



Promoting Children’s Mental, Emotional, and Behavioral (MEB) Health in All Public Systems, Post-COVID-19

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Abstract

The COVID-19 pandemic exacerbates the mental, emotional, and behavioral (MEB) health problems of children and adolescents in the United States (U.S.). A *collective* and *coordinated* national economic and social reconstruction effort aimed at shoring up services to promote children’s MEB, like the Marshall Plan that helped rebuild Europe post-World War II, has been proposed to buttress against the expected retrenchment. The plan prioritizes children’s well-being as a social objective. We propose strategically reconstructing the public safety-net systems serving youth, including early education, maternal and child health, child welfare, corrections, and mental health. That plan called for a concentrated focus on coalition-building and contracting by state mental health systems to establish a foundation for an improved health system. This paper offers a complementary set of suggestions for the four non-mental health systems mentioned above by recommending actionable steps based on scientific evidence to support improved services for children at risk for MEB problems. For each system we describe examples of evidence-informed services, policies or programs that (1) **prevent** disabilities and **promote** health, (2) **protect** and **preserve** families and neighborhoods, and (3) **provide quality care**. Prioritizing the promotion of children’s MEB health by all state systems can shape U.S. children’s health and well-being for generations to come.

Keyword Early childhood education · Mental Health · Child welfare system · Corrections · Incarceration · Maternal and child health · Public health · Policymaking · United States

Introduction

The prevalence of children’s psychological disorders is 17.4%, and rates for anxiety, depression and suicide are steadily increasing (Cree et al. 2018; Mojtabai et al. 2016). Glaring racial and ethnic disparities exist in access to and quality of mental health services (Merikangas et al. 2011).

Contributing to both prevalence and service disparities, 18% of children lived in poverty, and 33% had parents who lacked stable employment before COVID. These situations are worsening with the pandemic. The combination of rising rates of children’s disorders, a high poverty rate, high unemployment, limited schooling and services, and the escalating financial crisis posed by COVID-19 threaten healthy development for this generation of children.

To counter these threats, we need a plan that prioritizes social responsibility for children’s well-being and encompasses all public systems serving children. Hoagwood and Kelleher (2020) outlined core principles for such a response. They called for a fundamental societal shift to redress generations of public service system neglect of children. Modeled on the Marshall Plan, they outlined an economic and social reconstruction effort whose cornerstone is a children-first ethic: a societal pivot to prioritize children’s healthy development. The plan calls for the equitable coordination of public systems serving children and youth: mental health, early learning and education, maternal and child health, child welfare, and corrections. Given that the vast

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majority of MEB challenges begin before age 14, the plan would move services upstream to promote children's early development and support families, thereby mitigating the well-documented risks that lead to later mental, emotional and behavioral (MEB) disorders.

The children's mental health system in this country was not managing the pre-pandemic demand for services. By itself, it will not be able to address the predicted surge in demand post-COVID-19. But scientific evidence points to a multitude of community-facing programs, policies, and strategies that prevent mental health problems from developing in the first place and promote children's MEB health by addressing child and family developmental needs early in life. The National Academies of Science, Engineering and Medicine (NASSEM) has called for all sectors of society to engage in the healthy development of resilient children by strengthening families and communities (National Academies of Sciences Engineering & Medicine, 2017a, 2017b, 2019a). Effective strategies to promote healthy development and to address the negative consequences of racism on families and communities can be implemented using a multi-sector, coordinated plan; in fact, numerous state and local pediatric population health experiments were doing that before COVID-19.

Hoagwood and Kelleher (2020) outlined actionable steps that state and local mental health systems could undertake to move services upstream. These included coalition building with other systems. These coalitions were strengthened by contracts that improved accountability for outcomes, including required metrics to measure those outcomes. **Coalition building** includes establishing the *structural conditions* for implementing a prevention/promotion initiative, *workforce issues* (i.e., who will carry the program out), and *engaging communities and families* in the effort. **Contractual considerations** include establishing agreed-upon *measures and metrics* to monitor outcomes, assigning accountability for those outcomes and delineating realistic time frames for these investments before expecting improved outcomes.

In this paper, the authors extend the plan to non-mental health systems, with suggestions about scientifically based services programs or policies that can be immediately mobilized, including under-represented racial minority children who may be particularly vulnerable because of ongoing systemic racism and pandemic effects. The abrupt shutdown of many state public services and the economic recession has further weakened the public safety net infrastructure. Nevertheless, the disruption also provides an opportunity to commit to social priorities that focus on upstream services targeted at children's healthy mental, emotional, and behavioral development.

