Breaking the Intergenerational Cycle of Adversity

CWDA 2019
California At the Forefront
Wednesday October 16, 2019
Executive Order: N-02-19

WHEREAS California faces serious health challenges rooted in early social determinants of health; and

WHEREAS these challenges are not only serious but inequitable, disproportionately impacting low-income Californians and communities of color; and

WHEREAS some of the most persistent, but least addressed, health challenges are the upstream factors that eventually become chronic and acute conditions that are far more difficult and expensive to treat; and

WHEREAS the overwhelming scientific consensus is that these upstream factors, including toxic stress and the social determinants of health, are the root causes of many of the most harmful and persistent health challenges facing Californians; and

WHEREAS California is home to many of the world’s leading experts on proactively addressing these root causes, including State and local health officials; and

WHEREAS these experts are endeavoring to identify and implement solutions proven effective by our best science; and

WHEREAS medical and policy experts cannot effectively do this work alone—they must leverage the expertise of Californians whose lived experience is critical to the development of working solutions; and

WHEREAS it is time that California appoints a leader who can marshal the insights and energy of medical professionals, public health experts, public servants, and everyday Californians to solve our most pressing health challenges with surgical focus.

NOW, THEREFORE, I, GAVIN NEWSOM, Governor of the State of California, by virtue of the power and authority vested in me by the Constitution and statutes of the State of California, do hereby issue this Order to become effective immediately.

IT IS HEREBY ORDERED that there is established the position of Surgeon General, a public entity within the Governor’s direct executive authority.

IT IS FURTHER ORDERED that the Surgeon General shall advise the Governor on a comprehensive approach to addressing health risks and challenges as effectively and as early as possible.

IT IS FURTHER ORDERED that the Surgeon General shall marshal the insights and energy of medical professionals, scientists and other academic experts, public health experts, public servants, and everyday Californians to solve our most pressing public health challenges.

IT IS FURTHER ORDERED that the Surgeon General shall be a key spokesperson on public health issues throughout the State of California by providing Californians with the best medical and scientific evidence through public health reports and other tools of communicating widely to the public.
Office of California Surgeon
General Priorities

- Health Equity
- Early Childhood
- Toxic Stress
10 Categories of Adverse Childhood Experiences (ACEs)

ABUSE
- Physical
- Emotional
- Sexual

NEGLECT
- Physical
- Emotional

HOUSEHOLD DYSFUNCTION
- Mental Illness
- Incarcerated Relative
- Mother treated violently
- Substance Abuse
- Divorce
63.5% Californians with ≥1 ACEs  
17.6% have ≥ 4 ACEs

Source: A Hidden Crisis: Findings on Adverse Childhood Experiences in California, Center for Youth Wellness, 2014  
https://letsgethealthy.ca.gov/goals/healthy-beginnings/adverse-childhood-experiences/
ACEs across race and ethnicity

Prevalence of 4+ ACEs in low-income populations is substantially greater

ACEs dramatically increase risk for 8 out of 10 leading causes of death in US

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<th>Leading Causes of Death in US, 2017</th>
<th>Odds Ratio Associated with ≥ 4 ACEs</th>
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<td>2.3</td>
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<td>3   Accidents</td>
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<td>4   Chronic Lower Respiratory Disease</td>
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<tr>
<td>5   Stroke</td>
<td>2.4</td>
</tr>
<tr>
<td>6   Alzheimer’s</td>
<td>11.2</td>
</tr>
<tr>
<td>7   Diabetes</td>
<td>1.5</td>
</tr>
<tr>
<td>8   Influenza and Pneumonia</td>
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<td>9   Kidney Disease</td>
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**ACEs are NOT destiny!**

With intervention, we can make a significant impact and improve outcomes.

The Biology of Adversity
Adapted from Bucci et al, 2016
Health and behavioral outcomes in children

- Developmental delay
- Growth delay
- Failure to thrive
- Sleep disruption
- Asthma
- Pneumonia
- Viral infection
- Atopic disease
- Learning difficulties
- Behavioral problems
- Obesity
- Diabetes
- Headache
- Abdominal pain
- Teen pregnancy
- Hyperthyroidism
- Pubertal changes

Prenatal and perinatal outcomes

- Pre-eclampsia
- Impaired Fertility
- Altered microbiome
- Pregnancy intention
- Maternal Risk Behaviors
- Maternal chronic diseases
- Fetal loss
- Pre-term birth
- Low Birthweight

Using the Science to Break the Cycle
## Stress Response

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<th>TOLERABLE</th>
<th>TOXIC</th>
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<td>Physiological response to mild or moderate stressor</td>
<td>Adaptive response to time-limited stressor</td>
<td>Maladaptive response to intense and sustained stressor</td>
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<td>Brief activation of stress response elevates heart rate, blood pressure, and hormonal levels</td>
<td>Time-limited activation of stress response results in short-term systemic changes</td>
<td>Prolonged activation of stress response in children disrupts brain architecture and increases risk of health disorders</td>
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<td>Homeostasis recovers quickly through body’s natural coping mechanisms</td>
<td>Homeostasis recovers through buffering effect of caring adult or other interventions</td>
<td>Prolonged allostatics establishes a chronic stress response</td>
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- Tough test at school, playoff game
- Immigration, natural disaster
- Abuse, neglect, household dysfunction

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**Fig. 2.** Spectrum of the stress response: positive, tolerable, and toxic.

