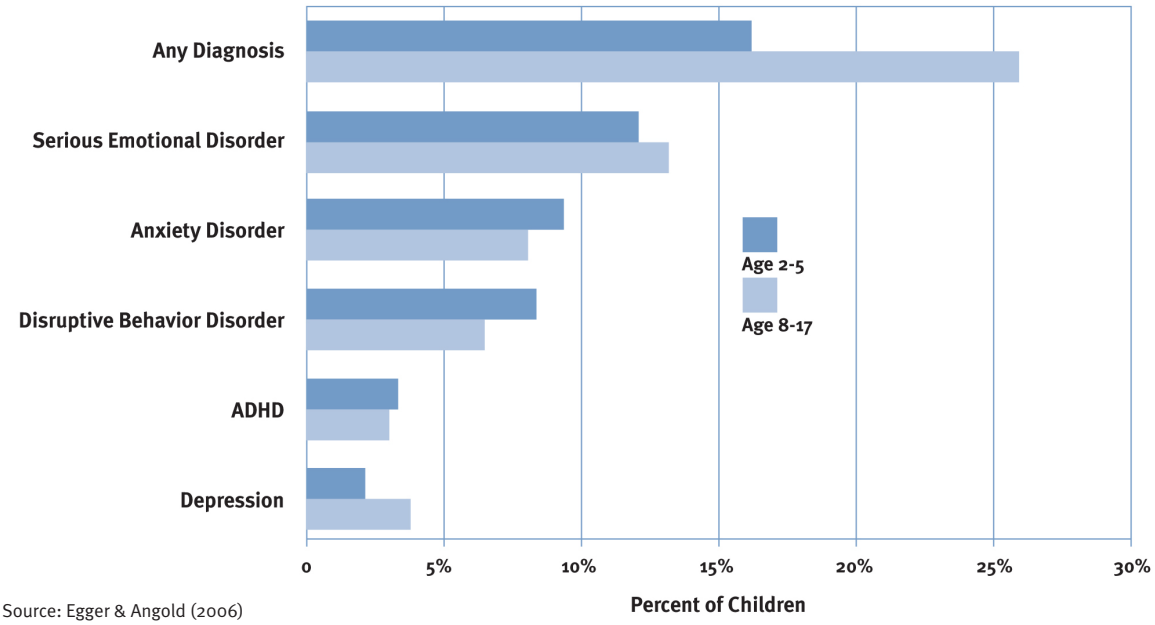
A series of brief summaries of essential findings from recent scientific publications and presentations by the Center on the Developing Child at Harvard University.

The science of child development shows that the foundation for sound mental health is built early in life, as early experiences—which include children's relationships with parents, caregivers, relatives, teachers, and peers—shape the architecture of the developing brain. Disruptions in this developmental process can impair a child's capacities for learning and relating to others, with lifelong implications. For society, many costly problems, ranging from the failure to complete high school to incarceration to homelessness, could be dramatically reduced if attention were paid to improving children's environments of relationships and experiences early in life.

Sound mental health provides an essential foundation of stability that supports all other aspects of human development—from the formation of friendships and the ability to cope with adversity to the achievement of success in school, work, and community life. Similar to the way a wobbly table may not function well if the floor is uneven, the legs are not aligned, or the tabletop is not level, the destabilizing consequences of problems in mental health can be caused by many interdependent factors. Just as small "wobbles" in a table can become bigger and more difficult to fix over time, the effective management of mental health concerns in young children requires early identification of the causes and appropriate attention to their source, whether they reside in the environment, the child, or (most frequently) in both. Understanding how emotional well-being can be strengthened or disrupted in early childhood can help policymakers promote the kinds of environments and experiences that prevent problems and remediate early difficulties so they do not destabilize the developmental process.