While space precludes our discussion of financing issues—those will be addressed in future papers—there is strong evidence supporting the positive return of early

investments in children (National Academies of Sciences Engineering & Medicine, 2016, 2017a, 2017b, 2019a), and benefit–cost ratios have also been calculated for many early education programs (Institute & for Public Policy. Benefit–Cost Results: Children's Mental Health. In: 2020: <https://www.wsipp.wa.gov>, BenefitCosttopicId=5. 2020) (see <https://www.wsipp.wa.gov/BenefitCost>). Creative financing strategies have also been developed to support early education initiatives, which have longer-range return-on-investments (Foundation et al. 2018) and are now being used by several states (Hoagwood et al. 2020). New federal investments are also testing these models of care nationally (i.e., Integrated Care for Kids (IncK.) (Care and for Kids (InCK) Model. 2020; <https://innovation.cms.gov>, Innovation-models, Integrated-care-for-kids-model. Accessed 09, 03, 2020, 2020. 2020).

To address the "historic underinvestment" in children's MEB (Flores & Lesley, 2014; Kayal, 2016), we suggest three core actions that child-serving public systems can adopt to mitigate the mental health consequences of the pandemic. These are to: (1) **promote health and prevent risks**, (2) **protect and preserve public structures** that work, and (3) **provide care** for all populations. These actions will increase the availability of mental health-promoting services in non-mental health systems and enable delivery of mental health promotion services to children and families who cannot access the mental health system.

We recognize that other critical system supports are needed to strengthen system capacity, and other papers and NAM reports () have called for better policy, data infrastructure, implementation support, and workforce development. This paper is focused solely on innovative, science-based programming for non-mental health sectors that can promote children's mental health and ability to thrive. We outline below the core elements of this plan for four sectors: early education, maternal and child health, child welfare, and corrections.

Four Sectors

Early Learning and Education

Early brain development begins in utero, and critical neural pathways and processes occur during the first years of life. Scientific evidence has established how and why investments in early childhood education pay off; the seminal *Neurons to Neighborhoods* synthesized evidence about the impact of the environment (i.e., families, neighborhoods, communities, and schools) on the development of children's language, cognition, and behavior (National Research Council, 2000). The zip code where you spent your first years is associated with health and economic outcomes later in life (National

Academies of Sciences Engineering & Medicine, 2017a, 2017b). Two decades of research have also documented how parenting matters, focusing on specific parent–child interactions that promote development (National Academies of Sciences Engineering & Medicine, 2016).

States can take initiatives to foster early learning and development. Early education systems can prevent adverse outcomes, promote health, and provide equitable services supporting children's MEB health.

Prevent Disruptions to Early Brain Development and Promote Early Learning

Adverse childhood experiences, or ACEs, can derail early children's development (Felitti et al. 1998) and lead to costly downstream healthcare spending (Miller et al. 2020). ACEs screenings, developed initially for adults, have been modified for use for children and adolescents (self-report), are increasingly integrated into pediatric well visits and used in prenatal care (Atzl et al. 2019). Forty-eight states and D.C. have, since 2009, included at least one question on ACEs (via a national survey, BRFSS). But only the state of California mandates universal ACEs screening (e.g., via pediatric well visits before school entry) through their Medicaid program, Medi-Cal. While ACEs screening is important, to be effective it must be coupled with care coordination and availability of services. Thirty-seven states now have standardized referral forms and processes to link families to services (Academy & for State Health Policy. Referral & Care Coordination. In. Healthy Child Development State Resource Center, 2020).

Early education (from birth through age 5) has been shown to provide long-term benefits. The High/Scope Perry Preschool study was the first to show early education's large effects on educational attainment, income, criminal activity, and other important life outcomes. The Perry Preschool effects were sustained well into adulthood, and more-recently reported that high-quality birth-to-five investments in early childhood education, rather than preschool alone, resulted in a 13% return on investment (García et al. 2020). The federally-funded Early Head Start (pregnant mothers and children up to age 3) and Head Start (children ages 3–5) programs provided services to nearly 1 million pregnant women and children in fiscal year 2019 (). Early Head Start has been shown to improve child development and health and parent engagement with their children (Mayoral, 2013); see Section C below for child welfare-Head Start partnership examples.

