



Payment for Progress: Investing to Catalyze Child and Family Well-Being Using Personalized and Integrated Strategies to Address Social and Emotional Determinants of Health

A report on strategic priorities emerging from the “Payment transformation to address social and emotional determinants of health for children” project. Prepared for the Children’s Hospital Association by the Child and Adolescent Health Measurement Initiative, Johns Hopkins University, and AcademyHealth.

*Christina Bethell, PhD, MBA, MPH; Susan Kennedy, MPP, MSW;
Enrique Martinez-Vidal, MPP; Lisa Simpson, MD, BCh, MPH, FAAP*

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Executive Summary

Child health and well-being paves the way to a healthier and more productive adulthood. Conversely, childhoods lacking the safe, stable, nurturing relationships (SSNRs) and environments critical to healthy development sets the stage for greater adult disease, mental health challenges, higher health care costs and diminished social contributions over a lifetime.^{1,2} Creating a culture persistently dedicated to promoting the early and lifelong health of all children is the most important

priority for the health and well-being of the US population and society. Despite this, our health care system in America does not adequately invest in the proactive promotion of positive social and emotional determinants of health (SEDH), like positive parenting and the prevention and mitigation of impacts of Adverse Childhood Experiences (ACEs).³ Doing so requires creating integrated community systems of care that address the full range of SEDH, including adequate housing, safe and supportive neighborhoods and a range of other contextual factors impacting child and family health. The consequences are clear: fewer than half of US school age children meet basic criteria for flourishing (40.8%) and only about two in five pre-school children (41.8%) are estimated to be “on-track” for being “healthy and ready to learn.”^{4,5} Even more sobering, half of all US children and two-thirds of those with public sector health insurance have been exposed to one or more Adverse Childhood Experiences (ACEs) that can lead to toxic stress and trauma and impact brain development and lifelong health and well-being.^{4,6} While paradigm shifts to greater investments in the systems, workforce and models of care needed to catalyze healthy child development have long been called for,³ doing so requires redefining goals and value in health care and aligning models of care and payment accordingly. This was the focus of the “*Payment Transformation to Address Social and Emotional Determinants of Health for Children*” project reported on here.

Priority Recommendations

1. Pay to Improve Child and Family Well-Being
2. Support Enhanced and Personalized Well-Child Care
3. Build Sustainable Capacity for Transformation

This project built on prior work led by the Child and Adolescent Health Measurement Initiative (CAHMI) and AcademyHealth to develop a framework, measures, data, knowledge, capacity and consensus in the field to advance a national [agenda](#)⁷ for promoting child and family well-being by addressing the social and emotional determinants of health (SEDH) and ACEs in children’s health services. The Children’s Hospital Association supported the AcademyHealth/CAHMI team to promote the translation of this agenda into policy and payment approaches in children’s health services. Eight approaches and activities were undertaken, including engagement of a National Advisory Committee, assessing the “goodness of fit” of existing payment approaches and models of care, and conducting a national invitational meeting.

The mandate to continue to embed a focus on the proactive promotion of healthy development and well-being that addresses SEDH and ACEs in *all* systems that care for children and families was unanimous and shaped the strategic priorities and recommendations emerging from this project. Strategies and recommendations set forth are envisioned to work together to expedite payment approaches and policies that catalyze action to promote positive SEDH (e.g., child-parent connection, emotional regulation, social engagement, persisting to achieve goals and safe and supportive neighborhoods) and address risks like ACEs and the toxic stress and trauma that can result from adverse family and community experiences. The three priority recommendations emerging from this project are summarized below.

Strategic Priority #1—Pay to Improve Child and Family Well-Being: *Measure value and return on investment in health services for children, including children with special needs, to incentivize and build capacity to implement a life-course approach that promotes positive social and emotional well-being, prevents and mitigates risks from ACEs and addresses SEDH.*

Current definitions of value and return on investment focus on short term reductions of health care utilization (e.g., emergency care, avoidable hospitalizations, low value care), concomitant costs, and negative health outcomes (e.g., illness severity and symptoms). These are not sufficient for children’s health services. The “goodness of fit” analysis conducted to examine the degree to which existing interventions and payment approaches supporting healthier children and families identified many promising models if aligned with a payment model supporting child and family well-being. Medicaid and its Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefit provide the grounding for defining value in that way, but state actions often do not realize this vision. Current value-based payment strategies—capitation and bundled payments for routine and primary care for all children; tiered, targeted and tailored case management and care coordination payments for children and families with more complex needs; and the use of value-based purchasing and total cost

care payment models—have some potential to advance and incentivize more preventive and developmental responses to children. However, they are not currently structured to do so. Project findings support immediate action to review these and emerging alternative payment mechanisms with a specific focus upon children and ensuring that value is defined in relation to improving child health trajectories, whether or not there are immediate cost-offsets.

Strategic Priority #2—Support Enhanced and Personalized Well-Child Care: *Leverage and align existing payment approaches, federal law and practice innovations to establish an enhanced well-child care services model to promote healthy development that is guideline-based, personalized and systems-oriented (GPS).*

A core place to start is primary care. Existing insurance coverage is in place for well-child care services for virtually all US children. Bright Futures Guidelines are recognized as evidence-informed guidelines for well-child care services that are designed to advance healthy child development and wellness as well as respond to social and medical determinants of health. Yet, payment approaches for such care—and the attendant care coordination and linkages to health and health related services—need to be sufficient to establish that level of care in a way that is personalized to each child and family and integrated across systems of care in a community. Distinct bundles of care to pay for an enhanced GPS model of well-child care services will ensure comprehensive implementation of guidelines, personalized education and supports for each child and family and provide support for targeted care coordination and case management as needed.

Strategic Priority #3—Build Sustainable Capacity for Transformation: *Invest and collaborate across sectors to build the cross-cutting workforce capacity, systems integration, data and measurement and continuous learning infrastructure to both scale high value primary care and the related services and supports children and families need to thrive.*

While efforts in the field are impressive, project findings conclude that even in the context of the most enabling payment models—like a Pediatric Accountable Care Organization—at least four categories of infrastructure are needed to effectively finance approaches to address SEDH. These include: (1) workforce and environmental capacity building; (2) strategies that enable effective cross sector collaboration; (3) aligned measurement and data systems; and (4) robust learning and improvement platforms.

This project found that experts and stakeholders in the field already embrace the importance of whole-child, whole-family, whole-population approach to health care.

Complementing the many other emerging efforts in the field, recommended next steps include the design and implementation of a large-scale, multi-state collaborative initiative to support health systems and state/local policymakers in leveraging opportunities to impact the early and lifelong health trajectories of all children and children with special needs. The objective of this multi-state effort will be to promote positive social and emotional well-being, prevent, heal and mitigate risks from ACEs, strengthen protective factors and address social determinants of health.

Overall, this project found that experts and stakeholders in the field already embrace the importance of whole-child, whole-family, whole-population approach to health care. They value the proactive promotion of positive social and emotional well-being and prevention and mitigation of risks like ACEs, toxic stress and trauma. This work identified many existing or emerging payment approaches adaptable to support this transformation. Yet, until payment aligns to ensure the new emerging systems of care can support a “health” vs. “disease” model, we will fall short of our national opportunity to improve the health and health care costs of future adults.

To learn more about this and other related work, please visit www.academyhealth.org.

Project Motivation, Context and Goals

Child health and well-being paves the way to a healthier and more productive adulthood. Conversely, childhoods lacking the safe, stable, nurturing relationships (SSNRs) and environments critical to healthy development sets the stage for greater adult disease, mental health challenges, higher health care costs and diminished social contributions over a lifetime.^{1,2} Creating a culture persistently dedicated to promoting the early and lifelong health of all children is the most important priority for the health and well-being of the US population and society. Yet, the US ranks 26 out of 41 countries in basic measures used to assess child well-being and federal resources dedicated to children are markedly less than required.⁸⁻¹⁰ Despite the call to action, our health care in America does not adequately invest in the proactive promotion of positive social and emotional determinants of health (SEDH), like positive parenting and the prevention and mitigation of impacts of Adverse Childhood Experiences (ACEs).³ Doing so requires creating integrated community systems of care that address the full range of SEDH, including adequate housing, safe and supportive neighborhoods and a range of other contextual factors impacting child and family health. While paradigm shifts to greater investments in the systems, workforce and models of care needed to catalyze healthy child development have long been called for, doing so requires redefining goals and value in health care and aligning models of care and payment accordingly. This was the focus of the *“Payment Transformation to Address Social and Emotional Determinants of Health for Children”* project reported on here.

Scientific evidence abounds regarding the importance of parent-child emotional connection and the negative physical, mental and social impact of childhood experiences that can lead to trauma and toxic stress, like Adverse Childhood Experiences (ACEs).^{1,2,11} ACEs include physical and emotional neglect and abuse (including discrimination like racism), sexual abuse, and an array of household dysfunctions like substance abuse, violence, and untreated mental illness. In the absence of protective factors like healthy parenting, child and parent emotional connection and nurturance and school and community supports, such experiences can have devastating impacts on brain development, learning, a child’s socio-emotional functioning, mental and physical health, and well-being and joy throughout life.⁷ Nearly half of all US children and two-thirds of those with public sector health insurance have been exposed to one or more Adverse Childhood Experiences (ACEs) that can lead to toxic stress and trauma and impact brain development and lifelong health and well-being.⁴ Adverse community environments—like insufficient housing and availability of food, transportation, lack of community connection and social support and educational and recreational opportunities—and racial discrimination exacerbate and often accompany and contribute to the perpetuation of ACEs across generations.¹²

A substantial and growing proportion of children in the US experience emotional, mental, behavioral (EMB) problems, are not engaged in school or experience chronic health problems. Each of these issues are highly associated with problems in social and emotional development and exposure to ACEs.¹³ About 70 percent of children identified as having EMB in the US have been exposed to ACEs.¹⁴ Regardless of exposure to ACEs, only two in five (41.8%) US pre-school age children are estimated to be “on track” for being “healthy and ready to learn.”⁵ A similar proportion of US school-age children meet basic criteria for flourishing (measured as being curious and interested in learning new things, being able to regulate emotions when faced with a challenge, and persisting to complete tasks begun).⁴ These findings argue for population-wide efforts to proactively promote positive social and emotional well-being and address risks like ACEs and the toxic stress, developmental trauma and lifelong health problems that often result. Many now recognize that the health of our children is now a matter of national security.¹⁵

Scientific evidence abounds regarding the importance of parent-child emotional connection and the negative physical, mental and social impact of childhood experiences that can lead to trauma and toxic stress.

In response to these issues, the last decade has seen increasing action to address resource-oriented social determinants of health, like income, housing, transportation and food security, and more recently to tackle exposure to violence and foster safe and equitable schools and neighborhoods, which are strongly associated with children’s social and emotional development. Driven by federal and state agencies, a virtual movement has arisen to recognize and proactively prevent and/or heal the trauma that can arise from ACEs in the absence of nurturing parent-child relationships and safe and stable environments and experiences.¹⁶ More recently, the focus on trauma and ACEs is being reshaped around the proactive promotion of positive health and resilience.⁷ Here, the role of addressing ACEs, toxic stress, trauma and adversity is recognized as part of the larger goal, mandate and possibility to proactively promote well-being and reduction of risks (ACEs, insufficient housing) is not mistaken for the promotion of health. Full engagement of families, adoption of relationship-centered models of care and integration of health care and social, educational and community based services is essential to all such efforts, yet these are not well established in community services and clinical practices today³; though some initiatives as identified through this project are beginning to build traction.¹⁷⁻²⁵ Payment models that fail to effectively foster and incentivize further progress are identified as the primary barrier.

Exhibit A: Sixteen short-term research, policy and practice opportunities to address ACEs and promoting child and family well-being from the National Agenda

A. Priority opportunities to leverage existing policy driven systems, structures and innovation platforms

- 1. Prioritize EPSDT and prevention:** Advance approaches to integrate ACEs, healthy parenting and positive health development topics into federal and state standards, policies and initiatives in alignment with Bright Futures guidelines and the broad EPSDT benefit. Integrate care across settings.
- 2. Focus hospital community benefits strategies:** Integrate ACEs and positive health topics into hospital community benefits standards and community needs assessments partnership efforts—with a particular focus upon preventive and developmental community supports. Make available local area data on ACEs, resilience, protective factors and other social determinants. Enable easy access to methods and metrics to monitor impacts on child and family health, utilization and costs of care at the community level.
- 3. Establish enabling organization, payment and performance measurement models:** Advance trauma-informed and positive health oriented payment reform, accountability measurement and integrated systems efforts in existing and emerging practice innovation models. Design, test and evaluate models and promote shared measurement related to ACEs and positive health promotion across range of child health programs.
- 4. Advance and test Medicaid policy implementation:** Develop and demonstrate models for promoting resilience and healthy parenting in the context of addressing other social determinants of health (and responding to or preventing ACEs) in Medicaid. Ensure research methods and metrics are integrated throughout innovation efforts to demonstrate impact, and scale methods as they evolve. Foster innovation in: (1) eligibility and enrollment; (2) benefits, coverage and coding and value-based payments that recognize the costs of providing high quality primary care; (3) contracting, costs and performance measurement; (4) capacity, continuing education requirements and credentialing, and (5) communication and coordination.
- 5. Inform and track legislation to accelerate translation:** Formulate recommendations for, track and evaluate impacts of specific federal, state and local legislation, regulations and related actions to address ACEs. Ensure ACEs and childhood trauma is considered in health policies.

B. Priority opportunities to leverage existing & evolving practice transformation efforts

- 1. Leverage medical/health home and social determinants of health “movement”:** Leverage existing Primary Care Medical Home demonstrations and efforts to address social determinants of health in pediatric practices, hospitals and other settings. Integrate ACEs into other screening, assessment and education efforts using a relationship-centered approach. Test methods addressing Medicaid innovations at the practice implementation level, ensuring evaluation for cost-benefits and cost-effectiveness.
- 2. Enable, activate and support child, youth and family engagement:** Evaluate and advance efforts to engage children, youth and families in driving measurement and improvement efforts. Optimize face-to-face time in health care encounters to enable relationship-centered education and support.
- 3. Build effective peer/family to peer/family support capacity:** Design and evaluate use of non-traditional “providers” like peer-to-peer, family-to-family and other community health workers.
- 4. Empower community based services and resource brokers:** Create and evaluate impact of “through any door” models for educating and engaging parents, youth and families and leveraging existing and emergent community based services and resources related to trauma, healing and resilience. Innovate around effective methods to educate and engage families as partners.
- 5. Leverage existing commitments focus areas in child and family health:** Integrate trauma and resilience informed knowledge, policies and practices into existing initiatives, including early childhood systems, childhood obesity, school health social and emotional learning. Focus on spread of best practice parenting and trauma informed education, coaching and trauma healing and resilience building interventions.