1 Significant mental health problems can and do occur in young children. In some cases, these problems can have serious consequences for early learning, social competence, and lifelong physical health. Children can show clear characteristics of anxiety disorders, attention-deficit/hyperactivity disorder, conduct disorder, depression, post-traumatic stress disorder, and neurodevelopmental disabilities, such as autism, at a very early age. That said, young children respond to and process emotional experiences and traumatic events in ways that are very different from older children and adults. Consequently, diagnosis in early childhood can be even more difficult than it is in adults.

Mental Health Problems Can Occur Across Childhood



Source: Egger & Angold (2006)

2 Impairment in mental health occurs as a result of the interaction between a child's genetic predispositions and his or her exposure to significant adversity in the environment. Genes are not destiny. Our genes contain instructions that tell our bodies how to work, but the environment leaves a "signature" on the genes that authorizes or prevents those instructions from being carried out—or even speeds up or slows down genetic activity. Thus, the interaction between genetic predispositions and sustained, stress-inducing experiences early in life can lay an unstable foundation for mental health that endures well into the adult years.

3 Toxic stress, which is the result of strong, frequent and/or prolonged biological responses to adversity, can damage the architecture of the developing brain and increase the likelihood of significant mental health problems that may emerge either quickly or years later. Because of its enduring effects on brain development and other organ systems, toxic stress can impair school readiness, academic achievement, and both physical and mental health in children and, later, during adulthood. Life circumstances associated with family stress, such as persistent poverty, threatening neighborhoods, and very poor child care conditions, elevate the risk of serious mental health problems. Young children who experience recurrent abuse or chronic neglect, domestic violence, or parental mental health or substance abuse problems are particularly vulnerable.

4 Some individuals demonstrate remarkable capacities to overcome the severe challenges of early, persistent maltreatment, trauma, and emotional harm, yet there are limits to the ability of young children to recover psychologically from such adversity. Even when children have been removed from traumatizing circumstances and placed in exceptionally nurturing homes, developmental improvements are often accompanied by continuing problems in self-regulation, emotional adaptability, relating to others, and self-understanding. When children overcome these burdens, they have typically been the beneficiaries of exceptional efforts on the part of supportive adults. These findings underscore the importance of prevention and timely intervention in circumstances that put young children at serious psychological risk.

5 It is essential to treat young children's mental health problems within the context of their families, homes, and communities. The emotional well-being of young children is directly tied to the functioning of their caregivers and the families in which they live. When these relationships are abusive, threatening, chronically neglectful, or otherwise psychologically harmful, they are a potent risk factor for the development of early mental health problems. In contrast, when relationships are reliably responsive and supportive, they can actually buffer young children from the adverse effects of other stressors. Therefore, reducing the stressors affecting children requires addressing the stresses on their families.

POLICY IMPLICATIONS

- The emotional and behavioral needs of vulnerable infants, toddlers, and preschoolers are best met through coordinated services that focus on their full environment of relationships, including parents, extended family members, home visitors, providers of early care and education, and/or mental health professionals. Mental health services for adults who are parents of young children would have broader impact if they routinely included attention to the needs of the children as well.
- Physicians and providers of early care and education would be better equipped to understand and manage the emotional and behavioral problems of young children if they had more appropriate professional training and easier access to child mental health professionals when they are needed.
- Better coordination of resources invested in mental health services for young children and their parents would provide a more stable and efficient vehicle for assuring access to effective prevention and treatment programs.

For more information, see "Establishing a Level Foundation for Life: Mental Health Begins in Early Childhood" and the Working Paper series from the Center on the Developing Child at Harvard University.
www.developingchild.harvard.edu/resources/

The authors gratefully acknowledge the contributions of the National Governors Association Center for Best Practices and the National Conference of State Legislatures.