Protect and Preserve

Early education programs that strengthen and empower parents to provide high-quality interactions with their children

(i.e., "serve and return"). These programs can be delivered through local community health organizations, neighborhood level programs, or in pediatric practices (National Scientific Council on the Developing Child. Connecting the Brain to the Rest of the Body: Early Childhood Development & Lifelong Health Are Deeply Intertwined: Working PaperNo., 152020). These include Healthy Steps, an evidence-based, team-based pediatric primary care program that promotes the health and well-being and school readiness of infants and young children (www.healthysteps.org), and Triple-P, an evidence-based parenting program that teaches strategies to encourage children's development and manage their behavior. Triple P has also been tested in the child welfare system, with proven reductions in child maltreatment, child out-of-home placements, and child maltreatment (Prinz et al. 2009).

Provide Services that Build Early Learning into the Continuum of Programming

States are exploring and investing in high-quality early learning and development programs. Many of these investments are prompted by the need to deliver value-based services, especially in state Medicaid programs. One program is the First 1,000 Days of Medicaid initiative in New York State, which recognizes the impact of early learning and development in the first three years on lifelong health outcomes. The program delivers care beyond the traditional medical model to address social determinants of health, including poverty, racism, and other environmental influences during the first 1,000 days (i.e., three years) of life. Nationally, home visiting programs in early pregnancy have some of the best evidence and provide roadmaps for many states to improve child development. Similarly, many states are adopting early childcare and preschool interventions to achieve early learning gains.

Maternal and Child Health

Over the last two decades, scientific progress demonstrated the critical importance of maternal and child health from pre-conception through the first two years of life in healthy brain development and overall mental, emotional, and behavioral wellness (National Academies of Sciences Engineering & Medicine, 2019a). The refinement of decades of risk factor and resilience research into both biological systems science, explaining life-course effects through environmental effects on gene expression and protein synthesis, combined with an improved understanding of community and societal level effects on development, has yielded comprehensive models of both the biology and likely targets for intervention.

Unfortunately, rates of maternal and infant mortality in the U.S. are among the highest of all developed countries. Lack of attention to maternal health before, during and after pregnancy leads to a cascade of negative events including prematurity, congenital anomalies, as well as lifelong disabilities and special educational needs. In addition, the mortality rate in the US is 40.8 for blacks, 29.7 for AI/NA, and 12.7 for whites. (<https://www.cdc.gov/media/releases/2019/p0905-racial-ethnic-disparities-pregnancy-deaths.html>). To maximize MEB health in children and adolescents, state maternal and child health systems should prevent preterm births, preserve maternal-child bonds, and provide services that enhance early relationships among parents and children.

Prevent Premature Births

The prevention of prematurity remains an elusive goal in many communities despite gradual progress over the past decade in the U.S. Various interventions are associated with reductions in prematurity, including increased birth spacing, vaginal progesterone for pregnant women at risk, and calcium supplements during pregnancy (Osman et al. 2018). One of the best-supported strategies is smoking cessation during pregnancy. Women who are pregnant and provided professional smoking cessation have higher birth weights and less preterm birth. Smoking initiation often occurs after delivery, but the benefits of quitting during pregnancy are substantial (World Health Organization 2020) <https://www.euro.who.int/en/data-and-evidence/evidence-informed-policy-making/publications/hen-summaries-of-network-members-reports/how-effective-are-smoking-cessation-and-nutritional-interventions-in-preventing-low-birth-weight>. Accessed 09/03/2020).

Preserve the Maternal-Child Bond

Parent-child attachment is a cornerstone for healthy child mental, emotional and behavioral (MEB) development. One of the most common threats to that bond is maternal depression. Maternal postpartum depression occurs in 10% of women and is associated with cognitive and emotional delays and disorders in children (Zhou et al. 2019). Maternal depression screening and treatment are associated with improvement in child development and emotions (Cuijpers et al. 2015). Both antidepressants and psychotherapy demonstrate effectiveness in the treatment of postpartum depression. Unfortunately, many women with postpartum depression do not receive adequate psychotherapy, with depressed black mothers experiencing more adversity and receiving fewer services than others. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3253390/#!po=27.7778>).

Provide Services for Young Families

Most but not all infants and young children are accessible through well childcare for important detection of early speech, auditory, language, cognitive and emotional problems. Moreover, early intervention at this age is often more effective than later treatment. As such, healthcare services play a critical role in child development intervention before school age.

