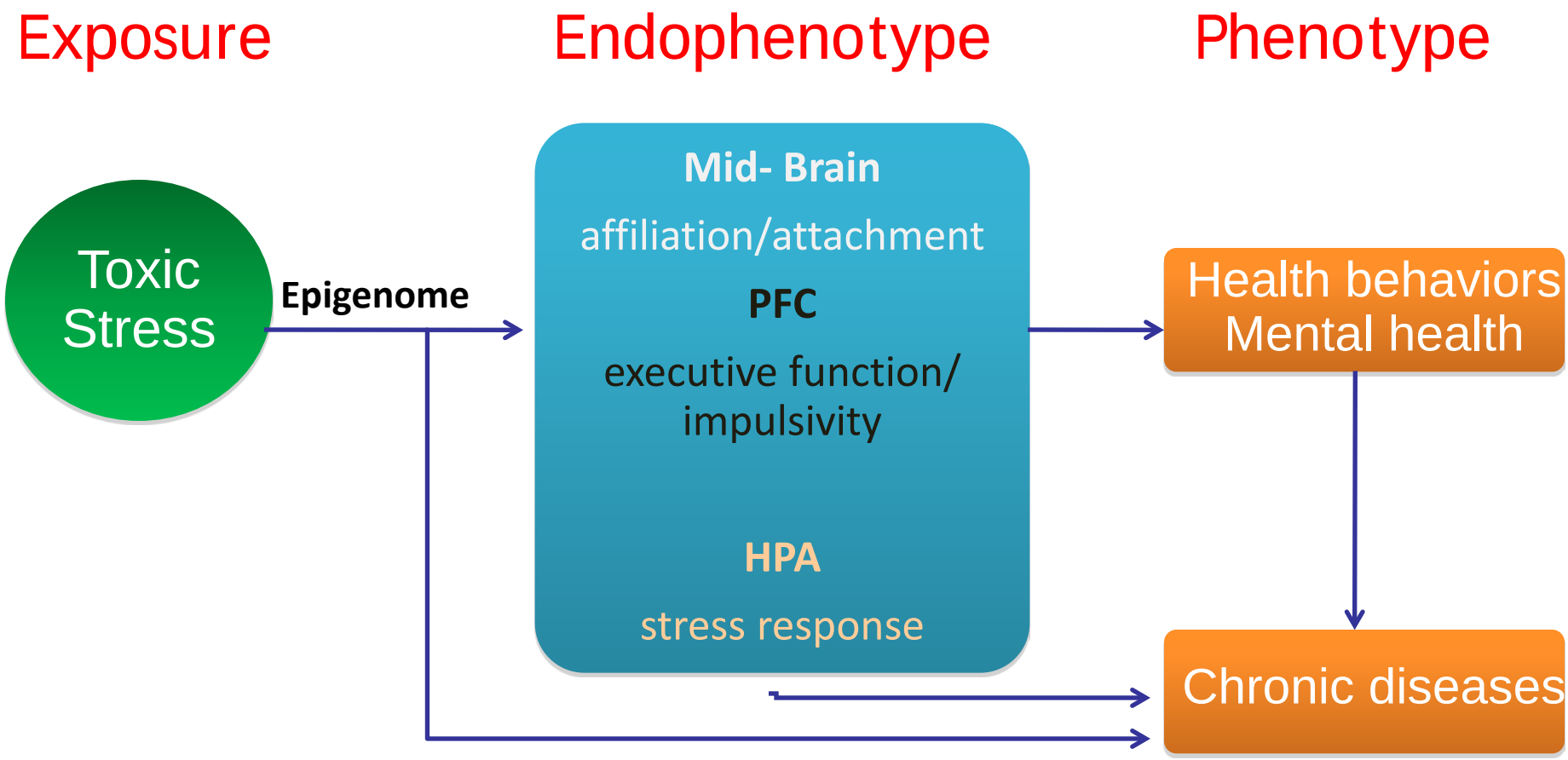
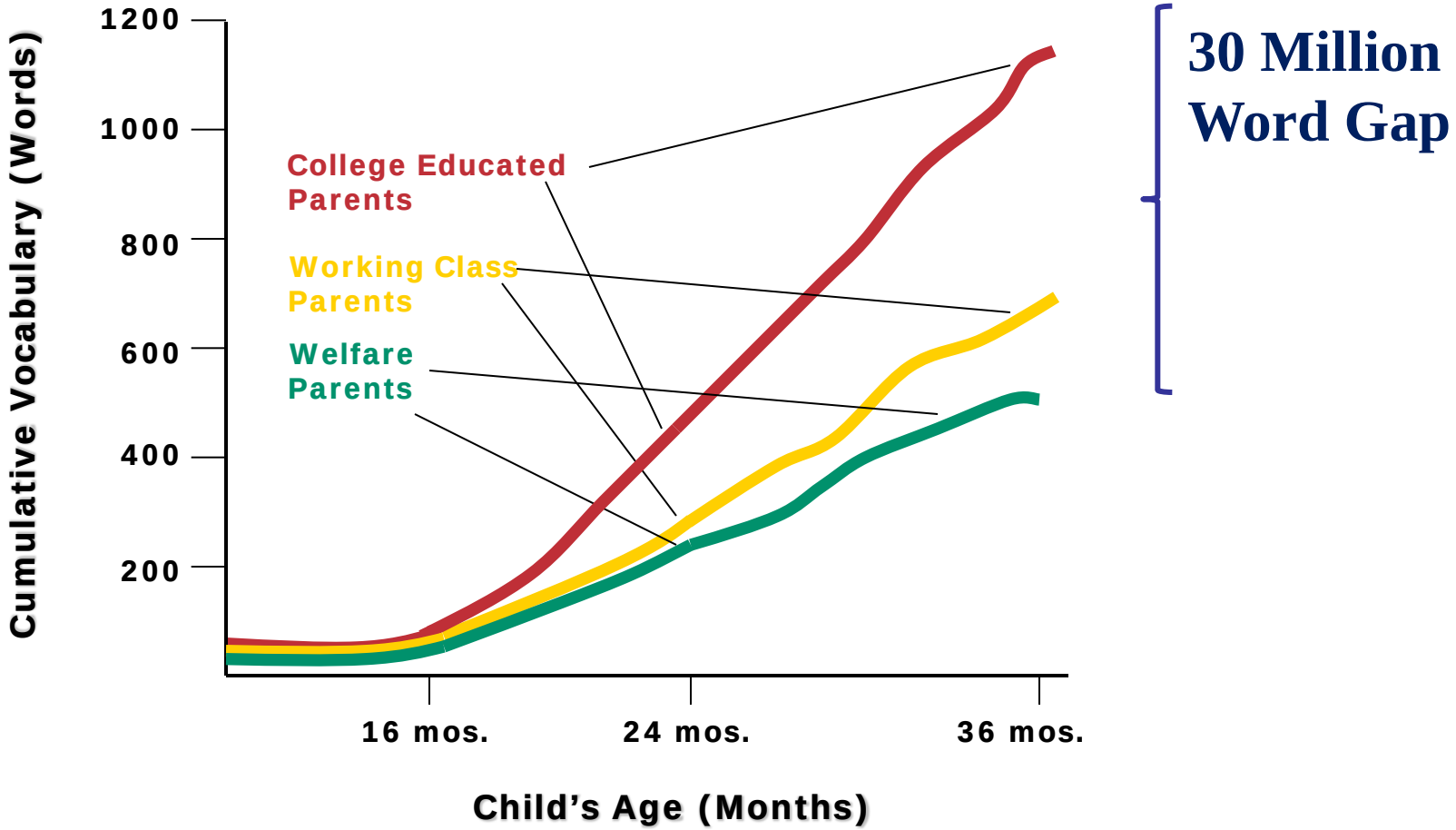
Time Sensitive Pathways of Influence

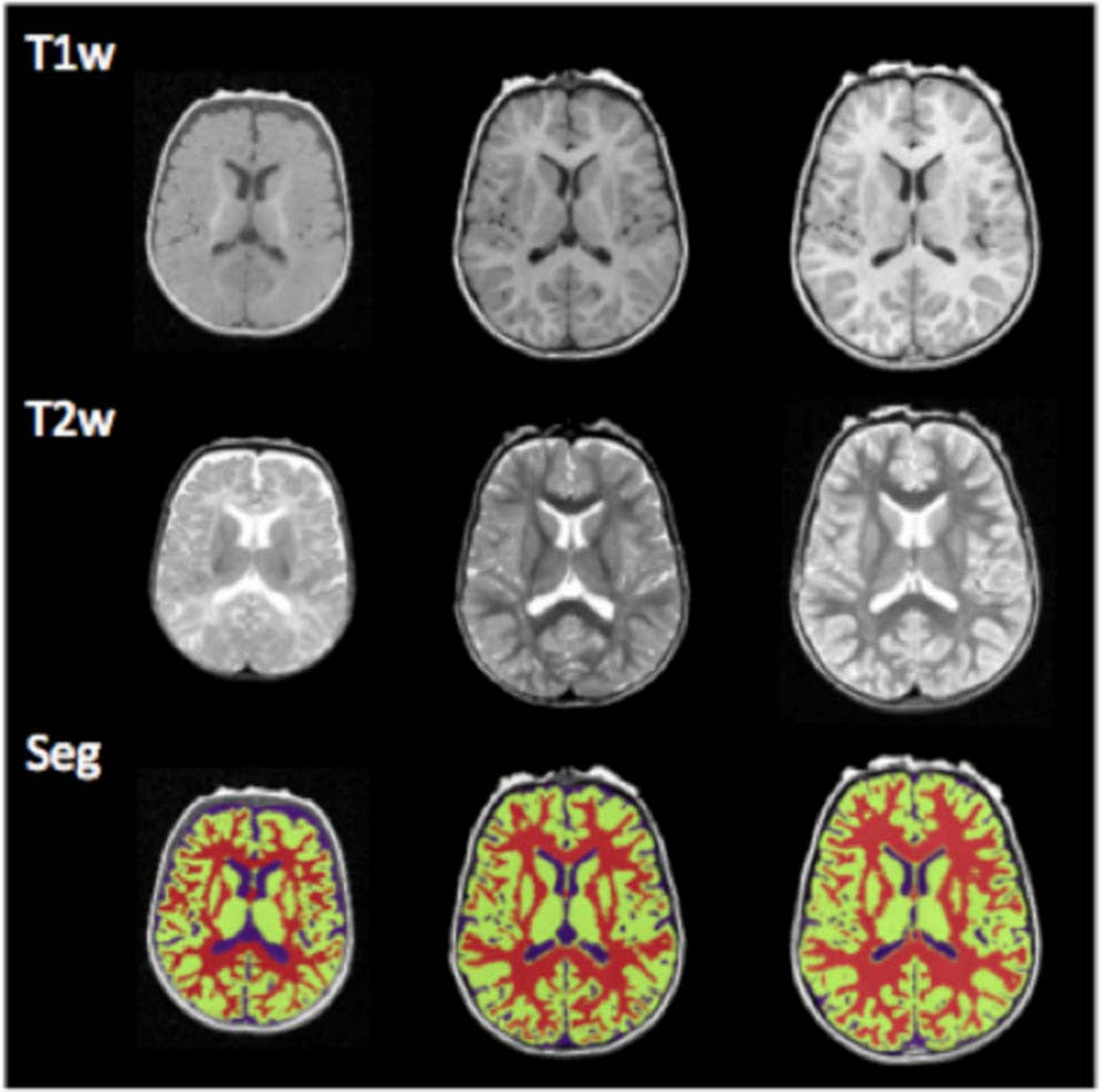


From Hertzman

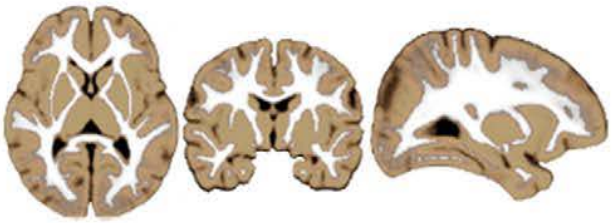
Difference in Functional Brain Development: Start Early & Compound Over Time