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Primary Care and Early Childhood Mental Health

White Paper Series
Vol. 1
Brief 1 of 4

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*Alex is a 3-year old boy brought to his pediatrician because he was **"kicked out of preschool"** for being hyperactive and aggressive towards other children. Medical review reveals multiple ER visits for injuries while under his father's care, along with food insecurity and domestic violence. The pediatrician refers him to Child and Family Services (CFS), behavioral health services and the public health nurse (PHN). Despite many calls, CFS never provides information on the referral. County behavioral health services deems the child ineligible for services and refers them to a community based mental health organization with a 7-month wait for counseling. The mother declines a PHN visit. **After much effort, Alex gets no help.***

Pediatric Primary Care Already Supports Early Childhood Mental Health

With ***frequent and nearly universal access*** to young children, ***pediatric primary care is well positioned to promote early childhood mental health*** by supporting parents, monitoring development and behavior, and by providing interventions to bolster parent-child relationships, promote brain development, and address major stressors. ***Timely action in the primary care setting can help promote school readiness and prevent a lifetime of mental and physical illness, yet many barriers presently impede progress in this area.*** These include:

Primary care physicians (PCP's) need additional tools, training and reimbursement to implement mental health and trauma screening in primary care settings.
Early assessments of parent-child relationships, stressors and child behavior are essential in identifying behavioral concerns and mobilizing needed resources and support.

⇒ **DHCS should implement a Medi-Cal reimbursement of at least $60 for mental health, developmental and trauma/resilience screening in primary care.**
Pending DHCS administrative action and California State Budgetary item for Proposition 56 funding

⇒ **The 3 tools recommended by the AB340 Trauma Screening Advisory Workgroup should be approved for use in trauma screening for Medi-Cal children, along with validated resilience screening tools.**
Pending DHCS administrative action

Integrated and culturally appropriate pediatric behavioral health programs should be funded to support primary care providers in providing effective care to at-risk families.

⇒ **A work group of stakeholders should be established to consider expanding prevention programs such as Healthy Steps or the Comprehensive Perinatal Services Program in order to assist health care providers in meeting the needs of families of young children. Both programs embed licensed clinical social workers or psychologists into the primary care setting; use psychosocial and developmental screening to triage risk; and provide on-site behavioral health services and collaborative referrals to higher risk families.**
Proposed DHCS Administrative Action ~ Support AB 898 (Wicks) Children's Behavioral Health

⇒ **Prevention and treatment programs should be linguistically and culturally appropriate for California's racially and ethnically diverse communities.**

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Strong parent-child relationships form the foundation of early childhood mental health. PCPs should have ready access to programs strengthening parent-child relationships and efficient means for referral and ongoing care coordination.

⇒ **Managed Care Plans (MCPs) should provide PCP's with regularly updated electronic databases of parenting education, family support and child/family mental health programs. They should also inform providers of the referral outcomes and any resulting evaluations and treatment plans, providing timely care coordination and case management as mandated by EPSTD program funding requirements.**
DHS administrative action

⇒ **Essential early childhood mental health support programs for preschool and child care-enrolled children 0-5 years and their families should be expanded to serve all low-income children in California through regional collaboratives under the Local Childcare and Development Planning Councils.**
Implementation regulations of the Department of Education AB2698 2018. Expanded legislation needed to expand coverage to all low-income children enrolled in State funded or licensed preschool or child care programs.

⇒ **Relevant state regulatory agencies should develop and support memorandums of understanding (MOUs) that facilitate the legal sharing of information between health care, mental health, and educational/preschool settings at the local level. They should also consider deploying technology that facilitates HIPAA-compliant transfer of information.**

⇒ **The Help Me Grow programs established by First 5 presently facilitates access to First 5 programs and Regional Centers for children with developmental concerns. Since its founding in 2000, revenues for First 5 have declined by nearly 40% due to declining tobacco tax revenues, making both the referral system and the support programs difficult to sustain. California should develop a funding source to sustain and expand this program to support children with behavioral concerns and trauma exposure.**
Potential legislative bill to be proposed

County Behavioral Health Programs and Medi-Cal managed care plans are responsible for providing behavioral health services to children under the EPSDT Medicaid program, yet resources are limited and responsibility for providing services is unclear.