C. Leverage existing research and data platforms, resources and opportunities

- 1. Optimize existing federal surveys and data:** Coordinate and optimize national, state and local research, policy and practice innovation efforts using relevant data from the federal surveys that can inform, monitor and build knowledge on ACEs prevention and positive health development. Establish targeted follow-back and longitudinal studies to understand variations and impact of health care and related policies. Include/maintain inclusion of ACEs and resilience variables in the NSCH and into NHIS and MEPS to promote medical expenditures impact studies.
- 2. Optimize state surveys:** Facilitate efforts to enhance availability and access to ACEs, resilience & positive health related data on children, youth and families in state led surveys like the Behavioral Risk Factor Surveillance Survey, the Youth Risk Behavior Surveillance Survey and the Pregnancy Risk Assessment Monitoring System.
- 3. Liberate available data:** Expedite and expand the use of existing ACEs, resilience and related data for research, policy and practice to remove barriers to using available data and facilitate easy and “lay-person” access to data findings to support national, state and local efforts in a real time context. Ensure technical assistance, training and education is provided to ensure valid use of data and curate “data in action” efforts to engender action. Make use of available data, particularly through the census and American Community Survey, to identify places and neighborhoods that deserve special attention in providing safe and nurturing environments for children.
- 4. Build crowdsourcing, citizen science and N of 1 methods:** Take advantage of newer NIH policies to allow data collected through crowdsourcing and citizen-science methods that engage individuals and communities in self-led learning and healing around ACEs, resilience and flourishing. Formulate and establish methods to engage individuals, families and communities in real-time and self-led learning and healing related to the prevention and mitigation of impacts from ACEs. Explore launching direct-to-public e-summits to fast track public education and engagement about ACEs and testing of self-care practices to gather experience and outcomes data with these modalities to advance knowledge. Focus on the spread of evidence based and promising parenting and trauma informed education, coaching and trauma healing and resilience building interventions appropriate for interactive, self-guided learning platforms and integration into existing community-based self-care programs addressing substance abuse, mental health, parenting education, weight management and physical fitness.
- 5. Integrate common elements research modules for longitudinal studies:** Construct common elements research and evaluation modules for possible use in existing or emerging longitudinal studies related to enable a focus on prevention and mitigation of impact of ACEs and promotion of safe, stable, nurturing relationships, positive health and well-being. Formulate research questions and measurement and analytic methods to append to/integrate into existing longitudinal and birth cohort studies to address key questions about prevention, risk and mitigation of impacts associated with ACEs as well as to test alternative measurement, prevention and healing methods. Embed common methods, metrics and coordinate analysis across deployments of research modules to facilitate learning and build knowledge.
- 6. Link to collaborative learning and research networks:** Advance ACEs, resilience and positive health related research aims and methods into existing and emerging learning and research networks sponsored by public and private sector agencies, such as the numerous Collaborative Innovation and Improvement Networks and the child health focused National Improvement Partnership Network.

Game-shifting payment innovation efforts are needed to catalyze the success of emerging practices to promote child and family well-being.

This project builds on prior work led by the Child and Adolescent Health Measurement Initiative (CAHMI) and AcademyHealth to develop frameworks, measures, data, knowledge, commitment and capacity of the field to advance a national agenda to promote child and family well-being by assessing and addressing SEDH.⁷ Positive SEDH foster child flourishing and resilience and include child-parent connection, positive health qualities like child and family resilience, interest and engagement in life, optimism, having and working toward goals and having safe and supportive family, social and community relationships. Negative SEDH include ACEs, toxic stress and trauma as well as other external resource-oriented determinants like housing, food and income sufficiency, transportation, legal assistance and so on. Positive and negative SEDH are strongly interrelated and can exist simultaneously.

Released in Fall 2017, the CAHMI/AH agenda—entitled “*Prioritizing Possibilities: A National Agenda to Address Adverse Childhood Experiences and Promote the Social and Emotional Roots of Well-Being*”, referred to as the “Prioritizing Possibilities National Agenda” throughout this report, produced 16 key recommendations that this project builds on. See Exhibit A for a summary of the Prioritizing Possibilities National Agenda 16 key recommendations. As emphasized in the agenda, game-shifting payment innovation efforts are needed to catalyze the success of emerging practices to promote child and family well-being in the face of ubiquitous SEDH in the US. Thus, the Children’s Hospital Association supported the AcademyHealth/CAHMI team to promote the translation of this agenda into policy and payment approaches in children’s health services. The year-long “Payment Transformation to Address Social and Emotional Determinants of Health for Children” project sought to further specify needed models of care and services and assess the “goodness of fit” of existing and emerging payment approaches in terms of their capacity to catalyze children’s health systems and services that are designed to effectively address SEDH, including ACEs. This included examining how existing or emerging approaches—like capitated, bundled, tiered, targeted and total cost of care payment methods—can best support the health promotion, early identification, relationship-centered and coordinated systems of care innovations needed.

Project Approach and Activities

Eight interconnected components comprised the approach and activities of the project:

- *Formation and facilitation of a National Advisory Committee*, comprised of key stakeholders and experts in child health, health care, payment reform and Medicaid policy;
- *Analysis to create two national and across state issue/data briefs and “common elements” summary of the evidence on approaches to preventing and mitigating effects of childhood trauma;*
- *Design of specific child-family use cases and a project advisor survey* to identify the range of program models and services needed to address SEDH and ACEs;
- *Development of two Challenge Guides* setting forth perspectives and recommendations on payment models and contextual needs to enable action and success of payment innovations;
- *Curation and presentation of a national panel* on SEDH, ACEs and Payment Policy at the National Health Policy Conference profiling three leading states on policy and payment reforms related to SEDH and ACEs;
- *Convening an invitational national meeting* of key stakeholders and experts in the field of child health, health care, family advocacy, payment reform and Medicaid policy to both discuss the issues and challenges related to developing payment and incentive models, and identify success factors and requirements to ensure payment models specifically support and incentivize health plans and provider organizations to address SEDH, and promote trauma-informed approaches to address ACEs.
- *Facilitating a roundtable panel* of additional stakeholders and experts to respond to the draft recommendations, contribute to a sense of relative priorities and identify any gaps to address in the final report.
- *Authoring Final Report including recommendations* for further specifications on types of data (economic and other) needed to develop actuarial estimates of various bundles or payment models, or address other data and evidence gaps.

These approaches and activities are further summarized below.

National Advisory Committee

The project first established a National Advisory Committee, comprised of 18 members from various disciplines focused on the health and well-being of children, to specify concrete recommendations to advance innovative payment models and contract arrangements in Medicaid and children’s health services. See Appendix A for a list of committee members. The Advisory Committee contributed to the project through shared insights and knowledge in the field. The Advisory Committee kick-off meeting identified shared assumptions regarding the need for integrating care delivery models into clinical practices to address social and emotional determinants and ACEs, as well as the readiness and requirements both

at the provider practice and payer levels to implement and cover these enhanced models of care. Additional consideration was given to optimizing the capacity of Medicaid, and contracted Medicaid health plans to drive momentum and adoption. The Advisory Committee’s initial meeting assisted in achieving near consensus on project goals and priorities, which helped develop the scope of the challenge guides and frame the in-person meeting agenda over the course of the project.

State Data Brief and Environmental Scan

Two issue briefs^{4,27} set forth national and across state findings on the prevalence of ACEs among children and youth in the US and explore associations with SEDH. These were developed to inform deliberations, check assumptions about needs, equity and whether a targeted or population-based approach is indicated. The analysis specifically informed questions about integrating attention to ACEs and promotion of SSNRs into existing initiatives focused on social determinants like food insecurity as well as behavioral health-primary care integration and care for children with complex medical needs. A literature and environmental scan yielding a high-level summary of common elements to evidence-based approaches to address SEDH was also conducted to inform project advisors and “Challenge Guide” authors about the status of the evidence regarding promising approaches in clinical and community contexts.

Clinical Use Cases and Advisor Survey on Evidence, Best Practice and Opportunities

To inform subsequent National Advisory Committee meetings and assist in achieving consensus on both the “starting point” and near-term goal for the project, AcademyHealth and CAHMI developed a survey to identify current care delivery approaches and specific interventions relevant to children and youth to best improve their health and well-being. To do so, the survey outlined four use cases, depicting children of varied ages, family structures, physical and behavioral health conditions, home environments and adverse childhood experiences. Advisory Committee members, based on their particular expertise, were asked to suggest those approaches and interventions most critical and available, where possible, to improve the health and well-being of each case. The survey prompted respondents to share knowledge of existing evidence and expert opinions on whether the approaches and interventions noted already do, or could explicitly, integrate “trauma-informed approaches” to SEDH related services and to address ACEs, toxic stress, and promote SSNRs. The survey identified common approaches (e.g., whole-child/whole-family assessment tools, navigators/care coordinators and systems integration) and evidence-based interventions (e.g., care coordination, disease management, behavioral health integration, parent support and parent-child interventions and home visiting programs) that could ensure essential clinical, developmental, behavioral health and social service needs were met. The survey also captured recommended resources to utilize, such as integrating trauma-informed diagnostic assessments, training behavioral health and other professionals in trauma-informed approaches, and

utilizing school based resources. Lastly, the survey identified key features that should be considered when creating a care model that is effective in addressing SEDH, ACEs, toxic stress, and promoting safe, stable, nurturing relationships in a way that is integrated with existing or emerging care models. This assessment was valuable in mapping the current landscape of delivery care models and resources for consideration as the project looked to identify appropriate payment models that ensure comprehensive coverage.

Challenge Guides

Through this process, the National Advisory Committee guided the framing of two “challenge guides” that built on existing work and captured the current state of the field, as identified in the survey. It assisted in anchoring the recommendations to concrete examples so that the models and recommendations presented for review at the Invitational 2018 National Meeting were as actionable as possible. The first challenge guide, *Policy, Capacity, and Environmental Factors Needed to Optimize Payment Reform Models to Address Social Determinants of Health for Children Using a Trauma-informed Approach*²⁸, outlined the range of contextual issues that must be considered for a payment model to be optimized for impact on SEDH and ACEs. See *Appendix B for a copy of this Challenge Guide*. Authored by NORC Senior Fellow Cheryl Austein Casnoff and her colleagues, this challenge guide first outlined policy, capacity, and environmental (i.e., contextual) factors that need to exist and/or must be in place to optimize a pediatric payment model. It then described the necessary actions to be performed by various stakeholders to ensure those contextual factors exist, such as the Medicaid agency (as purchaser writing MCO contracts), other state agencies (e.g., licensing, credentialing; enacting other supporting policy issues), providers (both clinical and non-clinical), community based organizations and health plans. The specific contextual factors addressed included workforce issues, measurement and data sharing, cross-sector community collaboration and evidence.

The second challenge guide, *Payment Reform to Address Social Determinants of Health for Children*²⁹, authored by Bailit Health, outlined recommendations for payment models that address social determinants and ACEs for children. See *Appendix C for a copy of this Challenge Guide*. Building off of Bailit Health’s prior work, which identified two payment models applicable for children’s health, this challenge guide explored how these models relate to the focus of this project, including primary prevention, secondary prevention, and complex trauma treatment. Further consideration was given to how these models could be applied in various care delivery system models, such as Accountable Care Organizations and Primary Care Medical Homes, and could support the efforts of various stakeholders such as the care team (including primary care providers and specialists), hospitals, and potential partners

in other non-health care sectors (e.g., education, housing, transportation). Lastly, the challenge guide proposed potential quality measures that could be applied within these payment models to measure and incentivize performance regarding the SEDH and ACEs for children.

National Panel on SEDH, ACEs and Payment Policy

A panel presentation was curated with three top US states addressing SEDH (WA, MA, MN) and facilitated by Dr. Bethell of CAHMI and Mark Wietecha of the Children’s Hospital Association. Presented at the at the National Health Policy Conference, this panel further illuminated the state of the field, and spurred discussion on requirements for innovation and opportunities for action and policy change to support payment models and contextual resources (e.g., data, systems integration, training, etc.) needed in the field.

National Invitational Meeting

The findings of these challenge guides grounded the conversation and assisted in framing the national invitational meeting, *Payment Transformation to Address SEDH for Children*, held on April 23-24, 2018. See *Appendix D for Agenda and Participant List*. Building on existing policies and practice transformation efforts, the convening sought to spur discussion on current and proposed payment and incentive models that specifically support and incentivize health plans and provider organizations to address the SEDH as well as use a trauma-informed and healing-centered approach to target ACEs, toxic stress, and promote SSNRs. Meeting participants, representing Medicaid and federal agencies, researchers, clinicians, payers, and family advocates, discussed the challenge guide recommendations and identified near-term actions that can drive change in payment and delivery care models for children and their families to enhance the quality and comprehensiveness of care to address social determinants and ACEs as it impacts the whole child and their well-being.

National Roundtable Review Panel

AcademyHealth convened an invitation-only roundtable at their Annual Research Meeting on June 24, 2018, to build on the National Invitational Meeting’s resulting compilation of recommendations on care models, support structures, and interventions/services that should be incorporated into provider settings to address children and families’ SEDH. The Roundtable hosted a diverse panel of reactors to gain their insights on how these various recommendations can be encouraged and supported by various funding and financing mechanisms, such as advanced payment models and other contractual arrangements, or through the leveraging of existing state and federal policies and programs. See *Appendix D for Agenda and Participant List*.

Strategic Priorities and Recommendations

The mandate to continue to embed - in all systems that care for children and families- a focus on the proactive promotion of healthy development and well-being that addresses SEDH and ACEs was unanimous and shaped the strategic priorities and recommendations emerging from this project. This mandate challenges predominant care and payment approaches that largely support a focus on physical disease and illness risk reduction and treatment and either ignore or are unintegrated with efforts to address the SEDH now understood to influence and impact physical disease and illness risk reduction and treatment. In contrast, a *whole-child, whole-family and whole-population well-being* payment approach was deemed essential to align health care for all children and children with special and more complex needs with the sciences of healthy child development and SSNRs and environments as well as with the evidence on the impact and opportunities to prevent and mitigate the impact of highly prevalent adversities like ACEs to foster resilience and flourishing.^{3,11,26}

The mandate to continue to embed - in all systems that care for children and families- a focus on the proactive promotion of healthy development and well-being that addresses SEDH and ACEs was unanimous and shaped the strategic priorities and recommendations emerging from this project.

The “goodness of fit” analysis conducted examined the degree to which existing and emerging payment approaches may support a well-being approach to health care. Central to this analysis was consideration of whether these payment approaches could support enhanced delivery of care models that ensure coverage of services needed, incentivize and reward front line service providers to make necessary changes in care, and effectively incentivize systems of care to also make essential changes. Results hinged on whether current and emerging payment approaches are anchored to a definition of value, outcomes and return on investment that SEDH, like parent-child connection, healthy parenting, preventing and addressing ACEs and coordination and linkages with community supports to foster stable housing, income and food sufficiency, home, school and neighborhood safety and emotional support and family and community resilience and cohesion. Such strategies innately require shifts in mindsets, culture and the metrics used to assess and drive improvements in health outcomes and systems performance. They also require cross-sector collaboration and coordination of services and the introduction of specific services to assess and promote

resilience for families and children. This will include feasible and actionable methods to assess and support healing from toxic stress and trauma. For example, home and community-based services can help prevent, identify and treat complex developmental trauma can help end the inter-generational transmission of trauma in families and communities. Attention to assessing, building and improving community resources, engaging communities and addressing racial justice and equity are central to innovation and improvements related to addressing social determinants, preventing and healing trauma and promoting strengths and wellbeing. Inspired leadership and enabling payment approaches that recognize these needs and opportunities are essential.