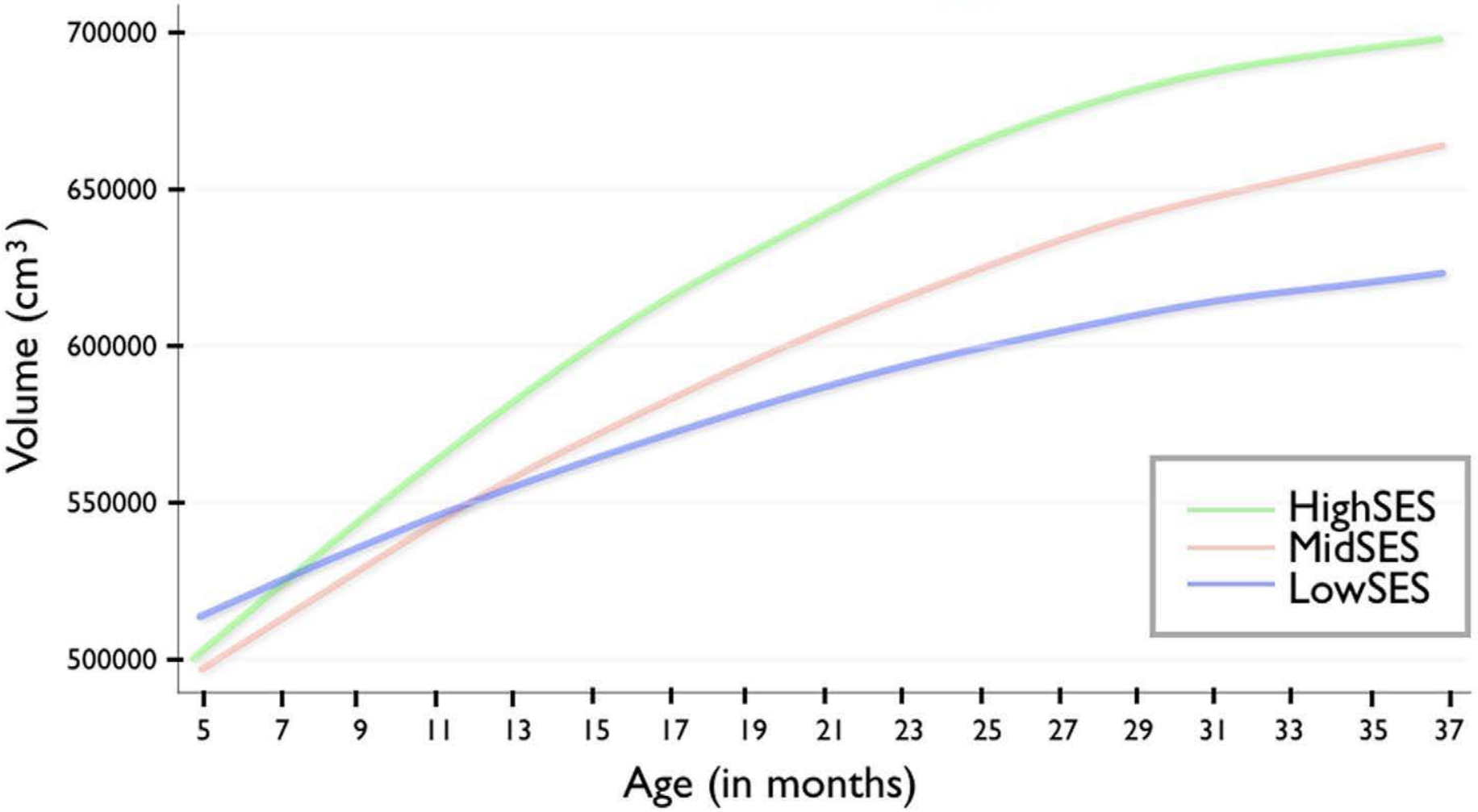


Source: Hart & Risley (1995)