Many of these interventions have a broad impact at a low cost. For example, the Reach out and Read parent/child literacy program is a book distribution program designed for implementation in healthcare offices. This program allows clinicians to ‘prescribe’ books with instructions on parent-to-child reading, taking good advantage of their established relationships with parents. The program increases parent-child interaction, improves child vocabulary, and makes school and reading more enjoyable (Obus et al. 2017).

Child Welfare

Child welfare is a large and critical responsibility of state systems: child abuse and neglect affect up to 6 million children in the U.S., costing state and federal governments \$25 billion annually (Council & of State 2020) <https://www.ncsl.org/research/human-services/child-welfare.aspx>. Accessed 08, 11, 2020). In 2018, the U.S. foster care system served 687,345 children. Preventing the removal of children from their families is the goal of child welfare systems unless they are in imminent danger. However, only 56% of foster children have case-plan goals of reunification with their families (U.S., 2019). Services and supports that empower parents to improve interactions with their children, contribute to their health and well-being, and ensure safe home environments can prevent removal from their homes.

Abuse and neglect alter both *physiological* (e.g., brain development) and *psychological* development (e.g., impacting attachment and relationship skills), which, when left untreated, have profound and often generational consequences. Safe, stable, nurturing relationships can buffer childhood adversity (Schofield et al. 2013). Effective state-level strategies for preventing and treating abuse and neglect include family preservation, family and parent engagement, home-visiting, parenting skills programs, trauma-focused therapies, and professional practice reforms. One systemic impediment to better care for these families is the lack of organizational capacity to implement evidence-based practices (e.g., inadequate training, poor organizational culture.)

Prevent Removal

To improve the uptake of evidence-based practices in the child welfare system, The Family First Prevention Services

Act (FFPSA)(2018) established the Title IV-E Prevention Services Clearinghouse to conduct "objective and transparent reviews" of research on programs and services that *prevent* entry into the foster care system. A critical feature of the act is that states can now spend FFPSA dollars on evidence-based prevention services and programs that allow youth to stay with their parents or relatives. Previously, funds could only be used for foster care costs.

Federal child welfare legislation over the last two decades (Family Preservation and Family Support Provisions of PL103-66) has promoted family support programs as a way to engage child welfare-involved families better. These programs view parents as partners rather than adversaries. The core services of these family support programs are primarily parent education. Programs with the strongest effects on parenting behaviors and outcomes for children are those delivered by professional staff in a group format (e.g. multi-family group therapy). In addition, family *peer* support services, the provision of peer support by trained parent peers who have themselves received family services, has grown over the last decade. Family peer support is now a Medicaid-billable service in 32 states (Schober & K., 2020).

Several in-home parent training programs are effective in targeting the risk factors for child neglect and physical abuse. One of these programs is *SafeCare*,[®] whose three modules focus on: (1) interacting positively with children, (2) improving the home environment, and (3) maintaining good child health and health records. *Parents as Teachers* has a similar focus but extends beyond home visiting to include supportive group connection events, child health and developmental screenings, and community resource networks.

Preserve Family Unity

Youth in foster care often have severe and complex behavioral and mental health problems that put them at higher risk for poorer long-term outcomes (Halfon et al. 1995) and even the youngest children (12–18 months) are impacted (Horwitz et al. 2013). Evidence-based programs that focus on preserving the family unit include *Homebuilders*,[®] a home- and community-based intensive family services treatment program to avoid unnecessary foster care placement (or group care, psychiatric hospitals, or juvenile justice facilities).

Provide Services

As described above, Early Head Start is a federally-funded, two-generation program that combines high-quality early education of young children with parent education and support. New findings show that children enrolled in EHS had fewer child welfare encounters and lower child maltreatment rates than non-EHS-enrolled children (Green et al., 2014).

Recent federal attention has focused on helping community Early Head Start programs partner with child welfare agencies and specific strategies and targeted methods for engaging families (U.S., 2020b).

A recent national policy simulation model shows that balancing child welfare system investments in prevention and treatment generates a positive return on investment, resulting in 3 to 7% net cost reductions (approximately \$5.2 billion to \$10.5 billion saved against the current baseline of \$155.9 billion) for a cohort of children born over five years (Ringel et al. 2018).

Corrections

Mass incarceration has deep and racist roots in the U.S. Tragically, the use of jail and prison time exploded over the past 40 years when the number of people incarcerated increased from 500,000 to 2.3 million with marked disparities by race, ethnicity, and income. As a result, an estimated 5 million U.S. children will experience parental incarceration. The emotional, developmental, and financial costs to families with young children experiencing parental incarceration are just now being understood. Consequences include increased homelessness, dependence on public aid, residential instability, school failure, and MEB disorders. These outcomes, combined with growing concern about rising prison and jail costs at federal, state, and local levels, have many policymakers questioning the extensive use of incarceration as a political and social management tool.