Yet, current definitions of value and return on investment focus on short term reductions of health care utilization (e.g., emergency care, avoidable hospitalizations, low value care) and negative health outcomes (e.g., illness severity and symptoms) and do not explicitly support required innovations and improvements. At the same time, many existing federal and state Medicaid policies and payment innovations in the field can be leveraged and hold great promise. Reports, articles and analysis to document these opportunities are rapidly emerging in the field and reflect the growing agreement to prioritize child and family social and emotional well-being and to transform existing payment approaches to reflect a whole-child, whole-family and whole-population well-being oriented definition of value and return on investment.³⁰

Attention to building and improving community resources, engaging communities and addressing racial justice and equity are central to innovation and improvements....Inspired leadership and enabling payment approaches that recognize these needs and opportunities are essential.

In this project, many payment approaches were identified as promising. This includes (1) existing federal and state EPSDT payment options (many of which are not leveraged)^{31,32}; (2) capitation and bundled payments for routine and primary care for all children; (3) tiered and targeted case management and care coordination payments for children and families with more complex needs; and (4) the use of value-based purchasing and total cost of care payment models that have the potential to incentivize the types of changes and services summarized above. These findings are encouraging. Yet, as of now, no existing or emerging approaches were deemed sufficient since they do not explicitly define, support and reward for production of value in terms of the

promotion of early and lifelong health and proactive attention to SEDH. As such, findings call for an immediate “launch and learn” approach to formulate new definitions and measures of value and return on investment and apply these to existing and emerging payment models so that the field can swiftly move to demonstrate new payment approaches that support required shifts in services and models of care as summarized above.^{10,33}

To this end, a high level of optimism emerged around the possibility to leverage existing services and innovations to rapidly formulate and test payment approaches that can support enhanced models of well-child care services.^{3,11,12,19,20, 24, 31,34-37} These services and innovations include primary care medical home innovations like behavioral health integration as well as growing efforts to integrate all care for children with medical complexity and anchor this care to family and child needs, priorities and goals in ways that ensure a focus on SEDH as discussed above. Project findings support immediate action to optimize these existing and emerging innovations and drive their widespread adoption and continuous improvement. Perspectives differed as to specific actions that could and should be taken when considering specific components of any model of care or payment approach. These differences were largely reflective of the highly variable training, capacity and payment structures each child serving health care provider and system faces; along with the differences in the needs of the populations they serve and the existing delivery models in place that could be built upon.

While variations in context argue for different starting points for change and focus, there was recognition that all approaches to effectively address SEDH and ACEs would need to be anchored to several fundamental common-elements. These common elements—as also generally outlined above—include:

- the provision of comprehensive, integrated care focused on the whole-child and family;
- family and child engagement and coaching before, during and after encounters;
- trusting, safe and consistent relationships and a strong equity and trauma-informed approach;
- coordination and collaboration across medical, social, educational and other services in communities; and
- advocacy to change structural inequities that perpetuate adversity for many vulnerable children and families.

Provision of a roadmap to guide transformation regardless of the starting point for current providers and systems of care would be useful. In addition, methods are needed to:

- support routine and tailored assessment and care approaches enabling attention to each child and family’s unique social and emotional well-being and risks, as well as their unique strengths and values; and

- integrate assessments across providers and services in any given system of care and with the community-based resources children and families receive.

Further actions recommended include:

- investment in robust efforts to engage and support providers and leaders to learn about and gain skills related to social determinants, ACEs, positive health development and trauma healing; and
- training providers and teams and aligning payment to ensure consistent and personalized relationships with families and children.

Finally, the range of cross-cutting infrastructure requirements essential to support any enduring or effective changes were frequently noted in all project activities and include (1) workforce and environmental capacity building; (2) strategies that enable effective cross sector collaboration; (3) measurement and data systems; and (4) learning and improvement platforms. Many of these requirements also have relevance for adult health care and may be viewed as cross-cutting to improve population health overall. In this way, improving children’s health services in ways outlined here may benefit from similar efforts in adult health care and proactive attention to identify and leverage these opportunities is recommended.

Payment approaches focused on population health and well-being hold the greatest promise for redefining value and organizing systems and services to produce the greatest value.

Strategies and recommendations set forth are envisioned to work together to expedite payment approaches and policies that catalyze personalized and integrated action within communities to promote positive SEDH (e.g., child-parent connection, supportive and safe neighborhoods and schools, hope, optimism, emotion regulation) and address risks like ACEs and the toxic stress and trauma that can result from adverse family and community experiences. The three priority strategies and associated recommendations arising from this project are further summarized below.

Strategic Priority #1—Pay to Improve Child and Family Well-Being

Measure value and return on investment in health services for children, including children with special needs, to incentivize and build capacity to implement a life-course approach that promotes positive social and emotional well-being, prevents and mitigates risks from ACEs and addresses SEDH.

The challenge to shift existing value-based care models as outlined above is emphasized in Bailit's Challenge Guide,²⁹ reporting that while there is growing recognition in the field, there is demonstrated evidence on the importance of assessing and addressing SEDH and ACEs, it remains a challenge to prioritize the design of payment strategies and incentives for pediatric health services that consider these issues. Bailit further recognized that the nascent but growing trend toward trauma-informed care presents an opportunity to leverage or modify existing payment strategies, yet there is a need to understand “*what constitutes high-value care for children?*” and to redefine value in ways that support both children's immediate and long term social and emotional development and well-being. There is a danger for current efforts to narrowly address trauma related services for children with high levels of complex developmental trauma. In doing so, the fundamental need to promote the prevention, early detection and healing of toxic stress and trauma in primary care and for all children and families will be ignored and little improvement in overall child health will result. Thus Payment approaches focused on population health and well-being hold the greatest promise for redefining value and organizing systems and services to produce the greatest value. Existing payment model approaches that might be aligned for immediate impact are further summarized below, along with beginning notes on key issues that would need to be addressed to facilitate such alignment.

Possibilities to leverage existing payment models for all children and children with special or complex needs

Several existing payment models exist or are emerging that can be leveraged, presuming that shifts do take place in how value is defined and operationalized for children's health services to ensure robust incentives are in place to support the shifts necessary in services and practice.

For children without special or complex medical needs, where primary and preventive care is the focus, a payment model may be considered that has the following three components:

- *Capitation and Bundled Payments:* Capitation payments that provide a set “per member, per month (PMPM)” fee and bundled payments that provide a similar “capitated” rate for a specific bundle of core services may be well-suited for compensating pediatric and family medicine providers for children and families who do not experience varied and/or complex medical or social needs. As designed to date, such payment methods allow greater flexibility to specify the “care service” the reimbursed rate can pay for and offer the ability to cover related non-clinical services that address, for example, common parenting education and child-family relationship supports and to offer modalities like telehealth and routine care coordination support for the family. Capitation rates are typically based on historical costs that are adjusted upward to accommodate the additional number and intensity of services needed for subgroups of children. To be relevant for SEDH and ACEs related needs, new efforts to specify capitation (PMPM) and bundled payments that consider needs related to these factors would be required so that rates and bundled services sets reflect these needs. Examples of what to include in bundled payments to support enhanced care models are suggested below under Strategic Priority #2.
- *Tiered, Targeted and Tailored Case Management and Care Coordination Payments:* Payment models can include a payment to fund case management and care coordination for children that require additional services on a tiered and targeted basis whereby the level and need for case management and care coordination services is tailored to the assessed needs of the child and their family. Such determinations require effective assessments and identification of appropriate actions. To define the needs and services eligible for targeted case management and care coordination payments related social and emotional determinants and ACEs will require further assessment and the use of new assessment tools, provider and team skills and identification and capacity to provide additional services identified are needed.
- *Potential Financial Incentives:* Providers have the possibility to receive a financial reward for providing high-quality, cost efficient pediatric care as assessed by evidence-based quality metrics. Financial rewards are designed to acknowledge exceptional care provision as well as improvements, yet many efforts to pay for performance have yet to demonstrate a consistent impact. Effective incentives are essential to motivate and encourage improvements. Typically, reward payments are distributed on a regular basis to providers and/or practices that meet performance improvement targets. Performance metrics related to assessing and promoting positive SEDH and preventing and mitigating risks like ACEs, toxic stress and trauma require clear specification to support pay for performance methods like this. Such specification will require identifying what makes up exceptional care and establishing methods to routinely measure and report on performance. This is work that needs to be tended to immediately and requires resources to address properly. Methods to assess quality services in well-child care services and for children with medical complexity are emerging and many existing approaches can be adapted.^{35, 38-40}
- *Value-Based Payments:* As discussed above and further described in Strategic Priority #2 below, in the primary and preventive care arena, value-based payments should involve paying for an enhanced model of primary and preventive services not routinely provided in current care models but that are expected to result in immediate offsets to more expensive care (like avoidable hospitalizations for acute conditions). This enhanced model of care should promote healthy development, mitigate the impacts of all forms of adversity before they evolve into illness and meaningfully contribute to improving the health trajectories of children. Again, this value should not be defined based on immediate medical care cost offsets, but rather must consider offsets to costs that may occur at future time points. However, it should be noted that though often such care will in fact maintain or improve health and therefore have immediate cost-offsets from

reducing subsequent hospitalizations or treatments—especially for at-risk children, those with low levels of positive health upon assessment and that have complex health needs. In this way, even as redefined as suggested here, value-based care may also result in savings or offsets in short term medical costs.

Specifying payment models for children with special health care needs (CSHCN) and the subset of CSHCN identified as children with medical complexity (CMC) should be both consistent with those for all other children as well as further tailored to recognize the immediate and ongoing complex medical and non-medical, health related needs typically required for these children. It is important to note the approximately two-thirds of children identified as having more complex special health care needs have been exposed to ACEs and often their families experience tremendous stress and difficulties with daily life and lack hope or a sense of being supported in difficult times.^{4,13,14, 41} This is true despite the fact they are in frequent contact with medical care and other service providers. We also know there is wide variation in child and family functioning, outcomes and quality of care for children with similar levels of complexity and that this variation is associated with providing support to families, addressing the social context and family factors and providing integrated and coordinated services that support families.

For children with CMC in particular, pediatric care is commonly provided by clinicians or specialists associated with academic medical centers. For these specialists, it is less commonplace than in a community-based primary care pediatric practice to take a whole-child/whole-family approach to care that considers the child and family social context and ACEs. However, this trend is shifting as more is learned about the importance of these factors to the health and costs of care for CSHCN and CMC, such as findings from the recently completed Centers for Medicare and Medicaid Services' (CMS) Center for Medicare and Medicaid Innovation (CMMI)-funded *Coordinating All Resources Effectively (CARE)* project.³⁴ In this project, payment approaches that can be leveraged and tailored to incentivize providers and spur comprehensive pediatric care delivery for CSHCN and CMC were considered and summarized below.

- *Total Cost of Care Model with Shared Savings or Shared Risk.* A total cost of care model affords providers additional flexibility to spend on services that meet the related non-clinical services and social supports these children and their families need. This model can include a shared savings approach initially, but should evolve to a shared risk model as providers become more accustomed to coordinating their pediatric patients with additional services and supports, in order “to increase accountability and distribution of savings and responsibility for losses tied to provider performance.”²⁹ It should be noted that a provider’s eligibility for earned savings should be related to pre-determined performance metrics whereby increased savings distribution is linked to higher performance. Again, for this model to be effective in the area of focus here, performance

metrics would need to be specified that relate to expectations for care related to promoting positive SEDH and addressing risks like ACEs and the toxic stress and trauma that can result from both ACEs and living with complex medical conditions.

- *Tiered, Targeted and Tailored Case Management and Care Coordination Payments:* Whereas payment models that fund case management and care coordination for all children may not always be required, we expect that such payments will be routinely needed for CSHCN and CMC and should be considered as part of any comprehensive model of care. Similar to all children, case management and care coordination services related to services that promote positive social and emotional well-being and address risks like ACEs (in addition to medical and disease related care) would operate on a tiered and targeted basis whereby the level and need will vary according to the determined needs of the child and their family. They will also vary across time since children and families experience different levels of need over time. To define the needs and services eligible for targeted case management and care coordination payments related social and emotional determinants and ACEs will require the use of new assessment tools that can be integrated into routine care for CSHCN and CMS, new provider and team skills and identification and capacity to provide additional services identified.
- *Accountable Care Organizations:* For all children, but especially for CSHCN and CMC, emerging Pediatric Accountable Care Organizations using a population health and well-being framework are particularly important opportunities to leverage. These models will be charged to coordinate care providers and services using alternative payment structures and linking care to quality metrics and are now being considered by CMS. Current efforts, including the new CMMI initiative *Integrating Care for Kids (InCK)*^{30,41}, should be designed to ensure effective attention to the promotion of positive social and emotional determinants and risks like ACEs. As noted above, lessons learned from CMMI’s Coordinating All Resources Effectively (CARE) eight hospital initiative have fueled heightened efforts to center care on child and family social context and needs.³⁴ One key recommendation arising through this project to optimize the impact of Pediatric Accountable Care Organizations or similar models was to shift incentives throughout the system to reach the front-line service provider. An example was the need for payers to adjust work Relative Value Units (RVUs) for selected and relevant procedure (CPT) codes to encourage provision of both clinical and non-clinical interventions as may be required based on assessment findings and needs. To emphasize again, without such front-line incentives little change should be expected in the delivery of care or use of time to promote positive social and emotional development and well-being for children and families or address risks like ACEs and the toxic stress and trauma that can result and influence health across life.

Strategic Priority #2—Support Enhanced and Personalized Well-Child Care

Leverage and align existing payment approaches, federal law and practice innovations to support an enhanced well-child care services model to promote healthy development that is guideline-based, personalized and systems-oriented (GPS).

An enhanced model for well-child care services is a high leverage opportunity to proactively promote positive SEDH like child-parent connection, healthy parenting and child and family resilience, conduct early identification and mitigate the impact of risks like ACEs and other social determinants of health. As noted above, comprehensive assessments, tailored education, coordination and linkages to resources and supports, strong and consistent relationships with the child and family's primary care provider and team, and integration with community systems and supports are core elements for such an enhanced model of care.

The deliberations in this project affirmed great promise for optimizing existing policies and payment methods to scale innovations focused on promoting health, including social-emotional health and well-being.