⇒ **The upcoming renewal of federal waivers funding behavioral health services in California waivers has the potential to draw billions in federal matching funds into the Medi-Cal program. A work group should be established to develop an integrated system of behavioral health care for children and teens and maximize federal matching funds for allowable expenditures.**
Support AB898 (Wicks) Children's Behavioral Health.

⇒ **MCPs should be required to develop quality improvement programs that measure whether or not at-risk children receive the appropriate follow up evaluation and services. The EPSDT federal mandate for MCPs and MHPs to provide behavioral health services should be clarified by DHCS, along with MOUs between MHPs and MCPs that avoid gaps in service for young children and families.**
Proposed DHCS regulatory action

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Benefits of Investing in Quality Early Care and Education
Birth to 5 Years

White Paper Series
Vol. 1
Brief 2 of 4

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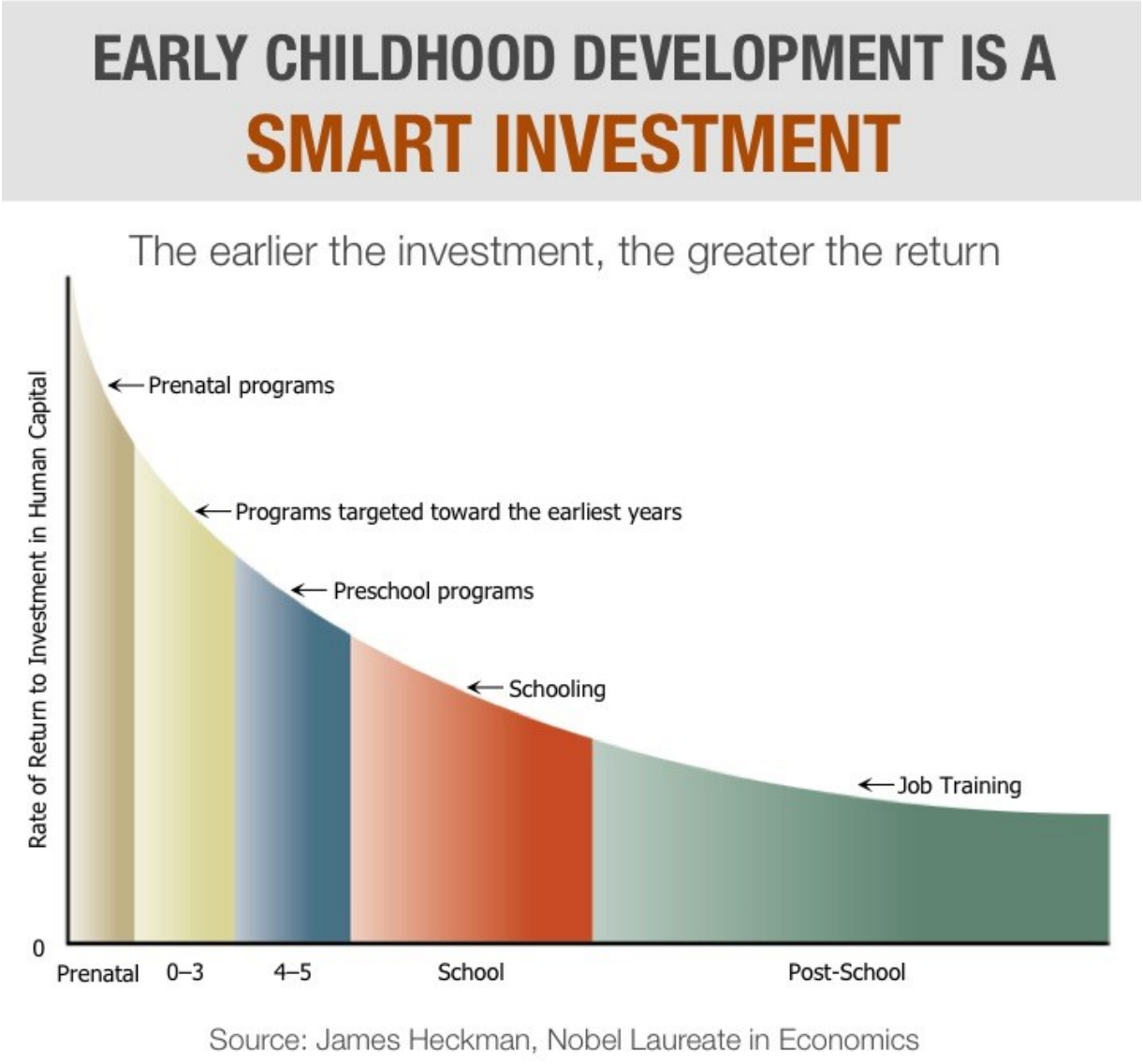
Early child care and education (ECE) are early learning services between birth and kindergarten entry. ***California ECE is a mixed-delivery system, available in stand-alone or networked family child care homes, community-based centers and school districts.*** Most centers and networked family child care homes and some independent homes, are state-licensed. They are also expected to adhere to school readiness-focused requirements, if they are state-funded. Child care delivered from the homes of extended family, friends or neighbors can be both state funded and exempt from even health and safety licensing, if the provider serves only relatives or only one other family, in addition to his or her own.