To foster healthy development, justice systems should seek alternatives to parental incarceration, preserve parent–child bonds and parenting, and provide services to children of incarcerated parents specific to the traumas experienced by these young people.

Prevent Parental Incarceration

Mental health and substance abuse diversion programs in criminal courts provide alternatives to the large numbers of persons with behavioral disorders in U.S. jails and detention centers. These courts involve screening persons for drug use or mental disorders, conducting a comprehensive assessment for diagnosis and functional status, and negotiating between behavioral staff and criminal justice staff about appropriate placement (Loong et al. 2016). The target population does not qualify for a not-guilty-by-reason-of-insanity plea but still has significant behavioral disorders. When an agreement is reached for those persons, charges may be dropped or waived in exchange for treatment services. These courts have lower rates of recidivism and public costs (Schneider, 2010; Schneider et al. 2000).

Another option for avoiding parental incarceration is intensive residential or alternative community settings for

non-violent offenses. Best practices for community settings for serving incarceration may still allow child engagement, but also require: (1) limiting contact with antisocial networks and supporting positive peer relationships, (2) maintaining proximity to home communities, (3) involving families in visitation and planning, and (4) structured schedule and training to avoid negative situations and recognize cues for escalation (National Research Council, 2013). Evidence suggests that when parents have to be separated from children, these community options allow greater interaction with children (Peterson et al. 2019).

House arrest, especially when combined with electronic home monitoring systems, is another option for courts to consider in parent sentencing. Although house arrest with monitoring does not lower recidivism rates, it is less expensive than prison, and it can keep the parent engaged with his or her family (Avdija & Lee, 2014). A related strategy is to provide early MEB treatment to those on parole or probation as a means to avoid criminal behavior and arrests.

Preserve Parent–Child Relationships

Even when parents are incarcerated, steps can be taken to preserve parent–child relationships. New initiatives to do this are underway with funding from the National Institute of Justice with special attention to child development, communication and discipline of children, and helping separated parents communicate with their children. For example, Franklin County, Ohio was funded to conduct parent training classes for resident inmates and provide related materials to the child's custodial parent outside of the facilities. Besides regular classroom instruction and didactics, the program helped inmates communicate with their children by mail, email and phone.

Among the challenges in preserving relationships are inconsistent and punitive prison and jail visitation policies or even children's outright exclusion. The development of family-friendly and transparent visitation centers and policies across the country is an important next step to preserve and build upon parent–child relationships (Axelson et al. 2020).

Provide Services

Many children are adversely affected by the arrest and incarceration of parents. A small body of literature suggests that behavioral health disorders are common among these children. As a result, clinical settings that care for children should provide them with the best possible services, including a welcoming setting, screening to identify children with families affected by incarceration, and improved access to behavioral health services, with an emphasis on trauma-informed care. The stigma associated with incarceration

makes it difficult for the custodial parent or the child to identify themselves. Providing easily-seen information at key places, informal screening procedures, and offers of help may increase identification.

In addition to behavioral health services, there are several programs designed for children of incarcerated parents. For example, the Sesame Street Series "Little Children-Big Problems" presents a way to talk with a young child with an incarcerated parent (see <https://sesamestreetincommunities.org/topics/incarceration/>) (Street & in Communities. Coping With Incarceration. Sesame Street in Communities <https://sesamestreetincommunities.org/topics/incarceration,xxxx>). Big Brothers-Big Sisters has the Amachi Program (<https://www.bbbs.org/amachi/>) that provides mentors for adolescents with an incarcerated parent (Sisters & of America. Amachi Program: Mentoring For Children With Incarcerated Parents. <https://www.bbbs.org/amachi,xxxx>). Summer camps organized for children with incarcerated parents help reduce the stigma associated with the justice system involvement.

Conclusion

The Children-First Marshall Plan is founded on an ethic that recognizes children have the human right to grow up in environments that promote their mental, emotional and behavioral well-being. The economic collapse of Europe following the Second World War created an urgent need to protect the next generation of children and youth, just as the pandemic does today. The original Marshall Plan sought to revive those economies; in this paper, we call for a Children-First Marshall plan to protect the next generation by restoring and improving cross-system child services.