Under the Affordable Care Act provisions to increase use of preventive services, well-child visits, based on the Bright Futures Guidelines,⁴¹ are covered benefits without family cost-sharing (i.e., no co-payments) under public and private coverage for virtually all children and youth in the US. Under federal Medicaid law, EPSDT provides comprehensive health coverage for children and youth, ages birth to 21. Known as EPSDT “screening” visits, Medicaid covers well-child visits that include a comprehensive health and developmental history, an unclothed physical exam, immunizations, laboratory tests, and health education and guidance for parents and children. Such EPSDT “check-up” visits are covered at age-appropriate periodic intervals recommended by professionals on a schedule set by states and at other times, as needed. The periodic visit schedule defined in *Bright Futures* is widely used by both state Medicaid agencies and private plans for this purpose; however, not all states are using the Bright Futures Guidelines. Overall, the Bright Futures periodic visit schedule recommends 14 visits for young children prior to the sixth birthday (with the newborn visit often done in the hospital making the total visits 15). In 2016, 22 states did not have the recommended 14 or 15 visits for young children birth through age five on their EPSDT periodicity schedules for pediatric well-child visits.³¹

EPSDT data and research consistently shows that well-child care visits are underutilized. For example, in 2016, among toddlers, ages 1 and 2, only 20 states met or exceeded the 80 percent EPSDT performance standard for having even one reported EPSDT well-child visit. Yet Bright Futures recommends that toddlers have five well-child visits between their first and third birthday.³¹ Furthermore, analysis of visits financed by Medicaid under EPSDT show that they are not conducted in a manner consistent with pediatric standards of care set out in Bright Futures and do not meet their potential to ensure the provision of essential whole-child and whole-family assessments, early intervention and promotion of healthy parenting and child social and emotional health. As noted, well-child visits for young children should include screening of general development, social-emotional development, maternal depression, and social determinants of health. EPSDT federal law requires age-appropriate screening for physical and mental health, yet, as typically delivered, such visits are more likely to emphasize a subset of Bright Futures recommendations (such as immunizations and physical development) rather than proactively promoting healthy development, healthy parenting and family functioning and recognizing and addressing the impacts of various social and emotional determinants and ACEs; and providing needed care coordination across various clinical and non-clinical service providers. Insufficient payment is central to these short-falls.

While federal law regarding well-child visits in EPSDT is clear, state Medicaid policy, managed care contracts, and payment decisions impact the degree to which services are appropriately provided according to standards of care. At the same time, some states have made deliberate and effective efforts to improve Medicaid/EPSTDT for young children. The deliberations in this project affirmed great promise for optimizing existing policies and payment methods to scale innovations focused on promoting health, including social-emotional health and well-being. Improved understanding about what existing payment policies will and will not allow through Medicaid is a need identified through this project and work has been and needs to continue to be done to elucidate this. Stakeholders agreed that more opportunities to address SEDH and ACEs under current EPSDT law and payment regulations in Medicaid exist that have yet to be spread and scaled across the nation. Little is known about efforts of private sector health plans and payers though emerging efforts are seeking to track and align these efforts with Medicaid in several states.

Establishing a GPS system to enable an enhanced model for well child care services

Taken together, input and analysis conducted suggest a core set of parameters that can be used to shape and communicate an approach to leverage existing coverage and EPSDT laws and regulations to optimize well-child care visits and the national Bright Futures Guidelines and ensure appropriate levels and approaches to payment that allow well-child care visits to realize their potential. One way to characterize essential key parameters for an enhanced model for well-child care services is the GPS acronym, which comes from CAHMI's ATTACH* Model that features assessment

tools, standardized measures, and strategies to promote a Cycle of Engagement⁴² with families before, during and after well-child care visits, which provides ongoing, real time family, provider and population-based data on strengths, needs, context and clinical and systems performance. **GPS** stands for “Guidelines-based, Personalized and Systems-oriented”.

(**ATTACH stands for Advancing Tools and Technologies to Achieve Child Health*)

G: Guideline-based:

As noted above, while EPSDT law³¹ and Bright Futures Guidelines⁴¹ support the types of well-child care services recommended here, they currently do not reflect typical practice. Continued and persistent efforts to advance guideline-based well-child care services is needed. Translating EPSDT law and guidelines into specific care processes. The types of services and approaches to ensure is supported through adequate payment and incentives is further characterized below.

P: Personalized:

Most central to Bright Futures Guidelines is meeting the priorities of each child and family. As such, well-child care services must be personalized to each child and family for each of the many encounters recommended. This means establishing trusting and consistent relationships with children and families so providers come to know them well as well as valid, feasible and useful methods to assess and engage families to reflect on and share about their child’s and family’s strengths, context, needs, goals and priorities. Domains of personalized services that emerged as the best and highest value for funding, perhaps using bundled payment approaches. Three aspects of personalized care to consider for well-child care services bundled payments include:

1. *Personalized Direct Care Processes:* Payment can support more comprehensive well-child care visits based on Bright Futures Guidelines, ensuring inclusion of assessments of strengths, needs and priorities related to both positive and negative SEDH, including ACEs. It can also support sufficient time and resources to engage and establish trust with families, tailor education and coaching, and facilitate linkages to additional resources and supports.
2. *Personalized Child/Family Coaching and Supports:* Payment can enable provision of on-site interventions to foster child-parent connection, parenting education, and additional supports and services based on child and family preferences to address issues and needs identified. This includes learning about and gaining skills to provide a nurturing home environment and to recognize, address and heal from toxic stress and trauma and promote positive social and emotional skills.
3. *Personalized Case Management and Care Coordination:* Payment can support work to manage and coordinate care for children and families with more complex social and other health and health-related needs as well as address broader social needs

like education, housing, neighborhood safety, employment in collaboration with other medical and community based service providers.

S: System-oriented:

To support trusting, consistent relationships with children and family, it is critical to optimize existing systems and ensure systems are in place and integrated to meet and coordinate services identified as needed by children and families. A “hub and spoke” model of care that is visible and easy to access for families and all services and providers in a community is essential.

Five immediate priorities were emphasized to empower the advancement and appropriate payment for a GPS model of care:

1. Creating a comprehensive, non-proprietary, feasible and family centered engagement and assessment tool;
2. Integrating and reporting back data from families and children to families themselves, health care providers and systems of care and optimize electronic health records and work flows to focus visits on identified needs and priorities;
3. Establishing targeted and tailored case management and care coordination models and strategies to ensure community-based resources and referral systems are in place and maintained;
4. Supporting innovators and early adopters to examine specific requirements (e.g., time and motion studies); invest in the upfront costs involved in making essential changes and in the overall operational costs for sustaining them; and
5. Ensuring learning networks are maintained to build the evidence and scale effective strategies

Strategic Priority #3—Sustainable Capacity for Transformation

Invest and collaborate across sectors to build the cross-cutting workforce capacity, systems integration, data and measurement and a continuous learning infrastructure to both scale high value primary care and the related services and supports children and families need to thrive.

In prior work and continuing under the project, we examined several state Medicaid agencies and health care systems that are intentionally and systematically redesigning pediatric care to promote positive SEDH and address risks like ACEs, unstable housing, insufficient income and food security and so on. These initiatives use different types of payment models, but those operating under a total cost of care, capitation or other similar population-health oriented model are most active in focusing on SEDH. These initiatives are characterized by efforts to align clinical, social, child welfare and school-based services through workforce development, data integration and shared accountability, cross-sector collaboration and process improvements and engagement in continuous learning and improvement efforts. Notable examples of specific interventions and programs engaged

with such health systems that were identified in the environmental scan and highlighted by advisors and key informants include:

- pediatric practice based models to promote healthy development (e.g., Healthy Steps, Healthy Start), home visiting models (e.g., Nurse-Family Partnerships, Project DULCE), healthy parenting and child-parent connection methods (e.g., brief child-parenting counseling and the Welch Emotional Connection Screener).
- community resources and systems integration efforts like Help Me Grow's 28 state network and FINDconnect.
- existing efforts to codify and promote innovative state Medicaid initiatives such as those underway or emerging in Arizona, California, Connecticut, Louisiana, Minnesota, New York, New Hampshire, Oregon, Vermont, Washington and others. This includes work of the Center for Health Care Strategies and Johnson and Bruner, both supported by the Robert Wood Johnson Foundation.^{31,43}
- the emerging “*Pediatrics Supporting Parenting*” initiative led by the National Institute for Children's Health Quality (NICHQ) focused on social and emotional development.³⁷
- the National Improvement Partnership Network's 26 state program driving systems integration and improvements in early childhood development and the Center for Youth Wellness's practice based transformation learning network related to ACEs and resilience.
- CAHMI's work to promote family-engagement in assessing and improving both well-child care services and care for children with medical complexity through its Cycle of Engagement Model and Tools, like the Well-Visit Planner and emerging CARE_PATH for Kids tools for CSHCN and CMC.⁴²

While efforts in the field are impressive, project findings conclude that even in the context of the most enabling payment models—like a Pediatric Accountable Care Organization—at least four categories of infrastructure are needed to effectively finance approaches to address SEDH, like ACEs and safe and stable housing and proactively promote the social and emotional roots of child and family well-being. These include:

1. Workforce and environmental capacity building;
2. Strategies that enable effective cross sector collaboration;
3. Measurement and data systems; and
4. Learning and improvement platforms.

Payment for such infrastructure is essential to address more explicitly at this time. Typically, to address these factors, especially as they relate to SEDH and ACEs, grant dollars or community benefit funds have been relied upon. In some cases, investments are also being made by the health care sector as well as the social services sector, but the sustainability of these efforts is unclear. Where such investments are made, they often focus on data collection and analysis infrastructure, care coordination services, new kinds of

workers to deliver services such as community health workers and non-traditional practitioners, and efforts to develop and support on-going collaboration across health and non-health care sectors to address population health goals in the community.

Below are recommendations emphasized through the input and deliberations that took place in this project, that reflect those included in the “*Policy, Capacity and Environmental Factors*” Challenge Guide²⁸ and that build on those set forth in prior efforts in the field, like the *Prioritizing Possibilities National Agenda*⁷ (see Exhibit A), and other work led by AcademyHealth to define elements needed to encourage collaboration and financing models to effectively address SDOH.¹⁸⁻²⁰

Workforce and Environmental Capacity Building Recommendations

- 1: Institutionalize professional training on the science of ACEs, trauma informed prevention and healing approaches and promotion of well-being for the professions serving the cross-sector needs of the pediatric population. Conduct training across providers to facilitate collaboration (e.g., pediatric and adult medicine).
- 2: Develop workforce skills, capacity and tools (including child and family skills) to employ a whole person and relationship and engagement centered approach to children's health services. This will entail workflow redesign, more open scheduling, using care teams, having practice redesign coaches, use of non-traditional providers, enhanced methods to engage and partner with families, and coordinated care.
- 3: Create care environments and workforce-family-community partnership competencies that enable consistent, flexible and person-centered coordination of services across the sectors, health care providers and agencies involved in addressing ACEs and social determinants (relationship-centered “through any door” approach to coordination).
- 4: Establish the skills to transform team-based care to enable the consistency of relationships and seamless wrap around practice models that demonstrate improved outcomes and efficiencies, especially for people with complex trauma and social needs.
- 5: Create changes in the built space and environment reflective of a trauma-informed approach and that support the co-location of providers and services.
- 6: Advocate for policies to fill workforce availability gaps in primary care and social services shortage areas and leverage telehealth and related strategies to ensure availability of services.

Cross Sector Collaboration Recommendations

- 1: Advance standard criteria to guide formation of new and existing efforts to ensure collaborative efforts within and across pediatric health care systems and other sectors, agencies, and partners to reflect requirements for effective attention to social

- determinants, ACEs and the promotion of positive health and well-being. Criteria should include engagement of families and communities directly impacted by services provided, creation of collaborative resource and system maps to identify resources and determine how children and families move through the system, identify gaps and redundancies and establish “through any door” systems of care.
- 2: Curate a living library of “win-win”, ad-hoc service linkage models that inspire and illustrate the possibilities for immediate collaboration among social, health and health care serving and other community based organizations (including schools, child welfare, justice, early care and two-generation, family-based solutions integrating pediatric and adult health services) to conduct early identification and response to heal and prevent trauma (e.g., schools, foster care and health care coordination to help displaced youth).
 - 3: Create prototype inter-agency and cross-organizational contract, legal and other agreement templates that codify, streamline and solidify collaborative arrangements and develop protocols for collaborative services, and technologies or tools that enable more effective communication between systems.
 - 4: Call for multidisciplinary, representative advisory boards at all levels to guide the formation, implementation and evaluation of national, state, local, organizational and community based initiatives.
 - 5: Specify shared evaluation and accountability metrics, shared savings models and loss protection strategies to incentivize and reward for collaboration and formation of contractual relationships and commitments between health care and social and related services.
- 5: Identify a set of indicators and measures to monitor individual and community resilience and trauma. Use existing measures where possible, and create new measures where needed. Potential indicators may include:
 - a. Individual trauma: exposure to adverse childhood experiences and adverse community environments;
 - b. Individual resilience: social and emotional skills, connectedness to a caring adult, school connectedness, hope, persistence, sense of meaning, agency, and enjoyment in life;
 - c. Community trauma: concentrated poverty, unemployment rates, school suspension and expulsions, school dropout rates, community violence, incarceration rates; and
 - d. Community resilience: community engagement, social action/civic engagement, employment rates, school attendance and graduation rates, access to health care, investment in diversion from criminal justice and restorative justice practices, neighborhood safety.
 - 6: Continue to support existing data collection, surveillance and data reporting systems for individual and community indicators of trauma and resilience (e.g., Behavioral Risk Factor Surveillance Survey, the Pregnancy Risk Assessment Monitoring System and the National Survey of Children’s Health).