The main state administrative agencies are the Child Development Division of the California Department of Education (CDE) (contracted ECE) and the California Department of Social Services (DSS) (voucher-financed care and licensing). County Offices of Education house Local Planning Councils which organize the local efforts of each community. ***State and County First 5 Associations and Resource & Referral agencies focus on cross-sector systems-building and quality improvement, including mental health consultation services.*** Funding and oversight of these efforts is complex, but the Newsom Administration is pledged to simplify the system.



** studies available upon request*

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WHY INVEST EARLY?

Good quality ECE programs have been shown to improve school readiness, later school success and better life outcomes in low-income children*. More specifically, the following results have been found:

- ⇒ **Less special education placement**
- ⇒ **Less repeating of a school grade**
- ⇒ **More high school completion**
- ⇒ **Less involvement in crime**
- ⇒ **More college attendance**
- ⇒ **Higher incomes**
- ⇒ **Better cardiovascular health in later life**

Programs that also focus on parent support* produced:

- ⇒ **More positive parenting practices**
- ⇒ **Higher parental education and employment attainment**

Sub studies of Head Start participants in large scale longitudinal studies of child and human development* had the same high school completion, college attendance and higher earnings results—and more positive parenting practices. They also found among African-American participants improved behavioral, social, and emotional outcomes including:

- ⇒ **Higher self-esteem**
- ⇒ **Higher self-control**

Brain growth is at its highest in the first 5 years of life

- ⇒ **90% of brain growth occurs by age 5** **dependent on nurturing relationships and experiences*
- ⇒ **More than 1 million brain connections are formed each second during that developmental period**
- ⇒ **Greater vulnerability to Adverse Childhood Experiences (ACEs)* in the first 5 years of life**

Early investment in high quality ECE programs returns $13 for every $1 invested*

(Heckman equation graphic)

High quality ECE programs are able to prevent the expulsion of children from these programs. Expulsion is a highly significant, negative practice which has long-lasting consequences on a child's school career and life.

What are the key elements of high quality ECE?

Health and safety practices matter, as well as whole young child-oriented organization of space and schedule. Research indicates the central importance of intentional, developmentally appropriate and individually, culturally and linguistically-sensitive educator/child and educator/parent interaction.