T1w
T2w
Seg

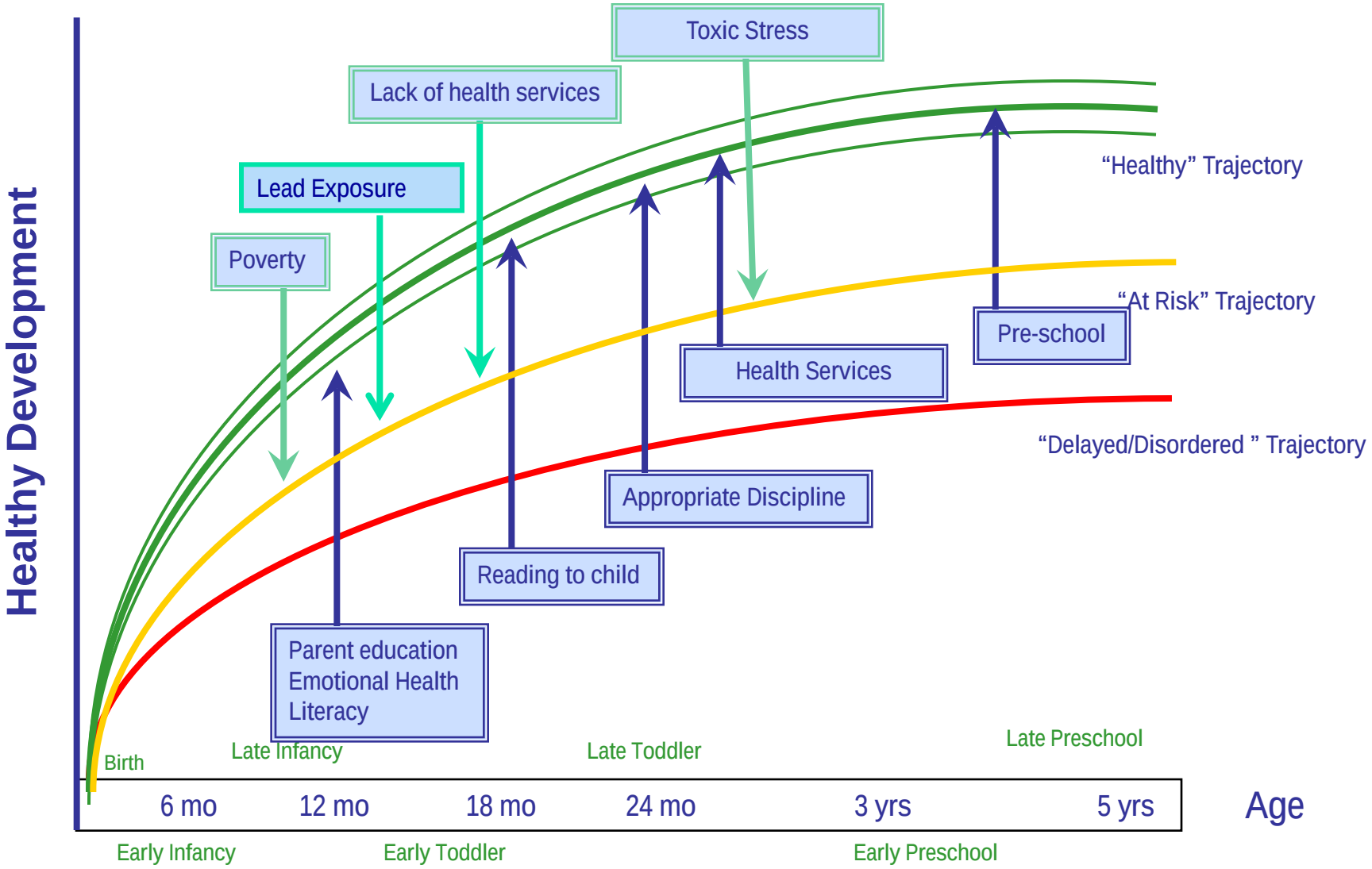
Total Gray Matter



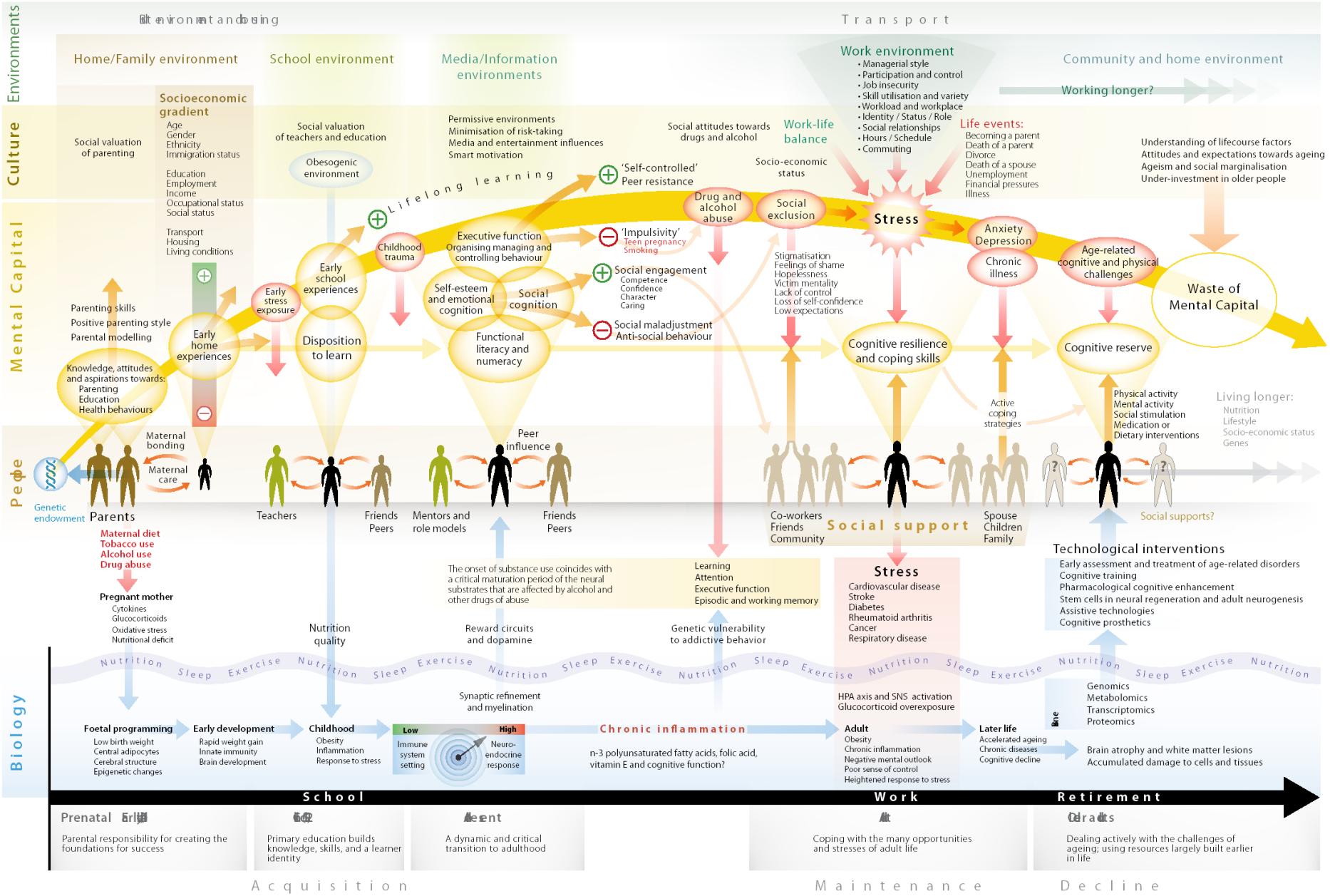


Hanson et al, Poverty & Brain Growth, PLOS One 2013

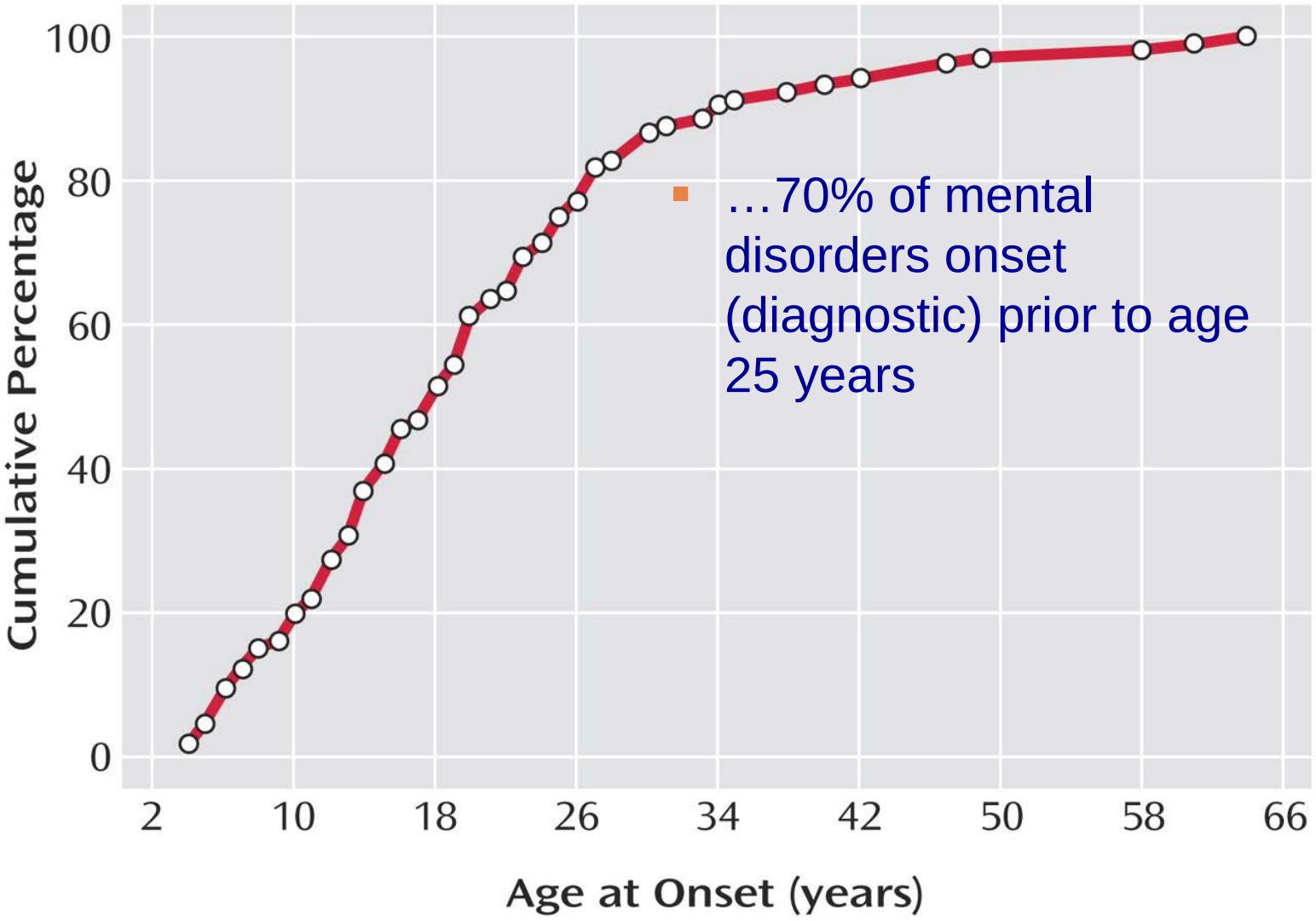
Reducing Risk & Optimizing Protective Factors



Appendix B: Synthetic view of the mental capital trajectory and factors that may act upon it



Mental Health Disorder Across the Life Span



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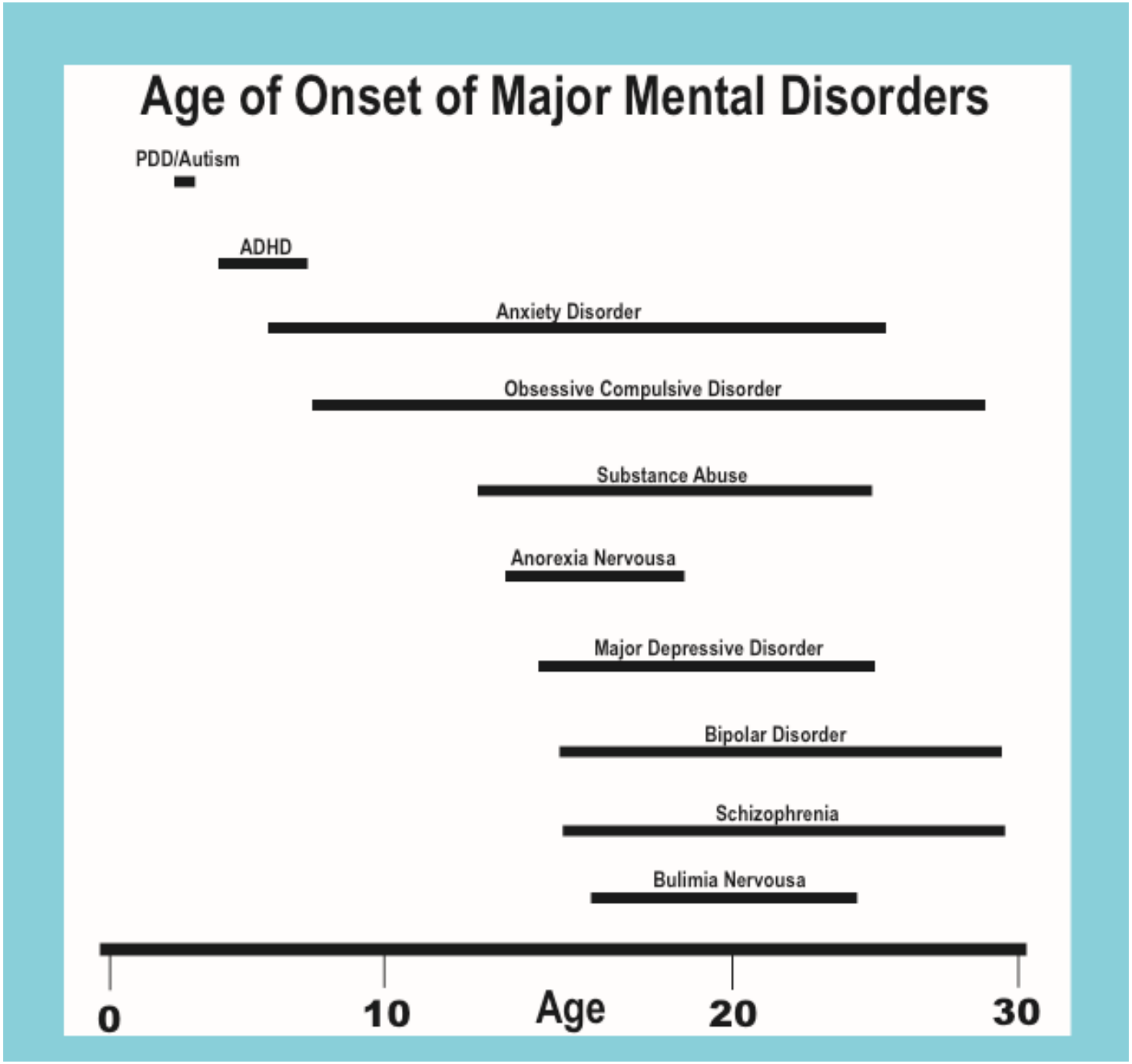
Age of Onset of Major Mental Disorders
PDD/Autism
ADHD
Anxiety Disorder
Obsessive Compulsive Disorder
Substance Abuse
Anorexia Nervousa
Major Depressive Disorder
Bipolar Disorder
Schizophrenia
Bulimia Nervousa
0
10
Age
20
30

Adolescent Development Mismatch (Paleolithic brains in post modern information age)

- Accelerated Biological Development
- Accelerated & Unstable Social Development
- Unprotected & Unsupported Development
- Segregated Development
- Colonized Development- technology, markets
- Extended Development
  - Start adolescences too soon, end to late

Adolescence/Mismatch: New LCHD Synthesis

- Transition from childhood to adulthood has changed dramatically
  - Starts earlier –ends later (rapid/short/protected to slow/long/exposed)
  - Emotional regulation/adaptation is suffering
- New evidence: Brain not mature till 3rd decade (why?)
  - Always the case, but did not matter in simpler societies
  - Consequence of complex society
  - Modern complex society + profound changes in child rearing/LCHD
- Early childhood factors big impact on adolescent risk
  - Remediation not as effective as prevention
  - Evidence scaffolding needs to be in place

Need for Responsive Mental Health System

- 20-30% of all youngsters under age 18 are in need of services for mental, emotional or behavioral problems.
- 21% (or one in five children and adolescents) seen as experiencing the signs and symptoms of a DSM-IV disorder during the course of a year
- 15-22% seen as experiencing significant impairment
- about 5-7 percent experiencing extreme functional impairment (about 4 million young people). In any given year, about 20% of these are reported as receiving MH services.

By Neal Halfon, Peter Long, Debbie I. Chang, James Hester, Moira Inkelas, and Anthony Rodgers

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ANALYSIS & COMMENTARY

Applying A 3.0 Transformation Framework To Guide Large-Scale Health System Reform

ABSTRACT **Implementation of the Affordable Care Act is unleashing historic new efforts aimed at reforming the US health system. Many important incremental improvements are under way, yet there is a growing recognition that more transformative changes are necessary if the health care system is to do a better job of optimizing population health. While the concept of the Triple Aim—dedicated to improving the experience of care, the health of populations, and lowering per capita costs of care—has been used to help health care providers and health care systems focus their efforts on costs, quality, and outcomes, it does not provide a roadmap for a new system. In this article we describe the 3.0 Transformation Framework we developed to stimulate thinking and support the planning and development of the new roadmap for the next generation of the US health care system. With a focus on optimizing population health over the life span, the framework suggests how a system designed to better manage chronic disease care could evolve into a system designed to enhance population health. We describe how the 3.0 Transformation Framework has been used and applied in national, state, and local settings, and we suggest potential next steps for its wider application and use.**

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James Hester is a senior adviser at Population Health Systems, in Burlington, Vermont.

Moira Inkelas is an associate professor of health policy and management at the University of California, Los Angeles.

Anthony Rodgers is a principal at Health Management Associates, in San Francisco.

The US health system is both expensive and inefficient, producing less value at a higher cost than the health systems of most other developed countries while yielding strikingly large health disparities across population subgroups.[1–6] These shortcomings ripple across society, affecting not only the health of the population but also the productivity of the workforce; the competitiveness of products in the global marketplace; and the ability to invest in education, economic infrastructure, and the future vitality of the nation.