Measurement and Data Systems Recommendations

- 1: Assemble and improve, as needed, core assessment measures and associated data collection and response protocols to address SEDH. Charlie: based upon children’s own stages of development and building upon the CAHMI TWG related to practice measures in the first years of life.
 - 2: Promote the use of child and family integrated care/case management databases that comprehensively track pediatric and parental health, medical and social services and outcomes.
 - 3: Leverage and institute model data sharing agreements to optimized existing and emerging data sharing platforms (across health systems, state agencies, services, etc.) and ensure the inclusion and sharing of information relevant to social determinants, ACEs, child well-being and pediatric care.
 - 4: Create “DIY” toolkits to support practice-based, community-based and health system-based selection and use of measures and screening tools suitable to their population and context.
- 1: Support high-value learning cohorts to develop, evaluate, and share innovative approaches. Learning cohorts in high-priority areas should be selected to launch and test innovative approaches with the support of technical assistance providers to guide the planning, implementation, evaluation, and sharing of lessons learned regarding innovative *trauma-informed approaches*. Innovative approaches may include: a new strategy for *family and community engagement*, a cross-sector collaboration to streamline services, implementation of an organizational assessment of *trauma-informed approaches* for a unique population/organization, piloting a new *comprehensive* screening tool, piloting a *traditional community practice* model to mitigate the impact of ACEs and stop intergenerational transmission of ACEs.
 - 2: Fund services, evaluation and research to promote a “launch and learn” model of implementation that recognizes the need to act now while continuously learning and improving through an “era of experimentation.”
 - 3: Develop relevant and actionable performance measures to support payment models and improvement. As it relates to value-based purchasing and other payment models tied to quality measures, the project yielded some recommendations for candidate measures to consider. These include:

- a. Measures of the provision of assessment and anticipatory guidance during well-child care visits related to social determinants, ACEs and positive and relationship health for children and families. The existing Promoting Healthy Development Survey (PHDS) is a possible vehicle for collecting this information from parents along with the many other quality metrics assessed using the PHDS;
 - b. Measures of the degree to which services are integrated vs. fragmented based on family/patient experience;
 - c. Measures of change in risks and positive outcomes (cohort vs. annual measures) such as “Healthy and Ready to Learn” or “Protective Family Routines and Habits”, “Family Resilience” or “Flourishing” (each assessed in the National Survey of Children’s Health); or “Family Belonging” (assessed using the PROMIS measurement set and being reviewed for use by CMS); and
 - d. Measures of positive deviance/high performers and examination of practices to learn what is working and why.
- 4: Support the design and dissemination of understandable and *actionable data reports* at the national, state, communication and local levels to continuously educate, engage and advance strategies related to social determinants and ACEs. Immediate supports are needed to enable communication platforms and materials be developed that rely on valid and agreed upon metrics and analytic approaches.
- 5: Foster the development and easy access to *ongoing webinar learning platforms, convenings and development of data dashboards and issue briefs* that showcase innovations and leverage data surveillance systems to make data on *social determinants, ACEs and healing* readily available. This type of information played a large role in eliciting interest and action to focus on social determinants and ACEs and will continue to be necessary as change progresses. This will be highly relevant for hospital community benefits standards community needs assessment and partnerships initiatives.
- 6: Specify *common evaluation approaches* that can support a core assessment of different efforts and enrich existing knowledge on the common elements and core competencies needed for effective practice. Without this we may end up with many studies on demonstrations and models, but little ability to compare findings due to use of unnecessarily different evaluation approaches. An evaluation toolkit may include tools, metrics, and methods for assessing service and programmatic outcomes, including participant attitudes and perceptions (e.g., feeling empowered, valued and cared for, trust, respect, and safety) and participant outcomes (e.g., *trauma* symptoms, resiliency factors, substance use). Other tools that would be of high value include assessment of whether children’s health services and systems are, in fact, operating in a trauma-informed manner. This would include assessment of:
- organizational policies (e.g., written statements expressing commitment to understanding *trauma* and utilizing a *trauma-informed approach*)
 - extent to which organizational policies are adhered to
 - existence of effective collaborations and partnerships (e.g., number and quality of partnerships within and across sectors);
 - training and capacity building (e.g., number of staff trained, change in knowledge, attitudes, and skills);
 - organizational staff knowledge (e.g., understanding of stress and *trauma*, understanding key principles of a *trauma-informed approach*);
 - organizational staff attitudes and perceptions (e.g., trust, respect, safety, support, collaboration, transparency);
 - organizational staff skills (e.g., creating safe environments, self-regulation and coping, de-escalation, *cultural responsiveness*).

Additional Considerations

Strategies and recommendations set forth here seek to expedite payment approaches and policies that catalyze action to promote positive SEDH (e.g., child-parent connection, supportive and safe neighborhoods and schools, hope, optimism, emotion regulation) and address risks like ACEs and the toxic stress and trauma that can result from adverse family and community experiences. Additional insights and considerations in implementing priority strategies include the following:

- While the majority of young children receive health care through Medicaid and place Medicaid in the central position to transform care overall, given the multi-sectoral and cross-cutting nature of these issues and the importance of caring for adults and families as well as children, it was noted that taking a multi-payer focus for all aspects of transformation would better facilitate a whole-child, whole-family and whole-population well-being approach. Yet, Medicaid will still be an essential driver of innovation since the majority of young children in the US receive services through Medicaid.
- In terms of financial incentives, it would be valuable to construct payment models that can also engage patients/families/communities so that they all share in the rewards, not just health care providers and systems.
- Considering the risk assumed when caring for high risk patients, it is critical for any payment model to account for this and provide reinsurance or risk protection in a total cost of care payment model, which could incentivize providers (both clinical and non-clinical) to participate. A variation of providing protection against risk could be manifested in shared savings models whereby provider organizations may qualify for protection from financial loss if they enter into a contractual relationship with a social service organization. Establishing shared accountability metrics for use across health and community services will be critical.

Finally, a cross-cutting recommendation to proactively, consistently and directly engage and educate leaders and decision makers for lasting change was repeatedly emphasized. Forums for engagement, listening and transformation are recommended to educate and activate existing, new and emerging leaders and decision makers in order to support ongoing and lasting change. This is distinct from training the workforce. Rather, leaders and decision-makers may not be closely involved in day to day operations of the systems changes required to create a health care system focused on whole-person, whole community well-being –and requiring effective attention to social and emotional determinants, ACEs and the proactive promotion of positive and relational health in order to do so. Once engaged through initial dialogue, it is common for leaders and decision makers in national and state policy arenas, health systems and communities to inquire about learning more. While simple overview trainings are available, it is recommended that an assessment of needs and work to meet

the needs of leaders and decision makers gain some attention as follow up to this project. This presents a critical leadership need and opportunity in the field that will also support goals to put and keep children on the political agenda the US.

Next Steps: Engage the Momentum to Catalyze Action at Scale

Based on project findings, the Child and Adolescent Health Measurement Initiative (CAHMI) and AcademyHealth envision next steps to complement other efforts in the field by advancing a large-scale, multi-state, collaborative initiative to support health systems and state/local policymakers in leveraging opportunities to impact the early and lifelong health trajectories of all children and children with special needs. The objective of this multi-state effort will be to promote positive social and emotional well-being, prevent, heal and mitigate risks from ACEs, strengthen protective factors and address social determinants of health. We suggest an effort that works across sectors and payers but is anchored to state Medicaid agencies and on behalf of populations and young children and families. We are initially calling this effort, *Statewide Collaborations to Advance Tools and Technologies to Achieve Child Health (ATTACH): Fostering Action at Scale to Establish a GPS System for Promoting Child and Family Well-Being*.

We propose to build on the national *Prioritizing Possibilities* action agenda published in September, 2017, the policy and payment related recommendations and approaches included in this report and to leverage programs such as CMMI's new Integrated Care for Kids (InCK) model and emerging accountable care organization (ACO) models for children to foster action and build knowledge in the field. We propose to partner with the Medicaid Medical Directors Network, the Network for Regional Health Improvement, and the Children's Hospital Association to establish the ATTACH Action and Advocacy Collaborative (AAA-C; aka *Triple A for Children*). This national collaborative will recruit multi-stakeholder organizations in five to seven states to work with their health care delivery systems, health plans, purchasers (including Medicaid agencies and Medicaid managed care plans), families and family and community-based organizations, and others to implement multi-faceted, best practice strategies to identify and optimize well-child care and other services for children. The focus will be on fostering scalable approaches to promote positive social and emotional development and address ACEs, toxic stress and trauma.

Given the dynamic and emergent nature of practice and evidence on social and emotional development and ACEs, this initiative will be bordered by a “launch and learn” evaluation model to further contribute to what we know about what works to address ACEs. Drawing on citizen science approaches, this evaluation model will enable real-time as well as pre-post and potentially smaller randomized cohorts to build knowledge on the impact of specific approaches. Building on the skills and demonstrated capacity of AcademyHealth and CAHMI, we propose to focus on the detailed work to advance new metrics

related to defining value, assessing social and emotional determinants, ACEs and positive child and family well-being and health outcomes and protective factors, tools to engage families in assessment and care. It is an ultimate goal to identify concrete payment and care model approaches effective in meeting child and family needs and incentivizing and supporting providers and systems of care. CAHMI and AcademyHealth leadership of the Maternal and Child Health Measurement Research Network and the Data Resource Center for Child and Adolescent Health will also be leveraged to support this work.

Specifically, CAHMI and AcademyHealth will build on their successful four-year partnership in promoting child well-being by applying a positive health approach to addressing SEDH and ACEs and will jointly serve as the National Program Office (NPO) for this initiative to lead several major activities, including:

1. Recruit 5-7 state agencies and multi-stakeholder organizations/collaboratives in different states and their participating health systems to shape and tailor payment, service delivery and integration interventions in their settings and populations;
2. Support needs and opportunities assessments for each state collaboration, conduct site visits and produce an environmental scan of participating sites at baseline;
3. Establish a learning community across sites to promote peer learning and optimize impact;
4. Provide tailored technical assistance (TA) to each site using a range of TA providers to address states' various technical needs;
5. Capture and synthesize learnings for real time translation for federal and state policy consideration and broad dissemination;
6. Ensure participation in the ongoing "launch and learn" evaluation strategies of the initiative; and
7. Broadly disseminate the results and lessons learned, including targeted outreach to federal and state policymakers and peer-reviewed publications on priority areas where research is most lacking and essential.

A robust evaluation strategy will be designed, including comparison (control) states/sites, to assess the impact of the selected interventions on priority outcomes and metrics, as well as contextual and other factors contributing to the outcomes achieved.

Recruiting Sites: The NPO will select states and corresponding multi-stakeholder organizations/collaboratives based on the following criteria:

- Strength and track record of the organization at promoting health system interventions at scale;
- Willingness and ability to work with their state Medicaid agency, the Medicaid agency's commitment to participate, and the readiness of the health systems and practices engaged;

- Data readiness at the system and state levels; and
- State characteristics (such as prevalence of various metrics of child well-being, SEDH, ACEs, rurality, region, population demographics, especially for those of the Medicaid population).

Each statewide, multi-stakeholder organization/collaborative will likely include a mix of the state's key child health practitioners, specialty, hospital, and other provider associations; consumer groups; potentially a Health Information Exchange/claims database; a public health agency; state policymakers and others. Each multi-stakeholder organization that is recruited will receive a grant to support its role as a state hub and will partner with and coordinate with their state Medicaid agency and various participating health systems and clinical practices that will implement the interventions. The multi-stakeholder organization will also serve as the liaison between entities implementing the interventions and the NPO and the selected evaluation team. Each site will implement evidence-based interventions to identify and manage ACEs. AcademyHealth and the Network for Regional Healthcare Improvement Organization (NRHI) each have extensive experience with designing and launching initiatives such as the one proposed.

Closing Thoughts

Overall, this project found that experts and stakeholders in the field already embrace the importance of whole-child, whole-family, whole-population approach to health care and the proactive promotion of positive social and emotional well-being and prevention and mitigation of risks like ACEs, toxic stress and trauma. This work identified many existing or emerging payment approaches suited to be adapted to support this transformation. Along with this enthusiasm are the many needs and challenges outlined in this report. Of critical importance is the need to explicitly call out the nature of the paradigm shift at hand and to support ongoing work to buffer the innate instinct to revert to old models that focus on disease and treatment rather than on early identification, prevention, health promotion and addressing the SEDH, like ACEs and positive and relational health skills. The threat that the progress made in this area may diminish due to this instinct to operate using familiar models should be taken very seriously. The health of current and future generations could be greatly harmed by failures to do so. Existing models and systems of care cannot remain as they are to be successful in delivering on the mandate to promote child and family well-being and address social and emotional factors and ACEs. Without a commitment to positive change, existing momentum may translate into simply tinkering with current structures and mindsets rather than to the paradigm shifting transformation called for. The good news is that many payment approaches that exist or are emerging are adaptable to support this transformation. Yet, until payment aligns to ensure the new emerging systems of care can stabilize around a "health" vs. "disease" model, it is unlikely that we will be able to anchor our aspirations for promoting child and family well-being in the arena of children's health services.

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Project Advisory Committee

Rich Antonelli, MD, MS, Medical Director of Innovative Care,
Boston Children's Hospital
richard.antonelli@childrens.harvard.edu

Michael Bailit, MBA, President, Bailit Health
mbailit@bailit-health.com

Christy Bethell, PhD, MPH, MBA, Director, CAHMI and Professor,
Johns Hopkins University Bloomberg School of Public Health
cbethell@jhu.edu

Debbie Chang, MPH, Senior Vice President and Executive Director
of Policy and Prevention, Nemours Children's Health System
Deborah.Chang@nemours.org

Patrick Conway, MD, MSc, President and CEO, Blue Cross Blue
Shield of North Carolina
Patrick.conway0@gmail.com

Angelo Giardino, MD, PhD, Vice President/Chief Medical Officer,
Texas Children's Health Plan
apgiardi@texaschildrens.org

Marilyn Gisser, MHSA Essentials for Childhood Project Coordina-
tor, Washington State Department of Health
Marilyn.Gisser@DOH.WA.GOV

Dianne Hasselman, MSPH, Deputy Executive Director, National
Association of Medicaid Directors
dianne.hasselmann@medicaiddirectors.org

Danielle Jones, MPH, Center for Diversity and Health Equity,
American Academy of Family Physicians
djones@aaafp.org

Dennis Kuo, MD, MHS, Associate Professor and Chief, General
Pediatrics, University at Buffalo, SUNY
dkuo@upa.chob.edu

Dave Labby, MD, PhD, Health Strategy Advisor,
Health Share Oregon
david@healthshareoregon.org

Dayna Long, MD, Medical Director, Center for Community Health
and Engagement, UCSF Benioff Children's Hospital Oakland-
dlong@mail.cho.org

Brigid McCaw, MD, Medical Director, Northern CA Family Vio-
lence Prevention Program, Kaiser
Brigid.McCaw@kp.org

Kalpana Ramiah, DrPH, MSc, Director of Research,
America's Essential Hospitals
kramiah@essentialhospitals.org

Jeff Schiff, MD, MBA—Medical Director, Minnesota Department
of Human Services
jeff.schiff@state.mn.us

Lisa Simpson, MB, BCh, MPH, FAAP, President and CEO,
AcademyHealth
lisa.simpson@academyhealth.org

Ellen-Marie Whelan, NP, PhD, FAAN
Chief Population Health Officer, CMS Centers for Medicaid and
CHIP Services; and Senior Advisor, CMS Innovation Center
EllenMarie.Whelan@cms.hhs.gov

Mark Wietecha, MS, MBA, President and CEO, Children's Hospital
Association

Project Leadership and Staff

Principal Investigators

Christina Bethell, PhD, MBA, MPH and
Lisa Simpson, MD, BCH, MPH, FAAP

AcademyHealth Staff

Enrique Martinez-Vidal, MPP, Project Director
Susan Kennedy, MPP, MSW, Project Manager
Sam Smith, MSPH, Project Research Associate

Child and Adolescent Health Measurement Initiative Staff

Narangeral Gombojav, MD, PhD
Natalie Mikat-Stevens, MPH
Romona Poblete, BS

CHALLENGE GUIDE: PAYMENT REFORM TO ADDRESS SOCIAL DETERMINANTS OF HEALTH FOR CHILDREN

bailit
health

Michael Bailit
Dana Hargunani
Erin Taylor

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Executive Summary

Payment reform in the United States has largely focused on the adult population, overlooking the opportunity to incentivize and support valuable and targeted child health services that lead to long-term cost savings, improved health and overall well-being. Children are predominantly healthy and account for less than 10% of total health care expenditures. The focus of pediatric care is principally to set a foundation for children to meet and achieve their potential for healthy development.