In order to support a stable, qualified, better compensated ECE workforce assuring continuity of care, high-quality interactions and secure attachment, we recommend support for:

- ⇒ **AB 167, the Child Care Partnerships Bill, which expands and improves family-centered infant toddler child care;**
- ⇒ **Adoption of the Governor's proposals for home visiting, developmental screening; ACES screening and PreK;**
- ⇒ **AB 123, which expands and improves State Preschool and Transitional Kindergarten and raises preschool reimbursement rates; and**
- ⇒ **AB 124, which makes reimbursement rates more responsive to the higher cost counties**

To increase the availability of healthy, safe ECE environments, we recommend support for:

- ⇒ **the Governor's facilities-related budget proposals;**
- ⇒ **AB 452 and AB 125, to finance renovation of facilities, including homes, used for ECE.**

To empower teachers to prevent and respond to challenging behaviors and avoid preschool expulsion, we recommend full support for:

- ⇒ **the CDE in the implementation of AB 2698, the Early Childhood Mental Health Consultation Bill.**

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** studies available upon request*

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SUPPORT FOR FIRST 5 ASSOCIATION OF CALIFORNIA PROGRAMS

White Paper Series
Vol. 1
Brief 3 of 4

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Why is the California Academy of Child & Adolescent Psychiatry in Favor of First 5 Program Support?

Child Psychiatrists in the state of California support early development of young children and the health and wellbeing of their caregivers. First 5 has been doing this for the past 20 years, and has a structure in place which makes this a natural partnership. Recently, tobacco sales tax has been declining impacting the availability of funds for First 5 programs that have filled the gaps between health insurance, publicly funded services, education services, and Regional Center services.

The First 5 "Story"

First 5 Commissions were established in each county 20 years ago. Their focus has been the health, nurturance, and school readiness of all children 0-5 years of age. Some counties have been able to build a strong commission and strong relationships with providers of health care, educators, school systems, Child Welfare Departments, local educational institutions, developmental specialists, and behavioral health providers. Some commissions are less advanced in these efforts. The advanced First 5 Commissions have a track record of fiscal support of programs, facilitating collaboration, encouraging workforce development, fostering innovative program development, and publicizing the successes of their work. Each County's Commission works to shape the programs and efforts to the character and needs of their region.

How Does First 5 Support the Governor's Recommendations to build Early Care and Education Programs in California?

⇒ Developmental Checkups and Screening Services for all children

⇒ Home Visitation Services

⇒ Oral Health

⇒ Vision Health

⇒ Quality Early Care and Education Program Supports

⇒ "Help Me Grow" parent and caregiver programs

⇒ Crisis Nursery

⇒ Education of New and Expectant Parents and Caregivers

⇒ Lead the development of a local system of care- programs, services, workforce and a model of excellence

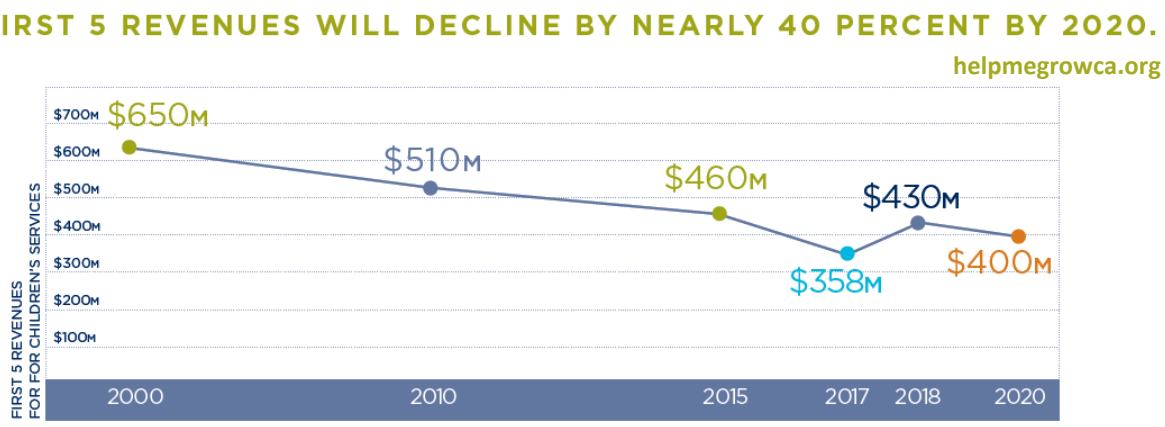
⇒ Collaboration with Partner Organizations that support health, education, safety, and social needs of young children and their caregivers