Buffering the Toxic Stress Response

**Neurologic:** MRI studies found that institutionalized children randomized to high quality nurturant caregiving showed normalization of the developmental trajectory of white matter structures.

**Immunologic:** Meditation was associated with decreased IFN-γ and NK cell production of IL-10 with increased T cell production of IL-4 (anti-inflammatory). Social support protected against the rise in infection risk associated with increasing frequency of conflict.

**Endocrine:** Oxytocin inhibits the stress response, enhances bonding, protects against stress-induced cell death, has anti-inflammatory effects, enhances metabolic homeostasis and protects vascular endothelium.

**Epigenetic:** Meany and colleagues found that nurturant caregiving was associated with epigenetic changes that led to greater stress tolerance, more normal functioning of the stress response, improved cognitive performance in increased caregiving.

Buffering the Toxic Stress Response

- Balanced Nutrition
- Regular Exercise/Physical Activity
- Mindfulness/Meditation Practices
- Psychotherapy and/or Psychiatric Care
- Supportive Relationships
- Quality Sleep

Maternal Mortality Rate, California and United States; 1999-2013

Source: State of California, Department of Public Health, California Birth and Death Statistical Master Files, 1999-2013
BOLD VISION:
California will cut ACES and Toxic Stress in half in one generation.
• Establish primary prevention through coordinated public awareness campaigns.

• Systematically deploy broad scale screening, early detection and early intervention of ACEs/toxic stress.

• Interrupt vertical transmission of ACEs by advancing screening and children in adults – with special focus on the prenatal and early parenting years.

• Coordinate and strengthen the network of referral and treatment systems to make them more effective, accountable and easy to navigate for children, adults and providers.
State of California Investment

- $40.8M for Adverse Childhood Experiences (ACES) screenings of young children and adults receiving Medi-Cal

  - DHCS will provide a supplemental payment to Medi-Cal providers for trauma screenings for adults and children, beginning in January 2020.

- $50M (plus match) to train providers on trauma screenings

  - Providers must complete required training and self-attest to completion to receive supplemental payments for trauma screening.
Phase 1: **Minimum Requirements for Reimbursement** –

- 2-hour online training that covers the basics of what billing providers need to know to appropriately screen and treat patients for ACEs and toxic stress, and how to participate in the program.
- Training will provide Continuing Medical Education (CME) and Maintenance of Certification (MOC) credits and will be available in the Fall of 2019.
CA-OSG and DHCS AB 340 Phased Approach

- Phase 2: Provider Engagement and Training –
  - Partnering with organizations to provide additional certified training opportunities that are targeted to specific provider specialties and/or offered in different modalities (such as in-person).
  - All trainings would need to meet CA-OSG/DHCS-developed curriculum criteria.
Phase 3: **Learning and Quality Improvement** –

- Development of a Learning and Quality Improvement (LQI) Collaborative to implement a data-driven, iterative evaluation and quality improvement process.

- Will draw on inputs from diverse hospitals and clinics across California, and provide technical assistance in identifying, improving upon, and implementing evidence-based best practices.

- The LQI Collaborative would work to disseminate these best practices to health systems across the state.
State of California Investment

- Multi-disciplinary network of systems & cross sector work:
  - $195m to the early learning and care workforce in education/training grants
  - $50m in After School Education and Safety Programs
  - $31.4m ($124.9m ongoing) to increase access to State Preschool for 10,000 income-eligible children in community based organizations
  - and $5m investment in developing a Master Plan for Early Learning and Care
CA-OSG Listening Tour 2019

- **Visited 10 counties**
  - Brought together community members, healthcare providers, education experts, and leaders to roundtable conversations

- **Key Learnings:**
  - Recognition of ACEs as a root cause of many challenges
  - People willing and ready or already hard at work on these issues
  - Need for coordination and infrastructure is abundantly clear
  - Localized and unique approach is critical
  - Need more widespread awareness to create the network of buffering care, early intervention and access to services
  - Tailoring Trauma Informed Care is already happening - practices, ideas, solutions and approaches are truly groundbreaking. Must nurture this innovation and help share best practices among us.
Continuing to Address ACEs and Toxic Stress

- Building the Buffering Care Infrastructure
- CA-OSG - Report on ACEs and Toxic Stress in California
- ACEs Aware: Public Education Campaign
- Continued work with CWDA & Individual Counties
Thank you for all you are doing to support vulnerable kids and families!