The Affordable Care Act (ACA) provides an unprecedented opportunity to transform the current *health care system* into a multisector *health system* focused on producing population health. Population health is the health outcomes of a group of individuals, including the distribution of such outcomes within the group.[7] It is understood that population health outcomes are the product of multiple determinants of health, including medical care, public health, genetics, behaviors, social factors, and environmental factors.[8] Already many disruptive innovations are emerging in the form of novel payment strategies, new delivery mechanisms such as accountable care organizations (ACOs), and the rapid expansion of health information technology that have a transformative influence on the health care system.[9] This new environment is transforming the current volume-driven payment model to one that rewards value, improves the experience of care, and promotes population

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The Evolving Health Care System

The First Era (Yesterday)

- Focused on acute and infectious disease
- **Biomedical Model**
- Short time frames
- Medical Care
- Insurance-based financing
- Industrial Model
- **Reducing Deaths**

Health System 1.0

The Second Era (Today)

- Increasing focus on chronic disease
- **BPS Model**
- Longer time frames
- Chronic Disease Mgmt & Prevention
- Pre-paid benefits
- Corporate Model
- **Prolonging Disability free Life**

Health System 2.0

The Third Era (Tomorrow)

- Increasing focus on achieving optimal health
- **Life Course Health Development**
- Lifespan/ generational
- Investing in population-based prevention
- Network Model
- **Producing Optimal Health for All**

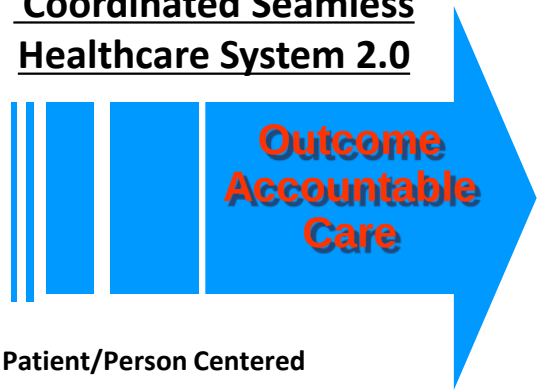
Health System 3.0

Innovation Driven
US Health Care Delivery System Evolution

Acute Care System 1.0

- Episodic Health Care
  - Sick care focus
  - Uncoordinated care
  - High Use of Emergency Care
  - Multiple clinical records
  - Fragmentation of care
- Lack integrated care networks
- Lack quality & cost performance transparency
- Poorly Coordinate Chronic Care Management

Coordinated Seamless Healthcare System 2.0



- Patient/Person Centered
- Transparent Cost and Quality Performance
  - Results oriented
  - Assures Access to Care
  - Improves Patient Experience
- Accountable Provider Networks Designed Around the patient
- Shared Financial Risk
- HIT integrated
- Focus on care management and preventive care
  - Primary Care Medical Homes
  - Care management/ prevention focused
  - Shared Decision Making and Patient Self Management

Community Integrated Healthcare System 3.0

Healthy Population Centered
- Community Health Linked
- Cost , Quality, and Population Transparency
- Accessible Health Care Choices

Community Health Integrated networks capable of a addressing psycho social/economic needs

Population based reimbursement

Learning Organization: capable of rapid deployment of best practices

Community Health Integrated
- Healthy People Goal Oriented
- Community Health Capacity Builder
- Shared community health responsibility

E-health and telehealth capable
- Patient remote monitoring and management
- Health E-Learning resources

Health System Transformation Framework

Components	Current System	Transformed System	Change Strategies
Logic			
Organization of Health Producing Sectors			
Organization & Delivery of Individual Care			
Medical Education & Workforce			
Market			
Funding			
Regulation & Governance			
Performance Monitoring			

Transitioning to a 3.0 Operating Logic

		New Operating Logic
Definition of Health	**Absence of Disease**	**Development of Capacities and Realizing Potential (IOM2004)**
Goal of the Health System	**Maintain Health, Prolong Life**	**Optimize Population Health Development**
Client Model	**Individual**	**Individual, Population, Community**
Health Production Model	**Biomedical**	**Life Course Health Development**
Intervention Approach	**Diagnosis, Treatment and Rehabilitation**	**Disease prevention, Preemptive Interventions, Health Promotion, Optimization**
Time Frames	**Short/ Episodic**	**Life Long & Continuous**

Health System Transformation Framework

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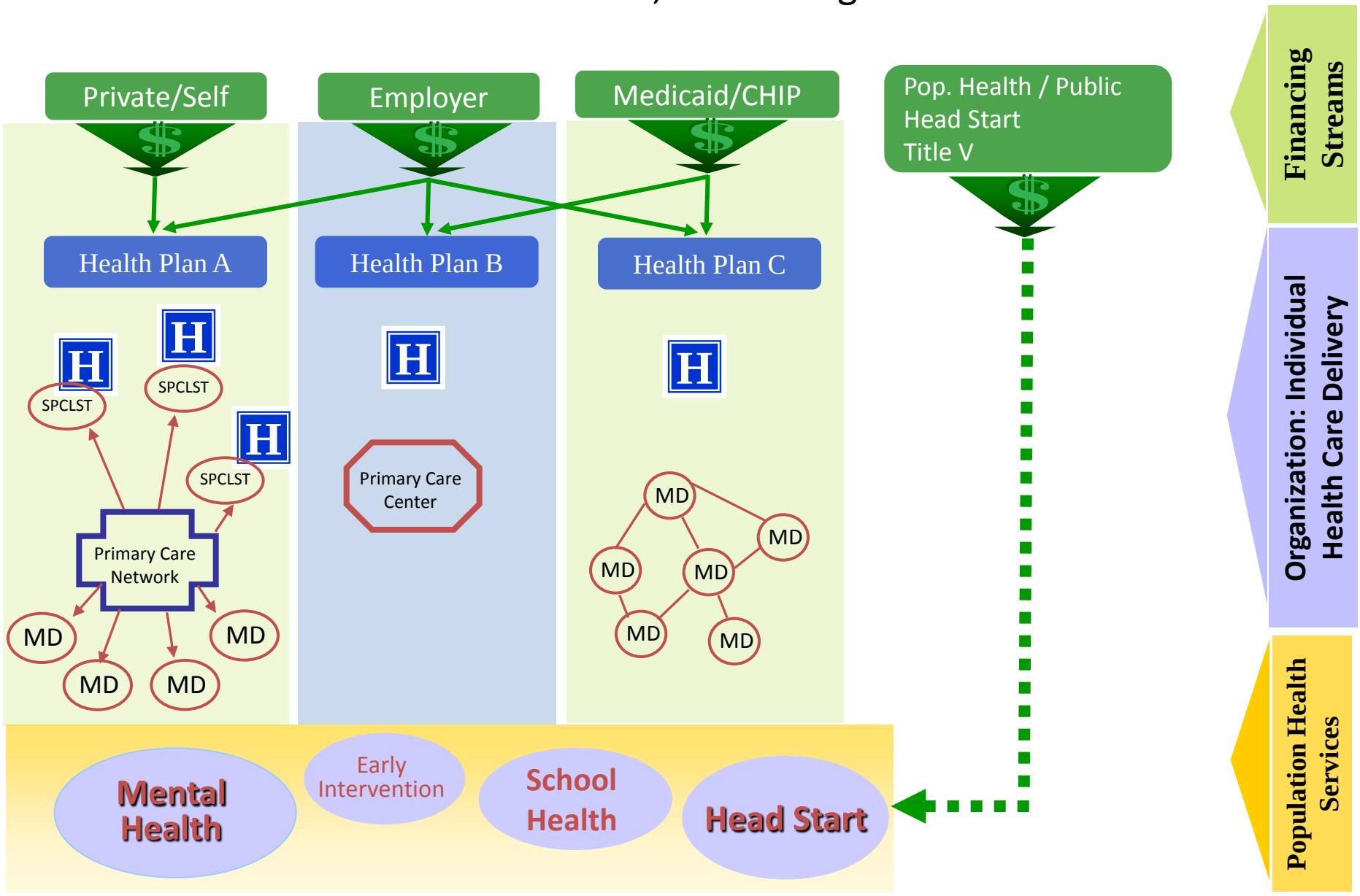
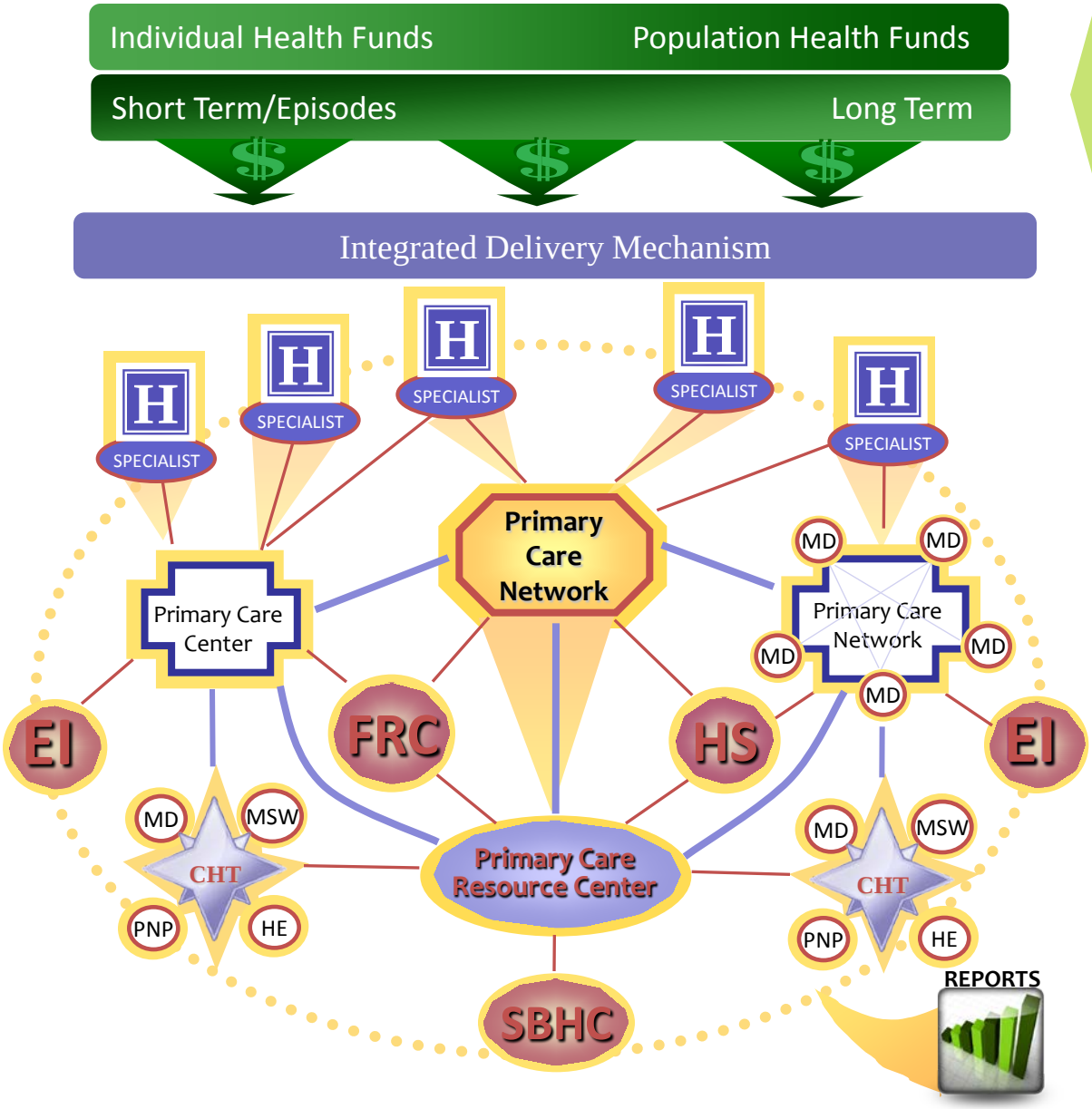
Logic			
Organization of Health Producing Sectors			
Organization & Delivery of Individual Care			
Medical Education & Workforce			
Market			
Funding			
Regulation & Governance			
Performance Monitoring			