Because the science of child development has advanced substantially in the past two decades, we can lay out program, policy and investment strategies that can alter the course of children's development during and after the COVID pandemic. In our previous paper (Hoagwood & Kelleher, 2020), we argued that the mental health system should expand upstream services to protect and promote children's MEB health, and we described how to implement these strategies through coalition-building and innovative contracts. This paper offers complementary recommendations for non-mental health systems. Figure 1 provides examples of these strategies.

Facing a pandemic that threatens our children's healthy development, we need state and national attention to programs and policies that coordinate all public systems that serve children and families. Several professional associations (APA, MHA) have recently proposed creating a White House Office on Children and Youth and a federal Children's Cabinet. Guided by an ethic that measures success by

How Child-Serving Public Systems Can Build Back Better (BBB) Post-COVID 19

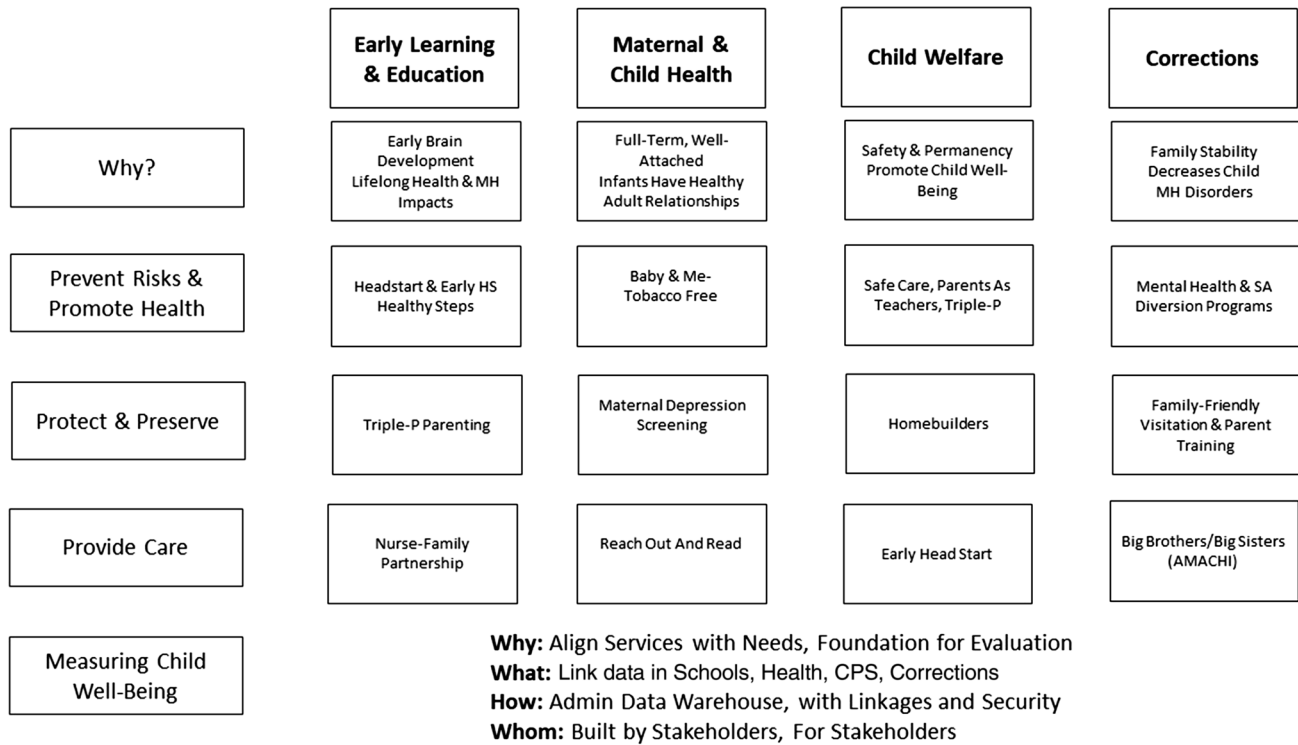


Fig. 1 Core policy and program elements in four sectors

healthy children's outcomes, we should act now to provide a continuum of services to intervene early and as often as needed, and an infrastructure that monitors both the quality of services and children's well-being.

Compliance with Ethical Standards

Conflict of interest The authors have no relevant financial or non-financial interests to disclose. The authors have no conflicts of interest to declare that are relevant to the content of this article. All authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript. The authors have no financial or proprietary interests in any material discussed in this article.

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