It is well known that the social determinants of health – the conditions in which people are born, grow, work and age – have a significant impact on health and health inequities. Research across multiple disciplines has found and confirmed the significant and long-term impact of adverse childhood experiences (ACEs) – stressful or traumatic experiences including abuse, neglect and household dysfunction – and other negative social, environmental and relational experiences on cognitive, social and emotional development, health and well-being. ACEs can alter a child’s life course, and nearly half of all children in the U.S. are exposed to ACEs. Protective factors and support may mitigate the impact of ACEs in many children. Trauma-informed approaches to care for children and their families provide an opportunity to mitigate the impacts of ACEs and toxic stress and address other social determinants of health.

It is widely accepted that health care payment influences the delivery of health care services, yet value-based payment strategies for pediatric care have not garnered the level of attention as for adult care. Designing payment strategies and incentives for high-value pediatric health services is often overlooked because the health and financial benefits from receiving good pediatric health care are realized over time. Mounting evidence demonstrating the impact of trauma-informed care on improving the health and well-being of children calls for payment strategies that financially support high-value care for children. But what constitutes high-value care for children? For most children, primary care and prevention, and trauma-informed care to mitigate ACEs and address other social determinants of health represent high-value care. A small percentage of children with medical complexity will have greater health needs requiring additional services, including clinical care management and coordinated care across specialties and home and community-based providers. Payment methodologies for those populations should therefore support team-based care, care coordination at appropriate levels, and provide an opportunity for financial reward for the provision of high-quality and efficient care, as described below.

- Value-Based Payment for Children without Medical Complexity: The focus of value-based payment strategies for children without medical complexity is on primary care and prevention – high-value care components for this population of children. The recommended payment model includes three components:
 1. **Capitation** for most primary care services delivered by pediatric and family medicine practices. Capitation payments provide financial flexibility for practices to receive compensation for high-value services, including those that extend beyond the clinic walls, televisits, and additional time spent with families as needed. The rate is based on historical costs that are adjusted upward to allow for delivery of trauma-informed care, care to address social determinants of health, and time spent by clinicians on non-office-based visits.

2. **A care coordination payment** funds coordination for children with medical and social risk factors and support for addressing ACEs and other social determinants of health. Care coordination services will vary based on the needs of the children and family and support defined functions as appropriate for the level of care coordination required.
 3. **Providers are eligible to receive a financial reward** for delivering high-quality and efficient care as defined by evidence-based measures. The performance program is designed to reward excellence and improvement, targets and feedback on performance is communicated regularly to providers, and incentive payments are made regularly to providers or practices.
- Value-Based Payment for Children with Medical Complexity: Children with medical complexity are typically supported by clinicians – particularly specialists – associated with academic medical centers. Often the preventive services that may address ACEs and other social determinants are not provided, as a specialist may serve as the primary care provider for children with medical complexity.
 1. **The payment model for this subpopulation is a total cost of care model with shared savings or shared risk.** This provides even more financial flexibility to providers because the spending on services for these children is greater and there are more opportunities to reduce unnecessary care and find better ways to meet the needs of children and their families. The model should evolve from shared savings to shared risk to increase accountability and distribution of savings and responsibility for losses is tied to provider performance. Eligibility for distribution of any earned savings should be predicated on performance relative to a pre-negotiated quality measure set, with increased distribution linked to higher performance.
 2. Supplemental **care coordination payments** complement the total cost of care model to support intensive clinical care management and coordination activities required to serve children with medical complexity.

Incorporating performance on defined quality measures is a fundamental component of value-based payment strategies. Many are captured in existing measure sets, including federal measure sets, state-defined measure sets, multi-payer measure sets, and payer-defined measure sets. Measure sets for children with and without medical complexity should be expected to vary to some degree.

Designing a value-based payment methodology for children is only one step. Implementing the model presents significant challenges, including funding for care coordination activities and recognition that those activities represent a long-term investment in the health of children and adults; adoption of new modes of payment and new care pathways at the provider level; and an investment in social and community resources to address the social determinants of health and ACEs. With the profound opportunities to prevent, disrupt and ameliorate the effects of toxic stress during childhood, a new valuation of the importance for children’s health care is imperative.

Introduction

Payment reform in the United States has largely focused on the adult population, overlooking the opportunity to incentivize valuable and targeted child health services that lead to long-term cost savings, improved health and well-being.

Representing one in four Americans, children and adolescents in the United States are largely healthy and account for less than 10% of total health care expenditures.¹ One in four US families has a child with a chronic condition requiring more than routine use of services. The less than 2% of US children with the greatest medical complexity make up a disproportionate percentage of child health care costs whose needs are heterogeneous and innately require attention to both medical and social factors.

Children receive health care in a variety of environments, such as clinics, hospitals, urgent care and in the home. Most children have a usual source of primary care,² although only half receive care that meets robust Medical Home criteria as coordinated, ongoing comprehensive care. Even fewer integrate behavioral health and oral health services.³ Emergency department (ED) utilization is relatively low for most children and adolescents. Even among children with medical complexity, ED visits represent only 20% of all health care costs.⁴ As a result, payment strategies to generate short-term cost savings, such as through the reduction in ED visits, will have limited return on investment for the child and adolescent population.

It is well known that the social determinants of health (SDOH) – the conditions in which people are born, grow, work and age⁵ – have a significant impact on health and health inequities. Examples of the SDOH that commonly impact children and their development include such items as food insecurity, housing insecurity and poor access to high quality early childhood education. The American Academy of Pediatrics recommends that pediatric care providers screen children and their families for poverty⁶ and SDOH as part of pediatric clinical care, and connect families to the appropriate resources when needed.

Over the past two decades, adverse childhood experiences (ACEs) – stressful or traumatic experiences including abuse, neglect, and household dysfunction – have also been repeatedly linked to adverse health outcomes across the lifespan.⁷ The convergence of research across multiple disciplines has now established that the toxic effects of ACEs - and other negative

¹ Bui AL, Dieleman JL, Hamavid H, et al. “Spending on children’s personal health care in the United States, 1996-2013” *JAMA Pediatrics*. 2017;171:181-189.

² Maternal and Child Health Bureau, Health Resources and Services Administration. DataSpeak: Results from the 2016 National Survey of Children’s Health. Available at <https://mchb.hrsa.gov/sites/default/files/mchb/Data/data-speak-nsch-2016-slides.pdf>.

³ Available at <http://childhealthdata.org/browse/survey/results?q=4712&r=1&g=619>. Accessed April 14, 2018.

⁴ Kuo DZ, Melguizo-Castro M, Goudie A, et al. “Variation in Child Health Care Utilization by Medical Complexity” *Matern Child Health J*. 2015;19(1):40-48.

⁵ World Health Organization. Available at www.who.int/social_determinants/sdh_definition/en/

⁶ American Academy of Pediatrics, Council on Community Pediatrics. Poverty and Child Health in the United States. *Pediatrics*. 2016; 137(4):e20160339.

⁷ Felitti VJ, Anda RF, Nordenberg D, et al. “Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: the Adverse Childhood Experiences (ACE) study” *Am J Prev Med*. 1998;14:245-158.

social and relational experiences - disrupt the brain architecture of a developing child,⁸ resulting in negative consequences for social and emotional development,⁹ health and well-being. With the profound opportunities to prevent, disrupt and ameliorate the effects of toxic stress during childhood, a new valuation of the importance for children's health care is imperative.

Nearly half of US children are exposed to ACEs. Because of the strong links between ACEs and emotional, mental and behavioral health problems and myriad related health risks, attention to this issue for children is growing. Most children with ACEs do not demonstrate flourishing, although many children with multiple exposures to ACEs do demonstrate resilience and flourishing when they are exposed to protective factors and support for healing and development.¹⁰

Trauma-informed approaches to care for children and their families provide a critical opportunity to mitigate the impacts of ACEs and toxic stress on long-term health outcomes. According to SAMHSA, "a program, organization or system that is trauma-informed realizes the widespread impact of trauma and understands potential paths for recovery; recognizes the signs and symptoms of trauma in clients, family, staff, and others involved with the system; and responds by fully integrating knowledge about trauma into policies, procedures, and practices, and seeks to actively resist re-traumatization."¹¹ Value-based payment approaches for children's health should incentivize high quality care that offers the opportunity to prevent, mitigate and address ACEs, such as through the delivery of trauma-informed care.

An evolving theoretical and evidence-based framework for addressing ACEs underscores the need for a paradigm shift,¹² including organizational policy and culture change (i.e., to reduce re-traumatization¹³ and prioritize provider self-care¹⁴), provider education and training¹⁵ (i.e., to inform knowledge, skills, and practice) and expanded coordination across community agencies and programs. Key attributes of a trauma-informed, pediatric clinical setting that is well poised

⁸ Center on the Developing Child (2007). The Impact of Early Adversity on Child Development (InBrief). Available at www.developingchild.harvard.edu.

⁹ Kerker BD, Xhang J, Nadeem E, et al. "Adverse childhood experiences and mental health, chronic medical conditions, and development in young children" *Acad Pediatr*. 2015;15:510-517.

¹⁰ Bethell, CD, Davis, MB, Gombojav, N, Stumbo, S, Powers, K. Issue Brief: A national and across state profile on adverse childhood experiences among children and possibilities to heal and thrive. Johns Hopkins Bloomberg School of Public Health, October 2017. Available at www.cahmi.org/projects/adverse-childhood-experiences-aces/

¹¹ Substance Abuse and Mental Health Services Administration. SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach. HHS Publication No. (SMA) 14-4884. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2014.

¹² Bethell CD, Solloway, MR, Guinosso S, et al. "Prioritizing possibilities for child and family health: an agenda to address adverse childhood experiences and foster the social and emotional roots of well-being in pediatrics" *Acad Pediatr*. 2017;17:S36-S50.

¹³ Bryson SA, Gauvin E, Jamieson A, et al. "What are effective strategies for implementing trauma-informed care in youth inpatient psychiatric and residential treatment settings?" *Int J Ment Health Sys*. 2017;11:36.

¹⁴ Butler LD, Carello J, Maguin E. "Trauma, stress and self-care in clinical training: predictors of burnout, decline in health status, secondary traumatic stress symptoms and compassion satisfaction" *Psychol Trauma*. 2017;9:416-424.

¹⁵ Magen E, DeLisser HM. "Best practices in relational skills training for medical trainees and providers: an essential element of addressing adverse childhood experiences and promoting resilience" *Acad Pediatr*. 2017;17:S102-S107.

to address the social and emotional determinants of health and adverse childhood experiences have emerged, including:

- **Location of services:** In addition to traditional inpatient, outpatient, and ED-based services, there is growing emphasis on home-based services (i.e., home visiting), behavioral health integration, and community-based services.
- **Service providers:** Trauma-informed approaches must elevate the role of a broad range of health providers, including traditional health workers (e.g., community health workers, patient navigators and peer mentors), in order to effectively deliver culturally, linguistically and trauma-informed care.
- **Types of services:** Interventions must encompass primary, secondary and tertiary prevention with greater attention to the critical role of multigenerational relationships, parenting education, an array of mind/body approaches,¹⁶ and the availability of community-level resources (e.g., quality childcare, home visiting, nutrition, libraries)^{17,18} that are critical for achieving optimal outcomes.
- **Care coordination:** Trauma-informed approaches draw on the importance of care coordination that extends beyond the walls of the health system,¹⁹ focusing on connecting families with community-level services and supports to address the social and emotional determinants of health, including but not limited to schools, human services (i.e., supplemental nutrition and child welfare), housing, juvenile justice, corrections, and public safety.

Central to all these attributes are skilled professionals and organizations that foster the safety, trust and respect most critical to effective approaches to preventing and mitigating the impact of trauma and toxic stress that can result from ACEs.

The growing evidence for trauma-informed approaches that mitigate ACEs and improve the social and emotional determinants of health underscores the importance to design child-focused, value-based payment strategies that will drive improved health across the lifespan.

¹⁶ Gannon M, Mackenzie M, Kaltenback K, et. al. "Impact of mindfulness-based parenting on women in treatment for opioid use disorder" *J Addiction Medicine*. 2017;11:368-376.

¹⁷ Bruner C. "ACE, place, race, and poverty: building hope for children" *Acad Pediatr*. 2017;17:S123-S129.

¹⁸ Center on the Developing Child (2007). A science-based framework for early childhood policy. Available at: <http://developingchild.harvard.edu/resources/a-science-based-framework-for-early-childhood-policy/>. Accessed January 13, 2018.

¹⁹ Antonelli R, McAllister JW, Popp J. "Making care coordination a critical component of the pediatric health system: a multidisciplinary framework" The Commonwealth Fund. 2009 pub. no. 1277. Available at: www.commonwealthfund.org/publications/fund-reports/2009/may/making-care-coordination-a-critical-component-of-the-pediatric-health-system. Accessed January 15, 2018.

Current Child Health Care Payment Models

A. The Movement to Value-Based Payment

Traditional medical care services, for both children and adults, have traditionally been compensated in the United States on a fee-for-service basis. There is longstanding recognition of the role that health care payment plays in influencing health care delivery, resulting in continuing reconsideration of this payment model. Health care purchasers, policymakers, payers and providers have criticized fee-for-service payment. They have faulted it for contributing to observed high rates of health care spending growth by rewarding service volume instead of service value.²⁰ In addition, they have observed that fee-for-service spending has other deleterious effects, including but not limited to a lack of incentive for quality care and lack of support for coordinated care.²¹ Its negative attributes may be felt most acutely by primary care clinicians in terms of quality of work life.²²

These critiques of fee-for-service payment have led to aggressive pursuit of alternative “value-based payment” models to both slow health care spending and improve health quality and outcomes. Value-based payment models typically integrate rewards for performance on quality measures and removing the barriers to providing value-added services that are otherwise non-compensated. They also sometimes include investment supports for provider practice team infrastructure.

B. Value-Based Payment: Differences Between Adults and Children

Because a primary focus of health care payment reform is to slow spending growth, the most prevalent new value-based payment models implicitly focus on adults. This is because most health care spending is concentrated in adults.²³

High-value health care for adults is typically defined as producing the best health outcomes at the lowest cost.^{24,25} This value definition has been operationalized for adult health care based on a widely shared belief that there is a significant opportunity to both lower costs and improve the quality of care by better managing chronic conditions. This perspective is not new to value-

²⁰ While much attention has been placed on fee-for-service payment driving increased service volume, recent research points to service price and intensity as the leading contributor to health care cost growth in the U.S. See Dieleman JL, Squires E, Bui AL, Campbell M, Chapin A, Hamavid H, Horst C, Li Z, Matyas T, Reynolds A, Sadat N, Schneider MT, Murray CJL. “Factors Associated with Increases in US Health Care Spending, 1996-2013” *JAMA*. 2017;318(17):1668-1678.