Current Model

Vertical Silos, Little Integration



Schema for a 3.0 KIDS Health System



Integrated Finance Mechanism

- Employer
- Medicaid CHIP
- Individual
- Prevention Trust Fund
- Other: Title V, HeadStart, Title X, CDC, etc

Measurement/IT System

- Decision Support and care mgmt
- Quality & Performance
- Clinical & Population Registries (surveillance and other analyses)
- Health information exchanges

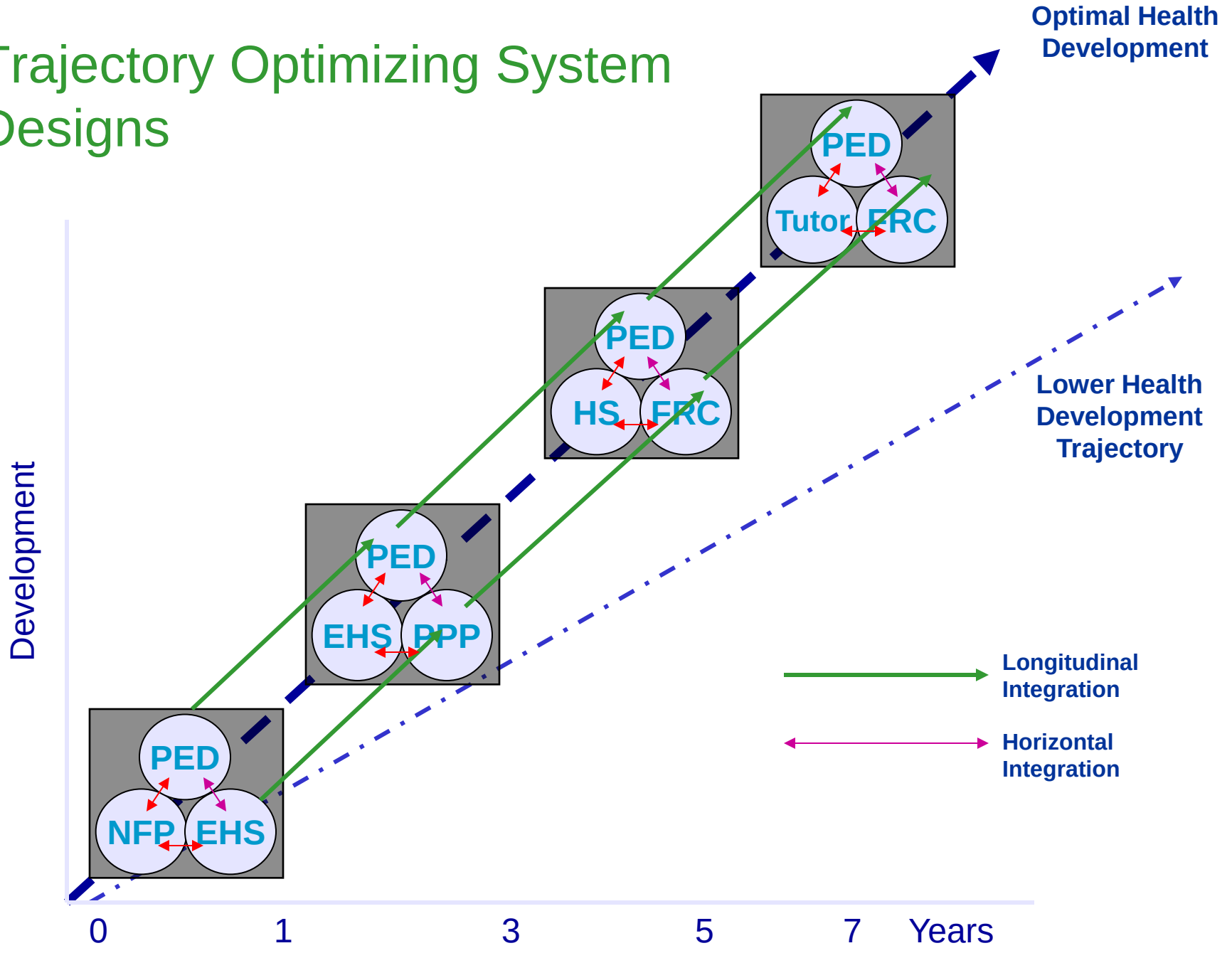
Value Portfolio

- Population Health Trajectories
- Diagnosis-specific outcomes
- Geographic Outcomes
- Short/Long Term Costs Savings

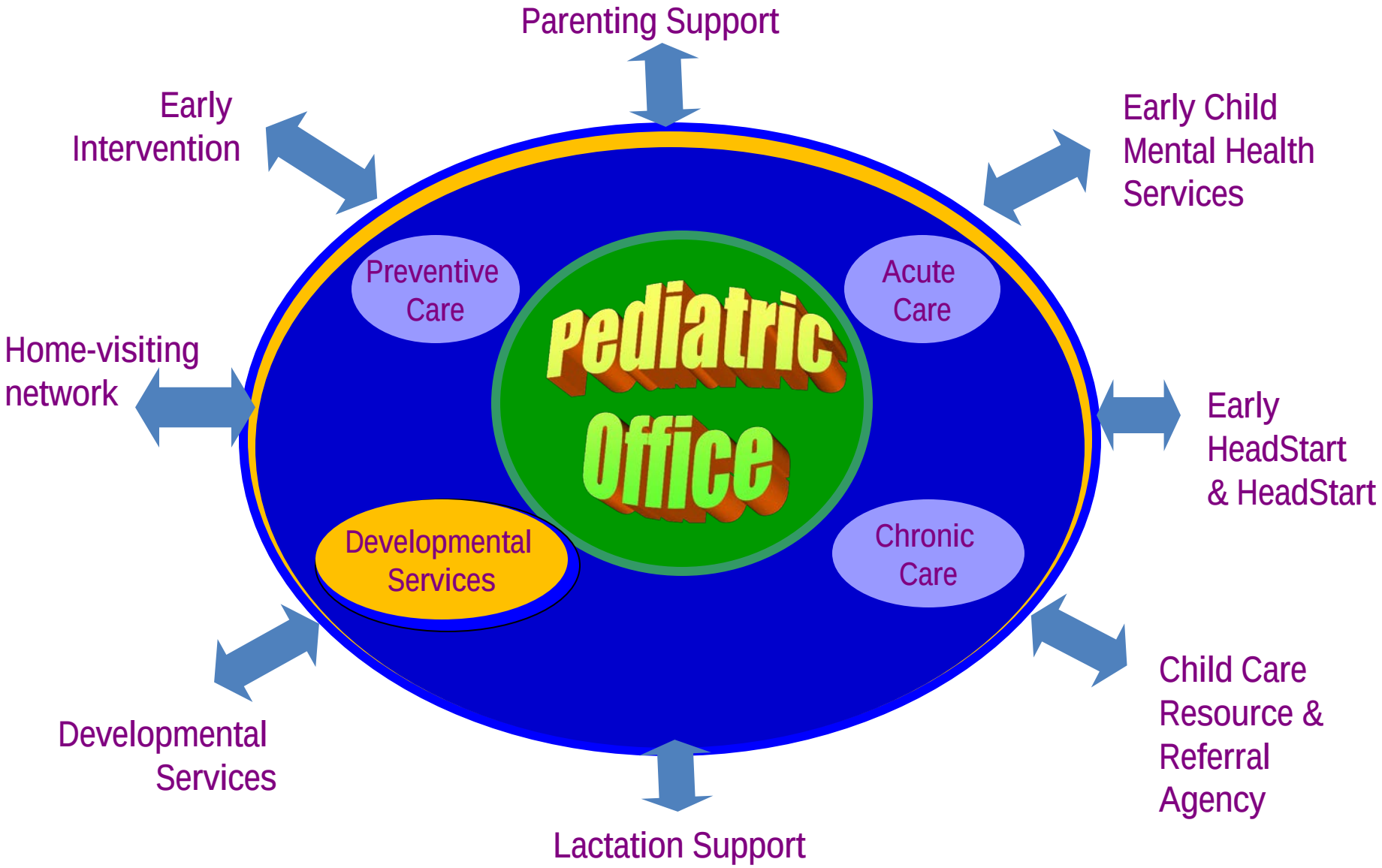
Health System Transformation Framework

Components	Current System	Transformed System	Change Strategies
Logic			
Organization of Health Producing Sectors			
Organization & Delivery of Individual Care			
Medical Education & Workforce			
Market			
Funding			
Regulation & Governance			
Performance Monitoring			

Trajectory Optimizing System Designs



Pediatric Office 2.5



2.0 vs. 3.0 >>>18 month visit

- **Pediatric Care 2.0**
  - C.D – Disability
  - Screen 4-6 % w/ disability
  - Screening tools & Pathway
  - Pediatric Office connected to Regional Center
- **Pediatric Care 3.0**
  - Optimize Developmental Health
  - I.D 30-40% developmental risk
  - Screening tools & Pathway
  - Pediatric Office connected:
    - Child care
    - Many other programs
    - Coordination
    - Regional center ++