⇒ Treatment services for mild to moderate developmental and behavioral health difficulties.

What are the Policy Implications of this Support?

First 5 has declining revenues- services will be cut. **Use of one-time funds could prolong those services as the First 5 organizations work to modify their goals and strategic plans to ensure long term availability of the needed services and programs.**

This proposal will need the combined efforts of the First 5 Commission Association, the State Department of Education and their County Offices of Education and may face opposition by other organized efforts to obtain funding (it still is a "zero sum game")



Recognizing and supporting developmental health in its full definition can help us improve school readiness and attendance, decrease child abuse, improve dental and vision health, support children and their caregivers during the most rapid and profound stage of development. Currently, the health systems largely wait until problems develop and, unfortunately, the problems are more serious and difficult to treat. **Intervening earlier, during a more rapid and profound stage of development, can provide a more effective, easier, and less expensive solution to problems before they become severe.**

The case for early investment saving money later has always had a hard time "winning" the discussion. In this case, it is clear that the discussion should include effectiveness of the evidence-based treatments available as part of the discussion.

First 5 Commissions in Counties that are not providing a broad array of services and collaboration **should partner with a more "developed" commission in order to assist their maturation.**

This, again, will take collaboration with the First 5 Commission Association as it proposes a change to the way they operate. There are many counties who are doing a fabulous job in the development of services, relationships, innovation, and integration. There should be a way, a funded way, to assist those counties who are struggling to make the same gains.

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K-12 - Coping * Achieving * Thriving (CAT)

White Paper Series
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It has been long recognized that the first five years of life are ones of dramatic growth and change that can strongly influence the course of an individual's life. The First 5 program has been created to link families to resources to help them develop in a healthy manner and prepare them for starting school. There's no debating the need for these services.

As kids begin school, they are beginning several challenges at the same time. These include separating from family, forming friendships, learning emotional regulation, gaining language skills, gaining motor skills, all in addition to learning the subject matter in school. Many kids do fine with only minor difficulty, but many struggle. ***Kids who don't learn emotional regulation are at higher risk for behavior problems, pain disorders, anxiety disorders, mood disorders, school absences, and academic failure.*** Once this pattern begins it is difficult to prevent a worsening of that child's educational and health outcomes throughout their lifetime.

We also know that ***children who experience numerous adverse childhood experiences (ACE) have poor mental health, general health, and academic outcomes in life.*** Some research shows that these experiences not only impact that individual, but may change their genetics, impacting generations to come. Other multi-generational studies support the concept of these epigenetic changes. For example, studies of the 1944-1945 famine in the Netherlands revealed changes in health outcomes of children who had experienced famine, as well as in their descendants.

Failing to provide prevention and early intervention in school age children promotes mental illness, general medical illness, absenteeism, academic failure, and behavior problems. This leads to a large number of individuals who are unprepared to parent, unprepared for the workforce, and at higher risk for mental illness, and incarceration.