²¹ Schroeder SA and Frist W. “Phasing Out Fee-for-Service Payment” *NEJM*. 2013;368:2029-2032. 2

²² Fernandopulle R. “Breaking The Fee-For-Service Addiction: Let’s Move to a Comprehensive Primary Care Payment Model” *Health Affairs Blog*. August 17, 2015. Doi:10.1377/hblog20150817.049985.

²³ 2014 New York State Medicaid data revealed per capita spending for adults to be 162% higher than for children (\$11,154 vs. \$4,253). See Bailit M and Houy M. “Value-Based Payment Models for Medicaid Child Health Services” United Hospital Fund, New York, NY July 2016. In addition, children represent only 24% of the U.S. population. See The Annie E. Casey Foundation. (2014). “The Changing Child Population of the United States: Analysis of Data from the 2010 Census.” Baltimore, MD. Retrieved from www.aecf.org, January 9, 2018.

²⁴ Curfman GD, Morrissey S, Drazen JM. “High-Value Health Care – a Sustainable Proposition” *New England Journal of Medicine* 2013; 369: 1163-64.

²⁵ Kelleher KJ, Cooper J, et al. “Cost Savings and Quality of Care in a Pediatric Accountable Care Organization” *Pediatrics* 2015; 135(3): e582-c589.

based payment. One author recently reflected on the longstanding bias towards spending health care dollars on chronically ill adults:

“...health care expenditures were prioritized towards treating adult “super-spenders”, frequently men with chronic conditions, such as heart disease, diabetes, depression and substance abuse. Spending on health promotion for children was historically located at one end of a long spectrum, with funding for intensive treatment of highly complex adults at the other end.”²⁶

Further, there is an expectation when targeting certain chronically ill adults that cost savings be generated within one or two years (at most)²⁷ and those savings can be used in part to fund the provision of additional, value-adding services that are not traditionally reimbursed, but are essential to containing costs. For example, realized savings can be used to fund care managers and care coordinators. Thus, value-based payment models for adults, in theory, are sustainable – at least as long as savings opportunities persist.

Because children are predominantly healthy and the focus of pediatric care is principally to set a foundation for children to meet and achieve their potential for health, opportunities generally do not exist for short-term cost savings to the same extent they are perceived to exist for adults.²⁸ In contrast to adult care, health care for children is predominantly focused on screening, preventive care and anticipatory guidance. The health and financial benefits from receiving good child health care are recognized over a longer period of time than are the benefits of adult care.²⁹ It also accounts for a small percentage of total health care expenditures. Where such short-term savings opportunities do occur, they are with small sub-groups within the pediatric population, including children with severe asthma and children with medical complexity.^{30,31,32,33}

The profound difference in health care objectives and services for children and adults and the strong link between childhood experiences and adult health and health care costs has not been

²⁶ Grimes KE. “Lessons from ACES: Pay Now or Pay (More) Later” *Academic Pediatrics* September-October 2017.

²⁷ A recent study calls this into question, observing that less than half of Medicare ACO savings were realized with high-risk patients. See McWilliams JM, Chernew ME and Landon BE. “Medicare ACO Program Savings Not Tied To Preventable Hospitalizations Or Concentrated Among High-Risk Patients” *Health Affairs* 2017; 36(12) 2085-2093.

²⁸ Raphael JP and Giardino AP. “Accounting for Kids in Accountable Care: A Policy Perspective” *Clinical Pediatrics* 2013; 52(8): 695-8.

²⁹ Raphael JP and Giardino AP, op. cit.

³⁰ Children with medical complexity can be defined as having medical fragility and intensive care needs that are not easily met by existing health care models. These needs may be the results of a congenital or acquired multisystem disease, a severe neurologic condition with marked functional impairment, and/or technology dependence for activities of daily living. See Cohen E et al. “Children With Medical Complexity: An Emerging Population for Clinical and Research Initiatives” *Pediatrics* 2011 127(3).

³¹ Malcarney MB, Seiler N, and Horton K. “Using Insurance Laws to Improve Access to Community-based Asthma Prevention” *Public Health Reports* 2013; 128(5): 402-6.

³² Berry JG, Hall M, Neff J, Goodman D, et al. “Children with Medical Complexity and Medicaid: Spending and Cost Savings” *Health Affairs* 2014; 33 (12): 2199-206.

³³ Ralston SL, Harrison W, Wasserman J, and Goodman DC. “Hospital Variation in Health Care Utilization by Children With Medical Complexity” *Pediatrics* 2015; 136(5): 860-7.

recognized in the design and implementation of value-based payment models. Rather, the adult care-inspired models have been applied indiscriminately to payment for child health care services. The next section briefly describes these payment models and offers examples of how they have been applied to child health care.

C. Review of Common Value-Based Payment Models

The currently dominant value-based payment models – supplemental payment, pay-for-performance, capitation, episode-based payment and shared savings on total cost of care – were designed for adults but have been implemented within the context of pediatric care across the United States. A more detailed discussion of the components of each model, and examples of each type of payment model, as applied to a pediatric setting, follows.

Supplemental Payment and Pay-for-Performance. This payment model is frequently implemented with two to four of the following key components:

- Fee-for-service payments for covered pediatric services. Fee-for-service payments are maintained as the traditional foundation of the payment model.
- Per-member-per-month (PMPM) payments for care coordination services, which are recognized as essential to providing more integrated, responsive and efficient services, but are seldom reimbursable under traditional FFS models. PMPM payment rates are either one average rate that applies to all attributed children, or varying PMPM rates that are based on the level of health complexity or care coordination services needed by a child.
- PMPM or lump sum infrastructure payments are paid to practices in recognition of the need to build the capacity to develop new work flow processes as part of practice transformation work, hold team meetings, build data collection capabilities and meet reporting responsibilities.
- Pay-for-performance payment opportunities are often tied to performance on clinical process and outcome measures, and sometimes to utilization and cost performance, although it can be dangerous to do the latter at the practice level due to statistical problems with small numbers.

Example: Rhode Island’s multi-payer PCMH-Kids initiative provides supplemental payments to pediatric practices that have committed to transforming into Patient-Centered Medical Homes. The payments are intended to fund care coordination services and transformation expenses. Practices receiving a \$3.50 PMPM care coordination payment and are eligible to receive a \$0.50 PMPM incentive payment (pay-for-performance) for reducing ED visits and meeting quality benchmarks.³⁴

Capitation. Capitation payments are prospective payments made on a monthly per-person basis for a provider-attributed patient population. Payments can be for a limited set of services, such as primary care or oncology care (“partial capitation”) or can be a comprehensive set of services (“full capitation”). Partial capitation for primary care, including for care of children, was commonplace in regions of the U.S. in HMO products in the 1980’s and 1990’s, but is in less use today outside of the West Coast.

³⁴ Susanne Campbell, Care Transformation Collaborative of Rhode Island. Personal communication, February 13, 2018.

Example: Capital District Physician’s Health Plan (NY) pays capitation for primary care. Capitation for care of children is risk-adjusted, and complemented with a quality incentive bonus (pay-for-performance payment).³⁵

Episode-Based Payments. Episode-based payments are fixed budgets or payments that can be applied to defined procedures (e.g., tonsillectomy), acute illness (e.g., upper respiratory infection) or for care of a chronic condition (e.g., asthma). Episodes are clearly defined in terms of what services are excluded and included from the payment, and for their time period. Episode-based payment differs from a case rate because the episode is often defined to include services provided by more than one type of provider. Episode-based payments also include time parameters. Payments may be prospectively paid, but most often providers are paid on a FFS basis with a retrospective reconciliation against the episode budget.

Example: The Arkansas Medicaid program has been the national leader in implementing episode-based payments for pediatric services, including for tonsillectomy and acute exacerbation of asthma.³⁶ The tonsillectomy episode begins with an initial consult for a tonsillectomy, adenoidectomy, or adeno-tonsillectomy up to 90 days prior to surgery. The episode includes the initial consult and any related services including sleep studies, head and neck x-rays, and laryngoscopy. It also includes the outpatient surgical procedure, any medications required and follow-up care related to the procedure within 30 days, including treatment for post-procedure complications or hospital admissions. The physician performing the surgery is the provider responsible for the episode and must have a minimum of five valid episodes within a 12-month performance period.³⁷

Shared Savings. Payment models for accountable care organizations (ACOs), and for some medical homes, are based on sharing any generated savings on total cost of care for a designated population. ACOs early in their evolution usually participate in “upside” shared savings contracts where they bear no financial risk for health care spending exceeding the target for their attributed patient population. ACOs earn shared savings if the total cost of care for their attributed patient population (for the included services) with a given payer come in below a pre-determined target, or relative to a control group. The target is frequently either a PMPM budget amount, a percentage of the medical expense portion of a health plan’s premium, or a cost trend. The ability of the ACO to earn shared savings is frequently linked to attaining quality targets. The better the ACO performs on meeting specific quality-based performance targets, the larger the share of the savings it can retain. Savings are shared between the health plan and the ACO at a percentage agreed to by the parties. The ACO then distributes the

³⁵ Eileen Wood personal communication. Also, see www.cdphp.com/providers/programs/enhanced-primary-care. Accessed February 28, 2018.

³⁶ Arkansas Medicaid did implement two episodes related to pediatric behavioral health conditions – attention deficit / hyperactivity disorder (ADHD) and opposition defiant disorder (ODD), but with the state’s recent move to provide more comprehensive mental health and substance use treatment services through its Behavioral Health Transformation initiative, the incentives related to ADHD and ODD have been transitioned to its PCMH model.

³⁷ Division of Medical Services. “Episode of Care: Tonsillectomy Episode Design Summary” Arkansas Department of Human Services. November 22, 2016. See www.paymentinitiative.org/Websites/paymentinitiative/images/Episode%20Design%20Summary%20-%20TONSIL%20-%202016-11-22%20-%20Final.pdf. Accessed March 13, 2018.

earned savings among its participating providers, often retaining some for infrastructure financing and development and/or for reserves.

ACOs may also accept varying levels of “downside” risk. If the total cost of care on a per capita basis comes in above the PMPM target (or trend target), the ACO is responsible for reimbursing the payer an amount that is predetermined by a risk sharing formula. Some models modulate the amount of risk assumed by reducing the amount if the ACO achieves certain quality targets.

Shared savings arrangements often accompany the following payment models:

- Fee-for-service payments for health care services provided. More advanced ACOs may receive prospective PMPM payments for total cost of care.
- PMPM payments. These are paid out in recognition that a successful ACO must build and operate extensive infrastructure around care management, care coordination, data collection and reporting, and patient outreach. The payments may also be used to fund ACO conduct of delegated health plan functions such as utilization management.

Because of the need for statistical confidence in savings calculations, this model is infrequently implemented at the individual practice level unless the practice’s experience is blended with that of many other practices.

Example: There are a number of pediatric ACOs in the country that have been formed by children’s hospitals.³⁸ Partners for Kids is an ACO in Columbus, Ohio organized by Nationwide Children’s Hospital. It operates under contracts with Ohio Medicaid managed care plans in a large urban and rural region of the state and serving approximately 325,000 Medicaid children through its ACO.³⁹

Two New Payment Models for Child Health Care

A value-based payment model for children needs to be predicated on financially supporting high-value care for children. But what constitutes high-value care for children? For the vast majority of children without medical complexity, high-value care has two primary components:

- timely and comprehensive preventive care, inclusive of screening, immunization, anticipatory guidance and other recommended well-child and adolescent services; and
- trauma-informed care to mitigate ACEs, address the social and emotional determinants of health, and proactively promote positive health, through resilience and social skills.

Care coordination is essential for addressing – as best possible – those social determinants of health that contribute to ACEs,⁴⁰ which evidence has shown impacts the health status and function of the child in adolescence and adulthood.

³⁸ Makni N, Rothenburger A, and Kelleher K. “Survey of Twelve Children’s Hospital-based Accountable Care Organizations” *Journal of Hospital Administration* 2015; 4(2): 64-73.

³⁹ A Study of Safety-Net Providers Functioning as Accountable Care Organizations, Report to the Medicaid and CHIP Payment and Access Commission by Abt Associates and Bailit Health Purchasing, July 22, 2015 and <http://partnersforkids.org/about/> (Accessed February 26, 2018.)

⁴⁰ ACEs also conversely can contribute to SDOH.

For the subpopulation of children with medical complexity, additional services are needed. These children are typically supported by clinicians – particularly specialists – associated with an academic medical center. Often their needs for preventive services that may address ACEs and other social determinants are not addressed. The additional services children with medical complexity require include:

- clinical care management; and
- coordinated care across medical specialties and home and community-based service providers.

In this section, we review separate recommended payment models for these two populations of children. In so doing, we note that there is a third cohort of children – children with one or more chronic conditions or mental health needs who can be treated by community providers. This includes an estimated 18% of US children. We posit that such children may be served in a care setting focused on children without medical complexity, perhaps with care management provided at a less intensive level than needed for children with medical complexity. For the purposes of this document, however, we focus upon payment models for the two populations defined above – children without medical complexity and those with medical complexity.

A. Value-Based Payment for Child Health Care: Children without Medical Complexity

Care for children without medical complexity should consist of regular primary care, with referral for specialty services and community resources, as needed. Specialty services may include treatment of asthma or a mental health condition, for example, and are typically medical and not procedural except in the event of an accident or injury. For this reason, our focus on value-based payment for children without medical complexity is on primary care.

Practice Team and Services

The primary care team should include a range of clinical and non-clinical staff appropriate for the size and composition of the practice and should all be trained in trauma-informed care. Whenever possible, one or more behavioral health clinicians should be a part of the practice team, minimally for assessment, brief treatment and referral. Ideally, a dental care provider should also be part of the team to ensure integrated care.

Finally, to ensure that children’s health is addressed beyond the confines of the practice setting, care coordinators, again appropriate for the size and composition of the practice, should be the locus of practice team efforts to connect families with community-based services and supports to address the social and emotional determinants of health and mitigate ACEs. The community resources with which they will connect children and their families may include but are not limited to schools, community and state-based social (human) service agencies (e.g., supplemental nutrition and child welfare), housing, child care, early education (e.g., Early Intervention), and public safety. For many children and families, the care coordinators could be social workers or community health workers.

Payment Model

We recommend a primary care payment model with three primary elements: capitation, care coordination and performance bonus. This model has been informed by our prior research,

including interviews with subject matter experts.⁴¹ The goal of this model is not to place financial risk on the practice, but to adequately fund traditional and non-traditional services, provide delivery service flexibility, and provide financial incentives to continually improve the quality of care provided.