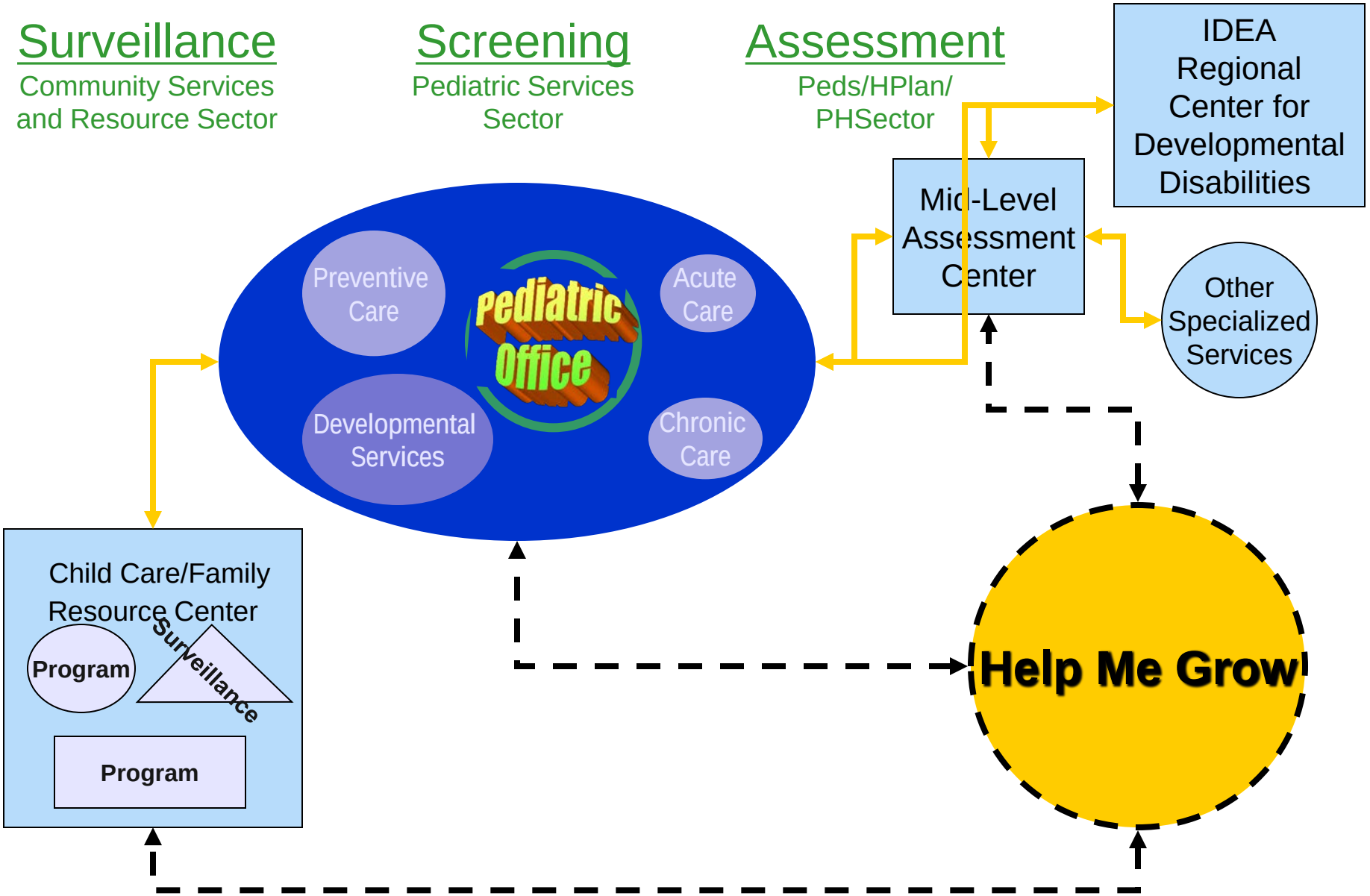
DS Community Services Pathway

Surveillance
Community Services and Resource Sector

Screening
Pediatric Services Sector

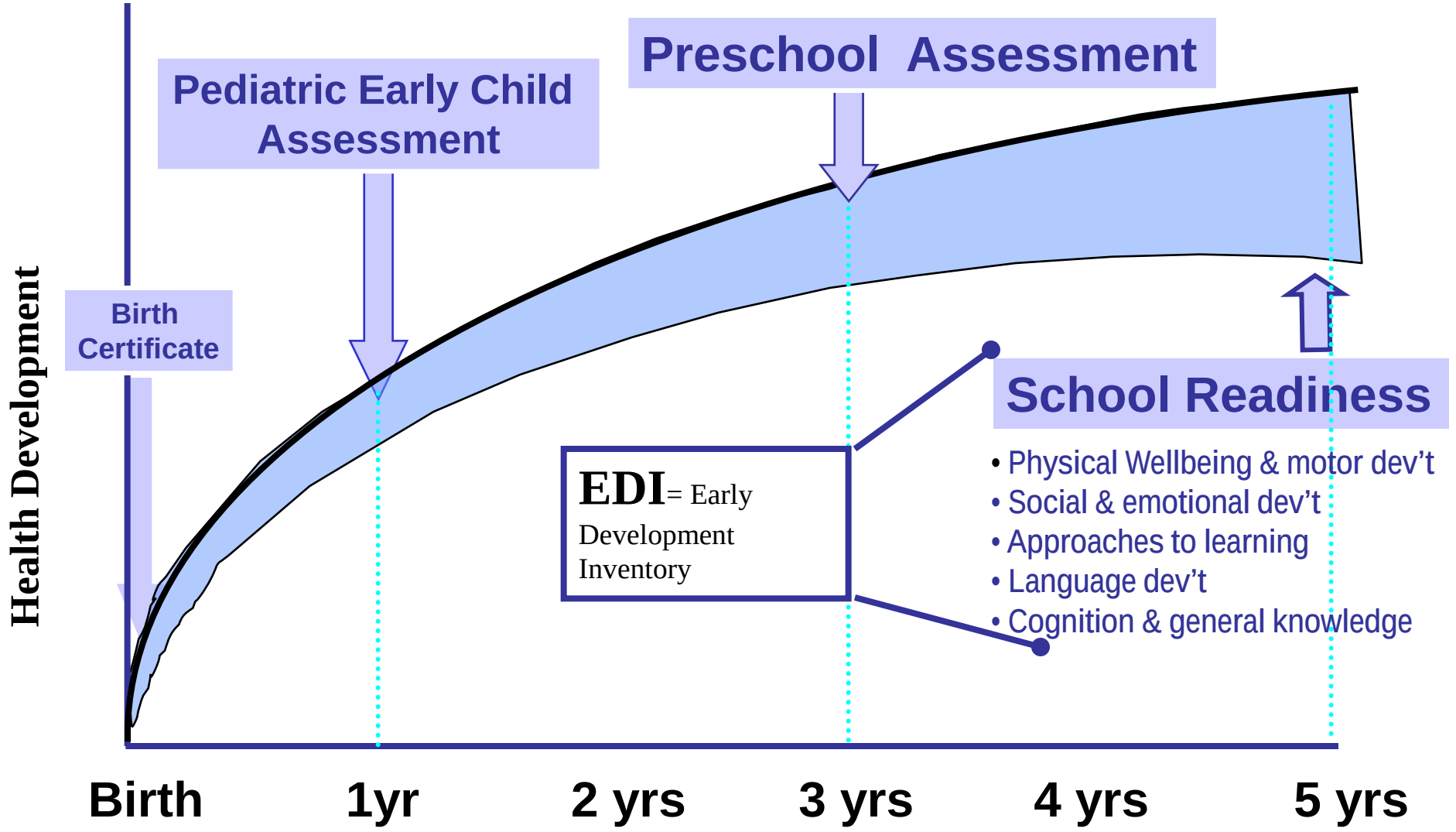
Assessment
Peds/HPlan/ PHSector

Evaluation
(IDEA Sector



Systematic Data Collection

For tracking Health Development Trajectories

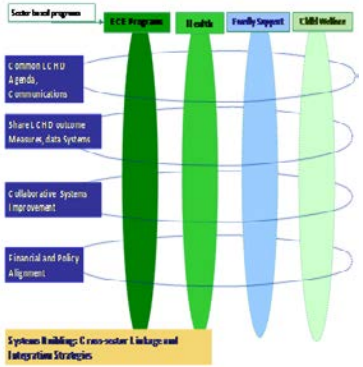


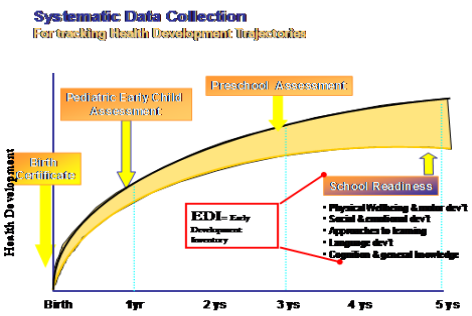
Transforming Early Childhood Community Systems (TECCS)

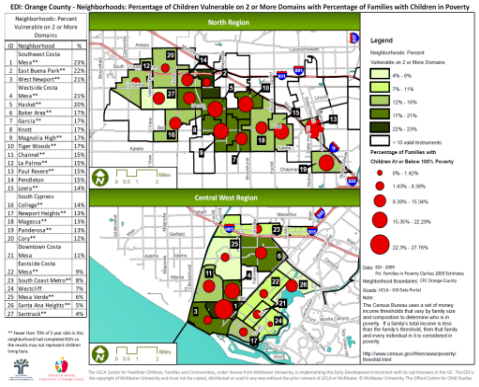
Transforming Early Childhood Community Systems

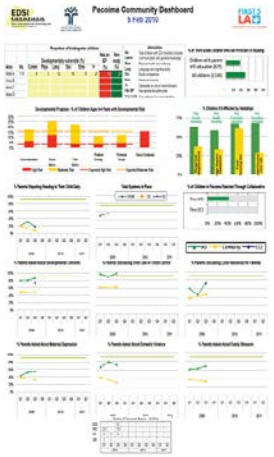
THE SCIENCE FOR A BETTER START

UCLA, UWW, WK Kellogg, States, Counties, & Communities



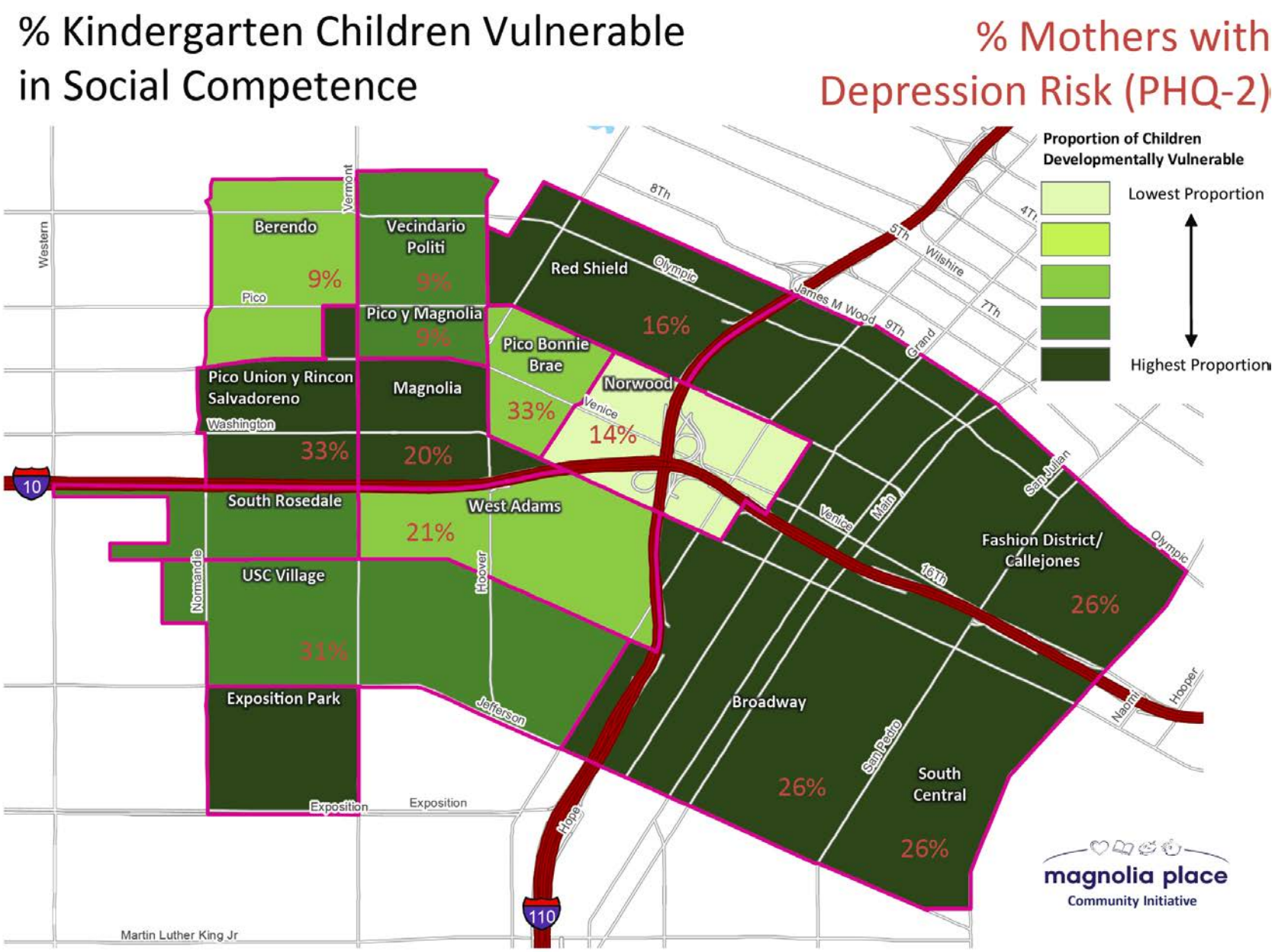






Transforming Early Childhood Community Systems (TECCS)
National Learning Network 2014