EDUCATION SYSTEM NEEDS

To reduce school absenteeism, improve academic performance, and reduce the incidence of mental illnesses and pain disorders we need a "K-12 CAT" program that includes:

- ⇒ **Mental health, bullying, and pain screenings**
- ⇒ **Referral resources**
- ⇒ **Programs that teach coping skills could and provide students supervised opportunity to practice daily. Any associated cost would be greatly outweighed by gains**
- ⇒ **School based mental health programs**
- ⇒ **All services should be performed with cultural sensitivity and humility to optimize outcomes**

COSTS

The Costs of continuing current practices are immense:

- ⇒ **It's estimated that 20% of children with chronic pain conditions including headaches, abdominal pain, and joint pain can miss up to 50% of an academic year.**
- ⇒ **37% of teens who have mental illness won't complete high school.**
- ⇒ **70% of youth in state and local corrections have a mental illness.**
- ⇒ **Teaching coping skills and allowing students to practice them could reduce the risk of developing a mental illness, pain disorder, or worsening medical illness. It could also decrease the severity of disorders that already exist.**
- ⇒ **Just as our current health system is funded by a combination of public and commercial insurance funding, school-based programs could be funded in such a manner.**

Medical System Needs

Our system can be fairly criticized for being segmented or poorly integrated. By nature, confidentiality concerns limit communication within the health care system and even more so outside the system. Schools and medical providers communicate with letters and signed forms, creating a triangle between parents, medical providers, and schools. The medical system needs:

- ⇒ **To improve communication and collaboration within the medical system**
- ⇒ **To improve communication and collaboration between medical providers, parents, and schools**
- ⇒ **Failing to improve the collaboration creates inefficiency, raises costs, and worsens both educational and medical outcomes**

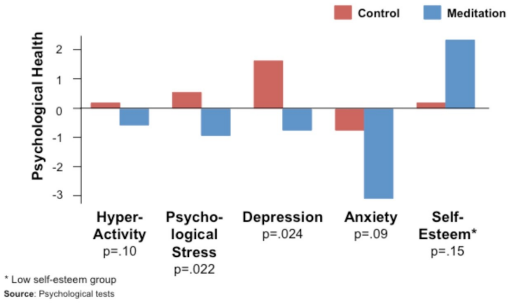
PROPOSAL

- ⇒ **Give schools options of different techniques to provide healthy learning environments, including identifying and effectively stopping bullying behavior and other factors that lead to distress, absenteeism, and illness. Train teachers of K-12 to teach various relaxation techniques in class and have students practice them daily (optimally twice daily). This could include sitting in silence, deep breathing, meditation, stretching, yoga, or many other options. Two San Francisco Bay Area schools have done 3-year pilot programs demonstrating that twice daily quiet time improved student behavior, attendance, and achievement.**
- ⇒ **Develop a health and education task force to begin removing barriers to effective communication between schools and health care providers, as well as barriers to funding. Examples of funding sources could include Federally Qualified Health Centers (FQHC), county Departments of Mental Health (DMH), as well as commercial insurance.**
- ⇒ **Expand school based mental health programs that provide direct services as well as coordinating between the schools and health care providers.**
- ⇒ **Fund screenings for mental health, bullying, and pain and refer children to comprehensive care that is coordinated by school based mental health providers. Funding should include both commercial insurance and publicly funded insurance, to eliminate barriers based on insurance status.**
- ⇒ **Provide reimbursement for health care providers taking time to communicate and collaborate with schools.**
- ⇒ **System could be overseen jointly by California Departments of Health Care Services and Education.**

"The Quiet Time program is the most effective program that I have come across in my 40 years as a public school educator for addressing the problem of stress and violence in schools."

- James S. Dierke, NASSP 2008 National Middle School Principal of the Year, Visitacion Valley Middle School, SF

Improvement in Psychological Health
after First Semester of Quiet Time Program



Meditating 9th grade students at Burton High School experienced improvements in mental health compared to non-meditating controls in the same grade.

Hyperactivity and psychological stress were measured by the Strengths and Difficulties Questionnaire (SDQ); depression was measured by the Profile of Mood States (POMS); anxiety was measured by the Spielberger Trait Anxiety Inventory; self-esteem was measured by the Rosenberg Self-Esteem Scale.

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