Using Population Data for Learning, Engagement and Collective Action

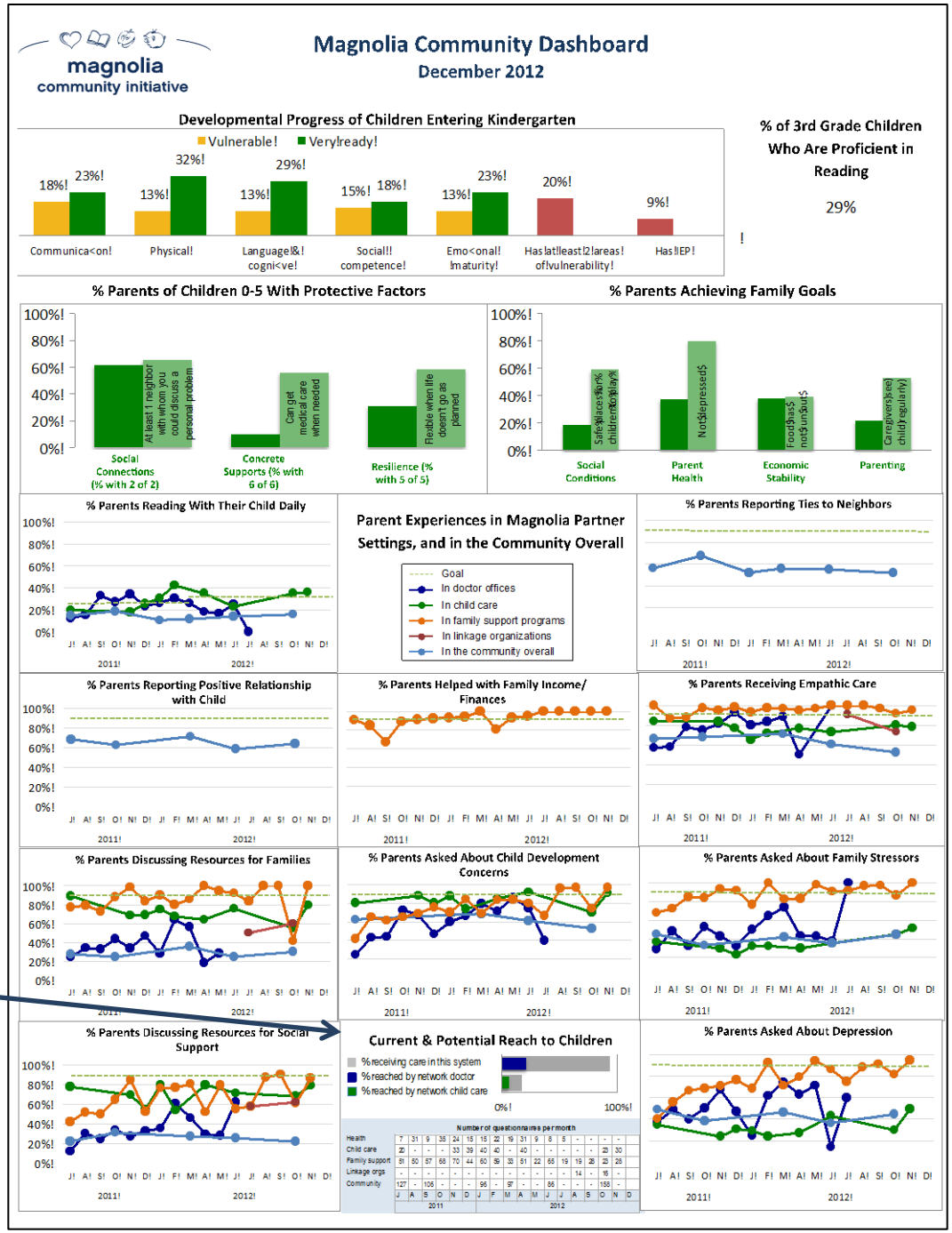


Developmental progress, by kindergarten

Protective factors for families

Parent activities and behaviors

Potential and actual reach to children in the community



Reading proficiency, third grade

Family and community conditions

Measures of real-time improvement in services and supports

cc BY NC SA

Big, Bold and Transformative- Change

- Child Health Community needs to commit itself to Child Health 2025 Initiative
- Adopt a 3.0 Strategic Framework for Research & Health System Transformation (children lead the way)
- Make the Unnecessary Catastrophic Loss Health Potential the unavoidable & inconvenient truth of our national destiny
- Child Health Development Network – a national innovation network designed to
  - Develop 3.0 delivery, organization, payment, HIT, & other innovations that will jolt the system forward
  - Prototype new models of finance & delivery
    - Child Health Trusts,
    - Community Accountable Health Systems-Kids 3.0 ACO+

By Neal Halfon, Paul H. Wise, and Christopher B. Forrest

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COMMENTARY

The Changing Nature Of Children's Health Development: New Challenges Require Major Policy Solutions

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Paul H. Wise is the Richard E. Behrman Professor in Child Health in the Department of Pediatrics, Stanford University School of Medicine, in California.

Christopher B. Forrest is a professor of pediatrics at the Children's Hospital of Philadelphia and the University of Pennsylvania, in Philadelphia.

ABSTRACT **The epidemiology and social context of American childhood are rapidly changing. Adverse social, economic, and child-rearing conditions are loading children down with preventable illness, physical and behavioral disability, and dysfunction. This new epidemiology of childhood is swamping the capacity of the nation's health care system, schools, juvenile justice facilities, and child protective services to respond to the needs of those they serve. This low-performing system not only jeopardizes the health of children, it also jeopardizes the health of the adults they will become. In this article we review the science of life-course health development, a new field that provides a powerful explanatory framework for understanding how poor health and social adversity during childhood can affect lifelong health. We then present five ambitious policy recommendations to integrate educational, health, social, and economic initiatives designed to enhance health. Our bold but pragmatic goal is that by 2025, US children will have the highest levels of health among industrialized nations, instead of where US children currently rank—among the worst.**

The fact that more than 10 percent of children will be maltreated during their childhood[1] is probably no surprise to child protective workers in many local child welfare systems. The fact that at least 30 percent of young children have behavioral and developmental problems is not lost on pediatric providers who see these children walking through their doors each day.[2] Nor is it surprising for most elementary school principals in low-income communities to learn that 40 percent of children showing up for kindergarten are not prepared to be there, are likely to fall behind, and won't be reading by grade three.[3] And a county probation department worker would not be shocked to learn that more than 40 percent of his charges have long-standing, undiagnosed and untreated, learning, behavior, and development problems.[4,5]

What each of these service sectors and providers has in common is that they are responding to the symptoms of the same adverse social, economic, and child-rearing conditions that are loading children down with preventable illness, disability, and dysfunction. This new epidemiology of childhood is swamping the capacity of the nation's health care system, schools, juvenile justice facilities, and child protective services to respond to the needs of those they serve. Each of these sectors operates in isolation, with narrowly targeted funding, in its own administrative silo, with its own congressional committee demanding accountability.

Even though the capacity of the United States

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at UCLA DIGITAL COLL SVCS

Child Health System Transformation Agenda

- National HD Action Plan (vision, goals, roadmap)
  - Bold, audacious, innovative, across government
  - Elevate MCHB and link with Federal Reserve
- Community Based Systems Transformation (new OS and co-laboratories of innovation and change)
  - 1000 communities over 10 years
  - National innovation and improvement initiative
  - CMMI dollars, and State Kids SIM
- Transform Pediatric/Child Health Care (specific APPs)
  - 1950's operating system needs major upgrade
  - Move to 3.0 operating system, principles and design
  - Community Accountable-Child Health Development Systems

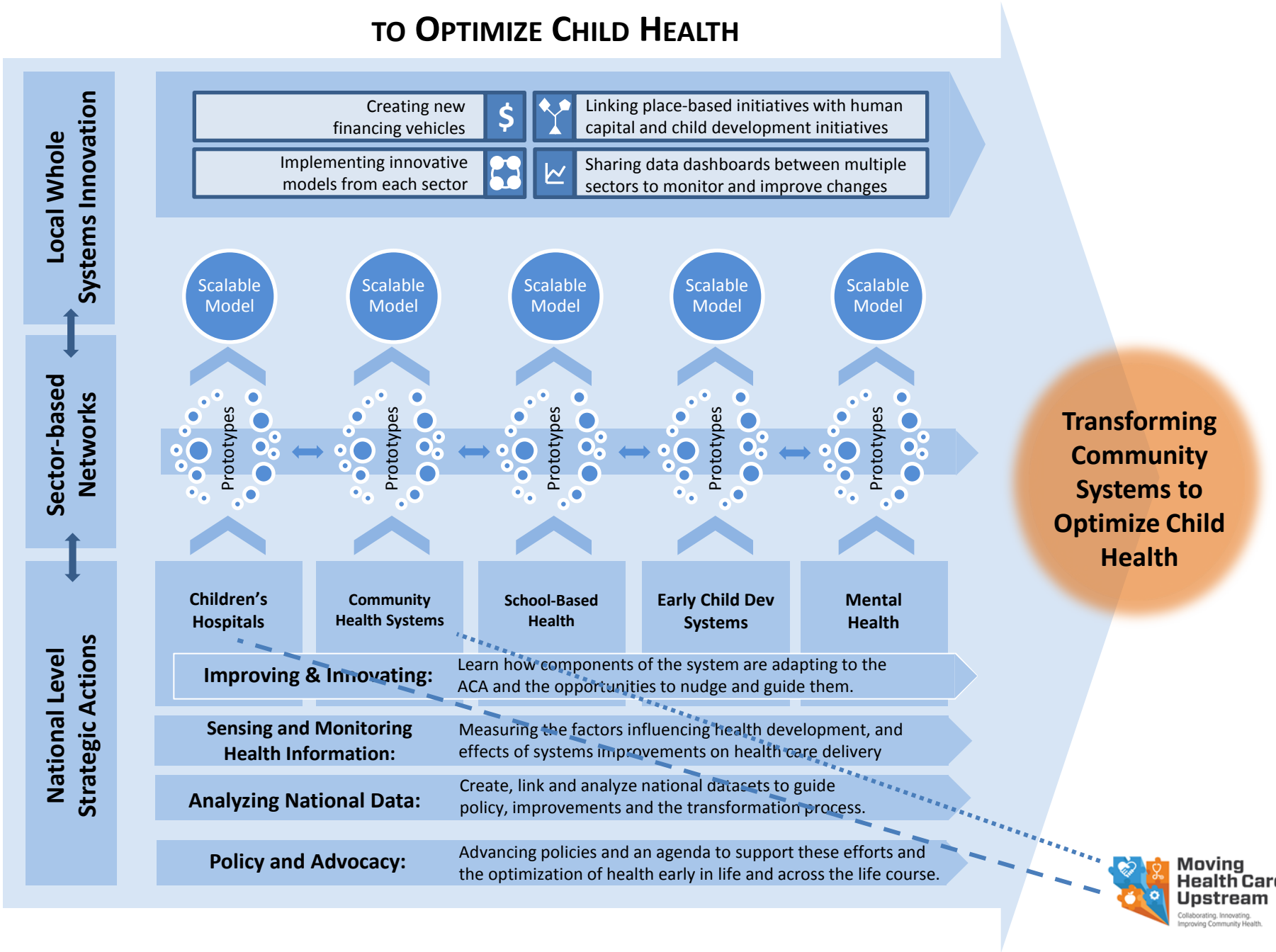
Child Health System Transformation Agenda

- LCHD Prevention Infrastructure (Health Optimization Platform)
  - Whole child, whole family, whole community early childhood thru adolescence scaffolding and supports
- Child Health Development Research Agenda (knowledge, tools, innovations)
  - Ambitious, bold, and comparable to the human genome project
  - Align public and private research and innovation activities
  - Focus on optimizing behavioral health of children and adolescents
- Child Health Development Information and Monitoring System (currency for policy markets, information for improvement)
  - 21st century health development sensing system
  - Provide real time, integrated, local, neighborhood level information to engage all sectors, (PEDSNET + KIDSNET)
  - Dashboard data, provide direction for innovation and improvement and motivation for sustainability (Magnolia CI)

Child Health System Transformation Initiative (CHSTI)

- Designed to leverage ACA implementation to:
  - Transform child health system- systematically advancing 3.0 design principles, strategies and prototypes
  - Rapidly establish a systematic process for monitoring, analyzing, responding to emerging threats

Integrated Strategy to Transform Community Systems to Optimize Child Health



Moving Health Care Upstream
Collaborating. Innovating. Improving Community Health.

Framework* for Building a Community Health Improvement Infrastructure

Shared Community Vision	Cross-Sector Stakeholder Engagement	Partnership Accountability Structure	Strategic Communications
Learning and Innovation System	Priority Community Outcomes	Metrics, Analytics	Comprehensive Data Management Systems
Collaborative Action	Collaborative Learning & Action Networks	Continuous Innovation & Improvement	Strategies to Spread & Scale
Investment & Sustainability	Health Impact Investing	Funding for Collaborative Action	Support for Integrating Functions

*Adapted from STRIVE

Moving Health Care Upstream

Collaborating. Innovating.
Improving Community Health.

Join LCRN

LCRN provides an innovative infrastructure for capturing and disseminating knowledge, catalyzing basic, theoretical, applied and translational life course health development research, and increasing the funding available to support such work.

Learn more about LCRN membership

If you're already a member Access our network

Sign up to receive the LCRN newsletter:

email subscribe to our free newsletter

Support Us

LCRN is actively seeking additional funding to develop new and innovative transdisciplinary research and activities. If you would like to contribute, please contact Ericka Tullis, Project Manager, at ETullis@mednet.ucla.edu.

The Maternal and Child Health Life Course Research Network (LCRN) is a virtual collaborative network of researchers, service providers and thought leaders committed to improving health and reducing disease by advancing life course health development research.

LCRN brings together diverse expertise and perspectives to examine the origins and development of health, and to inform meaningful and evidence-based changes in practice, systems and policies affecting children and families.

Announcements

AMCHP Life Course Metrics Project: Seeking Public Input on Life Course Indicators
Due October 26, 2012

Latin American Society of Nutrition XVI Congress
La Havana, Cuba
November 11-16, 2012

LCRN Member Webinar Series RFP
Due December 1, 2012

AMCHP Annual Conference
Washington, DC
February 9-12, 2013

MCH Life Course Research Agenda-Setting Meeting

Latest Research by LCRN Members

Stress and the brain: how experiences and exposures across the life span shape health, development, and learning in adolescence
posted August 01, 2012
Read full article

Integrating risks for type 2 diabetes across childhood: a life course perspective
posted August 01, 2012
Read full article

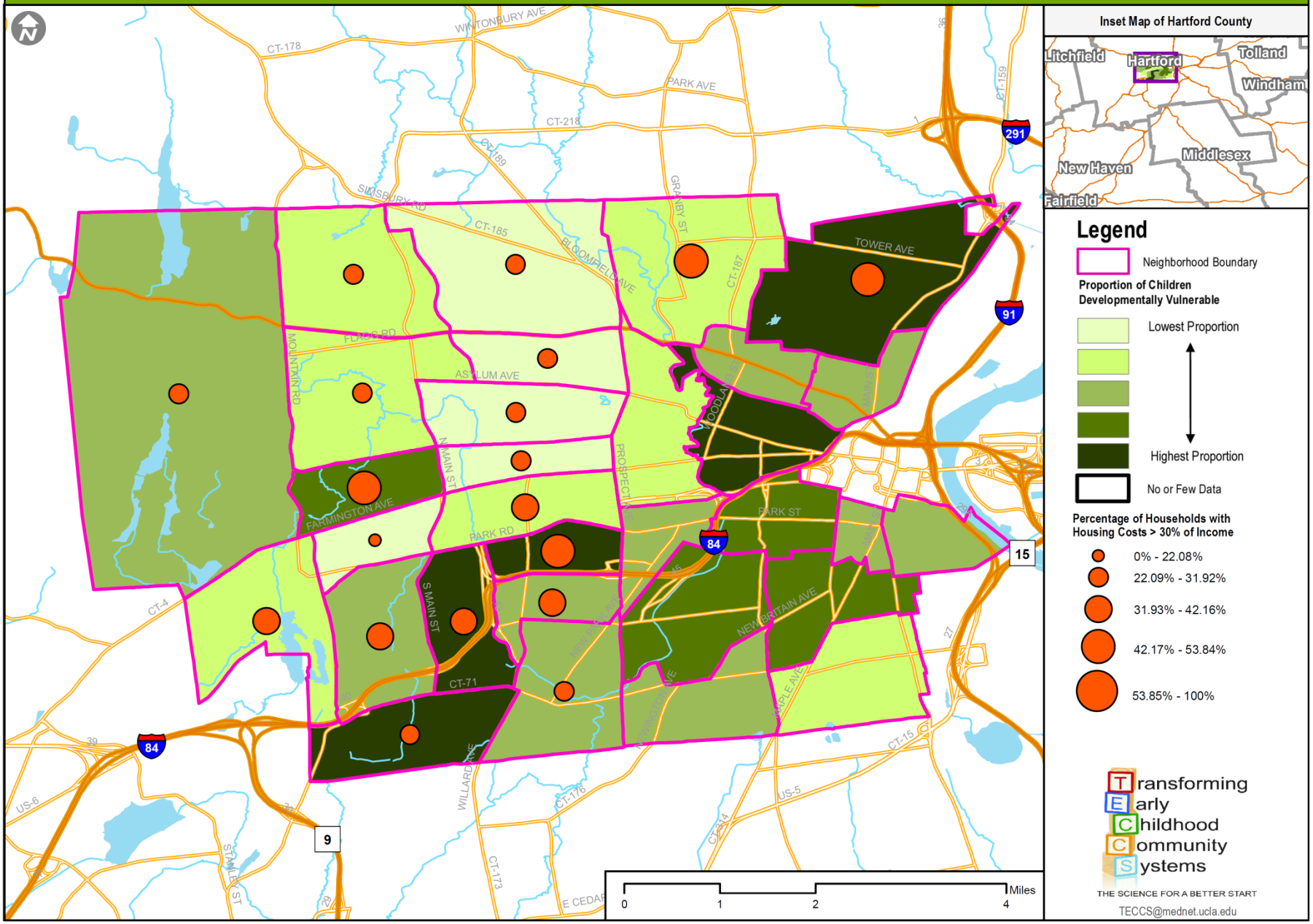
Fetal programming of body composition, obesity, and metabolic function: the role of intrauterine stress and stress biology
posted May 01, 2012
Read full article

Integrating the life course

Find us at

www.lcrn.net

EDI 2014: Children Vulnerable on the Emotional Maturity Domain with Percent of Households with Housing Costs > 30% of Household Income in Hartford Neighborhoods



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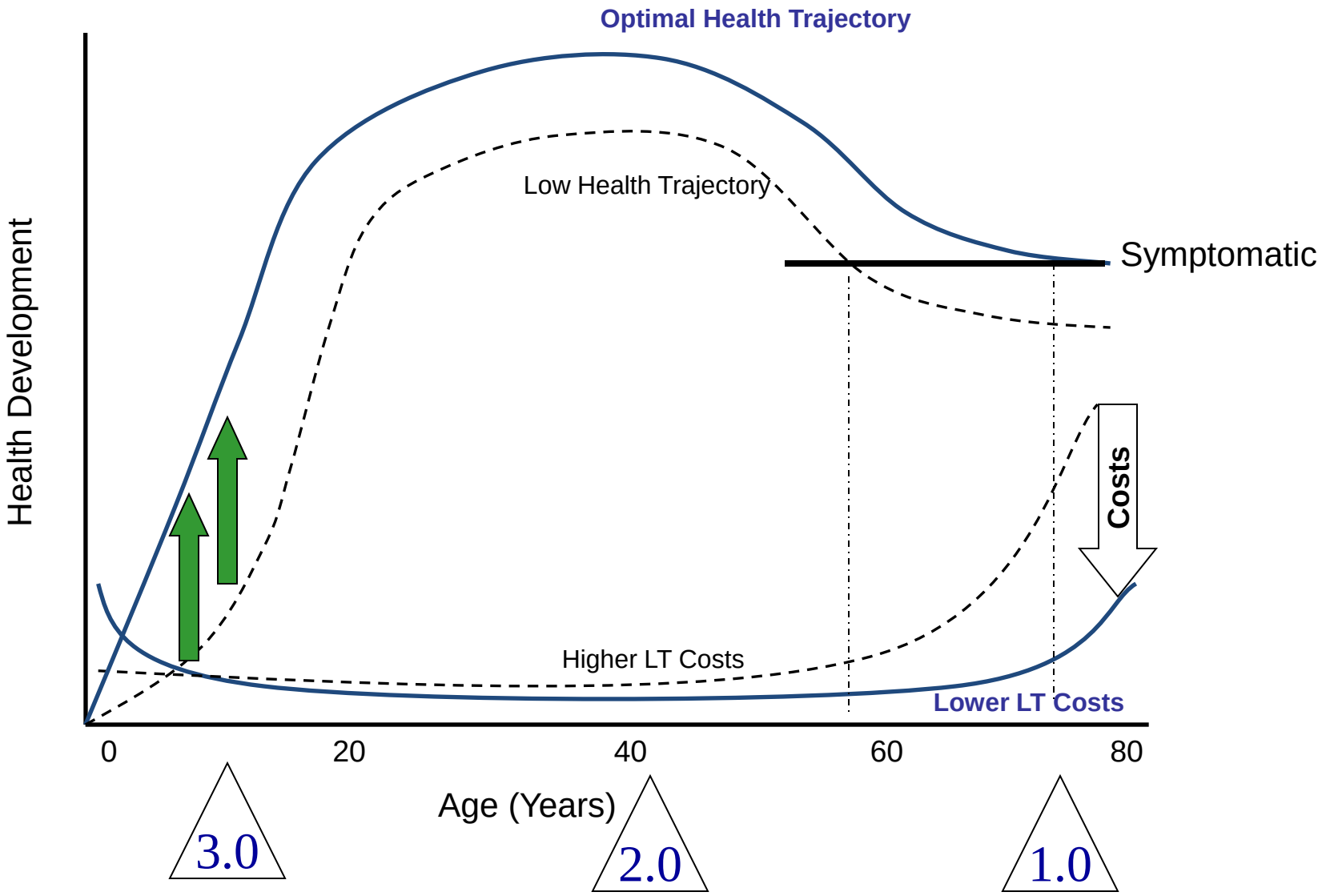
Shifting the Health Development Curve to Shift the Cost Curve



Other Challenges for MBD disorder in children and adolescents

- Preventive services- MBD screening
  - Need better screening tools, approaches, pathways
  - 30-40% of kids at risk;
  - system engineered to screen for 4-6% of kids with DD
  - Only 1-2% of kids entering DD system
- Bundled payment for continuum of MBD services
  - Lack of providers, pathways, integrated networks
- Barriers to providing complex developmentally focused care
  - Structure of visits, care pathways,
- Churning coverage MBD care