Capitated payment for most primary care services delivered to children by pediatric and family medicine practices is our preferred model. For these children, traditional fee-for-service payment does not produce the same harmful effects as it does for adult care, where overuse and duplication are more commonplace due to the higher burden of illness and the resulting larger number of clinician relationships. Nonetheless, an alternative to fee-for-service payment is preferable for primary care. The reasons are as follows:

- Fee-for-service payment creates a financial imperative for pediatric primary care practices to churn a high volume of patient visits.
- Fee-for-service payment does not compensate for certain high-value services, including clinician communication and meeting participation with schools and other community partners, or other care coordination services.
- Fee-for-service payment currently does not provide compensation for alternative service modalities, such as televisits (although this is anticipated to change).
- Fee-for-service payment typically does not adequately compensate a clinician for spending extended time with a family for which additional time is warranted.

Capitation, in contrast, provides the practice with financial flexibility to spend more time with those children and families in need of such attention, and to deliver traditionally uncompensated high-value services.

We recommend that primary care capitation be structured in the following fashion:

- The rate should be based on historical costs that are adjusted upwards, if necessary, to assume:
 - delivery of trauma-informed, clinical care consistent with the Bright Futures guidelines;⁴²
 - assessing social determinants of health and ACEs, including parental screening; and
 - physician time for telephone calls and non-traditional visits.
- The rate should exclude vaccine costs to encourage vaccination, as well as those pediatric services delivered by some but not most practices (e.g., suturing). Payers and practices could also agree to exclude from capitation specific services about which there may be serious concern regarding underutilization. All of these residual services should be reimbursed on a fee-for-service basis.
- The rate should be adjusted downward for a given practice if experience shows the practice to be making higher-than-expected use of ED, urgent care and/or physician specialist services.

⁴¹ Bailit M and Houy M. “Value-Based Payment Models for Medicaid Child Health Services” United Hospital Fund, 2016.

⁴² Hagan JF, Shaw JS, Duncan PM, eds. Bright futures: guidelines for health supervision of infants, children, and adolescents. 4th ed. Elk Grove Village, IL: *American Academy of Pediatrics*; 2017

- The rate should incorporate behavioral health services and/or oral health services for primary care practices with co-located and operationally integrated behavioral health and/or dental care.

Primary care capitation should be complemented with a **care coordination payment**, probably paid on a per-member-per-month basis. The care coordination payment should fund care coordination for children with medical and social risk factors and help with addressing social determinants and ACEs. The payment should support the following functions, as needed:⁴³

- Introductory visits to establish relationships with children, youth, and families and set expectations for care coordination;
- Communication with families and among professional partners;
- Supplemental child/youth and family assessment beyond those that may already have been performed by the practice team (e.g., through social determinant of health screening) that assesses child development and social determinants of health, including
 - family status and home environment assessment (i.e., assessment of family medical/behavioral/dental health status; social supports of family and friends;
 - financial needs);
 - family demands, relationships, and functioning;
 - cultural beliefs and values of family;
 - strengths/assets of child, youth, family/caregivers, and current goals of child, youth and family); and
 - growth and development assessment (i.e., assessment of child/youth developmental progress/status; school performance/needs, and emotional/behavioral strengths and needs);
- Development and regular updates of a written care plan with the family, including a medical summary, action plan, and, if needed, an emergency plan, that reflects mutual goals;
- Arrangement for, set up, and coordination of all medical, developmental, behavioral health, oral health and social referrals, and track referrals and test results. For example:
 - working with the patient or parent/family member to schedule a referral appointment;
 - contacting the school to obtain information on support services being provided;
 - contacting a governmental agency, such as SSI, to determine service eligibility;
 - scheduling appointments with the hospital or clinic;
 - clarifying coverage with a payer; arranging for participation in vocational or training; and
 - conferring with the PCP;
- Provision of condition-specific and related medical, financial, educational, and social supportive resource information, while coaching for the transfer of health-management skills supportive of partnerships with families to care for their children and youth;
- Ensuring health care team integration of multiple sources of health care information and communication of this summary to the patient/caregiver, thereby building caregiver skills and fostering relationships between the health care team and families;
- Support and facilitation of all care transitions from practice to practice and from the pediatric to adult systems of care;
- Coordination of family-centered team meetings (across organizations, as needed); and

⁴³ Antonelli R, McAllister J, Popp J. op. cit.

- Use of health information technology to effectively deliver and continually monitor care coordination and the effectiveness of service delivery.

As noted above, not all children will need extensive care coordination services, and some may need none at all. Antonelli et al. suggest three levels of care coordination:

- Level 1: Basic. Families are informed of care coordination opportunities and services and are assisted in determining how and when they choose to take advantage of them. This type of care coordination is an “information and referral” transaction, but the services rendered are still be integrated into a comprehensive care plan.
- Level 2: Moderate. A care coordination plan is developed with families, identifying needs, short- and long-term goals, and related strategies, and clarifies how care coordination services will be delivered. The care coordinator transfers skills, knowledge, and increasing responsibility to children and families, as appropriate. Communication is coordinated among multiple stakeholders and information is incorporated into a care plan.
- Level 3: Extensive. Care coordination is longitudinal and far-reaching. The members of the care team and family determine methods of communication and intervals for the coordination of care, as well as assessments of progress and outcomes.

The capitation and care coordination payment(s) should be risk-adjusted for clinical risk (e.g., chronic condition, behavioral health diagnosis) and ideally, socioeconomic risk (e.g., foster care status). Clinical risk adjustment using claim-based diagnostic data produces fairer payment and reduces economic incentives for providers to avoid higher-cost children.⁴⁴ There are many commercially available clinical risk adjusters. Because these risk adjustment methodologies were developed using a population representing a combination of adults and children, and adults comprise the majority of the population, these risk groupers best reflect adult health conditions. There are products, however, that employ separately developed weights for children and adults. Still, some health plans have reported challenges with claims-based risk adjustment for primary care services for children and instead opt for a simple age-based adjustment.

Adjustment for socioeconomic risk poses a greater challenge for two reasons. First, socioeconomic risk factors are generally not collected reliably in administrative data, if collected at all. Second, while there is some evidence detailing the relationship between those data that are collected and short-term cost and quality, it remains limited.⁴⁵ Despite lacking well-established means for adjusting capitation and care coordination payments for socioeconomic risk, experimentation with what data are available is recommended based on existing research.

The third primary care payment model component is a **performance incentive bonus**. It is important that there be an explicit incentive and reward for the delivery of high quality and efficient care. Research suggests that potential rewards should approach 10% of compensation

⁴⁴ Hwang W, Ireys HT, and Anderson GF. “Comparison of Risk Adjusters for Medicaid-Enrolled Children With and Without Chronic Health Conditions” *Ambulatory Pediatrics* 2001;1:217-224.

⁴⁵ For example, race, ethnicity, payer, and median household income for the patient’s home zip code were considered in Sills MR, Hall M and Colvin JD. “Association of Social Determinants With Children’s Hospitals’ Preventable Readmissions Performance” *JAMA Pediatrics* 2016;170(4):350-358.

to provide sufficient motivation.⁴⁶ Performance measures should be evidence-based and drawn from national measure sets. Measures should ideally be adopted on a multi-payer basis as has been done in Minnesota, Rhode Island and elsewhere to support the practices in attending to shared priorities. Candidate performance measures are discussed later in this document.

While there are many ways to structure performance incentive programs, the design should have the following basic characteristics:

- the focus should be on population-based rates;
- excellence and improvement should both be rewarded;
- the incentive algorithm should be simple so that it is easily understood by the practice;⁴⁷
- practices should know the measures and performance targets prior to the start of the performance period, as well as the eligible incentive payments tied to different levels of performance;
- payers should provide practices with regular and timely feedback on performance relative to target;
- payers should identify for practices those patients with gaps in care specific to the incentivized measures; and
- incentive payment should be timely, and ideally, less often than annually.

States and health plans should routinely solicit provider practice input on incentive program design and make periodic modifications in response to the feedback. Measure sets should not undergo significant, frequent changes, however, given the effort and time required for practices to implement necessary practice changes to achieve improvement on any given measure.

B. Value-Based Payment for Child Health Care: Children with Medical Complexity

Practice Team and Services

The care team will include more specialty representation than for children without medical complexity. A specialist may, in fact, serve as the primary care provider. As with children without medical complexity, a range of clinical and non-clinical staff appropriate for the size and composition of the practice, all trained in trauma-informed care, should be present on the care team. Also, again, whenever possible, one or more behavioral health clinicians and a dental care provider should be a part of the practice team. Care coordinators are particularly important members of the care team for children with medical complexity. Their role will include referrals and coordination of care between subspecialty and primary care providers, development of shared care plans, and connection to community resources needed as identified through screening activities.

Payment Model

⁴⁶ Rosenthal M.B., Frank R.G., Li Z., Epstein A.M. "Early Experience with Pay-for-Performance: From Concept to Practice" *Journal of the American Medical Association* 2005; vol. 294: 14.

⁴⁷ For example, practices could be awarded one point for each measure for which the practice obtains a required level of improvement or achieves a high-performance target, with a predefined PMPM dollar value attached to different cumulative point values.

We recommend that care for children with medical complexity – estimated to be 1% of the pediatric population and primarily supported by care teams at tertiary referral centers – be paid using a **shared savings or shared risk model** focused on the total cost of care, unless the provider organization is already contracting on this basis for its total patient population.

Our rationale for this model is: a) it provides financial flexibility for the attributed provider as with primary care capitation, but to a far greater degree because the “budget” is so much larger; and b) it provides a financial incentive to reduce unnecessary care and to find better ways to meet patient and family needs, especially in light of the opinion of some experts that there are significant opportunities for supporting these children with more efficient care.⁴⁸ This is supported by research finding that children with medical complexity account for 40.1% of all hospitalizations for ambulatory care-sensitive conditions in children covered by Medicaid.⁴⁹

The total cost of care model for children with medical complexity should have the following characteristics:

- There should be a sufficiently large population to ensure an accurate assessment of financial performance.
- The total cost of care model should evolve from shared savings to shared risk, but should not be full risk due to the impact of high cost outliers.
- Eligibility for distribution of any earned savings should be predicated on performance relative to a pre-negotiated quality measure set, with increased distribution linked to higher performance. Quality performance could also mitigate losses under shared risk arrangements.

While incorporation of quality measures into the payment model is essential, it is also challenging. Even if the attributed patient population is large enough to support a total cost of care model, it is likely to be sufficiently small and heterogenous to make the use of condition-specific quality measures statistically difficult. Prevention and patient/family experience measures may be more tenable. This topic is explored further later in this document.

The total cost of care model should be complemented by a **care coordination payment**. Care coordination resources should include individuals with higher clinical credentials than is needed for children without medical complexity, and should reflect the intensive care coordination activities associated with caring for these children. More of the previously cited care coordination functions will be required for this cohort of children than for most children without medical complexity. There is some limited evidence that care coordination provided in the context of a total cost of care model can be effective in reducing emergency and inpatient service use.⁵⁰

Incorporating Quality Measures into Value-Based Payment Models for Children

As described above, we recommend that quality incentive payments be available for primary care practices serving children without medical complexity, and that performance on quality

⁴⁸ Bailit and Houy, op. cit.

⁴⁹ Berry JG, Hall M, Neff J, Goodman D, et al., op. cit.

⁵⁰ Weier RC, Gardner W, Conkol K, Pajer K, Kelleher KJ. “Partners for Kids Care Coordination: Lessons From the Field” *Pediatrics* Volume 139, Number 2, May 2017.

measures influence the distribution of savings and potentially mitigate losses for total cost of care models for children with medical complexity.

A. Selection of Performance Measures for Use in Value-Based Payment

Selection of performance measures for these purposes should start with agreement on what constitutes “value” in health care for these respective populations, and then apply a set of explicit measure selection criteria to inform measure selection. For example, the Measure Applications Partnership utilizes the following:⁵¹

- address high-impact measure areas that safeguard public health;
- patient-centered and meaningful to patients;
- outcome-based where possible;
- relevant for and meaningful to providers;
- minimize level of burden for providers;
- significant opportunity for improvement;
- address measure needs for population-based payment through alternative payment models; and
- align across programs and/or with other payers.

States, health plans, and providers could work from these criteria or others,⁵² and customize them for use following processes employed in multiple states.⁵³ These processes should include work by a consensus-driven facilitated body comprising clinicians from provider organizations, performance measurement experts, payers, state agency representatives and family representatives.

B. Candidate Performance Measures

There are a multitude of eligible performance measures – almost too many. Many are captured in existing measure sets, including the Core Set of Children’s Health Care Measures for Children Enrolled in Medicaid and CHIP,⁵⁴ other federal measure sets, state-defined measure sets, multi-payer measure sets, and payer-defined measure sets.⁵⁵ While most measure sets are not specific to children, child health care measures are found in many measure sets.

Measure set developers typically organize measures by performance domain in order to make sure that all priority dimensions of care are addressed in the measure set, and that the measure set is balanced. Common domains applicable to care for children include:

⁵¹ All MAP Orientation and Pre-Rulemaking Process Web Meeting, Measures Applications Partnership, National Quality Forum, November 6, 2017.

⁵² For additional examples of measure selection criteria, see www.buyingvalue.org/wp-content/uploads/2016/12/4-Buying-Value-Examples-of-Measure-Selection-Criteria-from-Five-Different-Programs-final.pdf. Accessed February 25, 2018.

⁵³ Waldman B and Bailit M. “Considerations for State Development of Performance Measure Sets” Robert Wood Johnson Foundation, Princeton, NJ, September 2014.

⁵⁴ See www.medicaid.gov/medicaid/quality-of-care/downloads/2017-child-core-set.pdf for the 2017 measure set. Accessed February 25, 2018.

⁵⁵ For a listing of some of these measure sets, see www.buyingvalue.org/wp-content/uploads/2017/02/6-Buying-Value-Measure-Sets-to-Identify-and-Review-final.pdf Accessed February 25, 2018.

- preventive care;
- behavioral health care;
- oral health care;
- chronic illness care;
- acute care; and
- patient and family experience.

Other domains of frequent interest in our experience, but with fewer candidate measures include:

- care coordination; and
- equity/disparity.

Finally, there is growing national interest in measures assessing provider attention to social determinants of health. There are as of yet no such measures in national measure sets. States and health plans are considering assessing social determinant of health screening as a starting point. Other publicly contemplated options⁵⁶ include referrals to community agencies following positive screens and ACO reporting of population-level results of screening activity. This topic can produce consternation among child health care providers who recognize the importance of social determinants of health, but are uneasy about being held accountable for ameliorating them.⁵⁷

Of course, measure sets for children with and without medical complexity should be expected to vary to some degree. For example, care coordination among primary care, specialist and community-based service providers will be of much higher priority for children with medical complexity. Performance measurement for that population will also be more challenging due to smaller population size and the heterogeneity of the complex needs.⁵⁸

It would be improper to recommend a specific measure set to be used in the value-based models recommended with this Challenge Guide given the importance of fitting the measure set to state or regional priorities and opportunities, but we can offer examples of what a parsimonious set might look like. Most measures would be appropriate for children with and without medical complexity, but additional experience-of-care measures are suggested for the children with complex needs measure set.

Measure Set Example for Incentive Payment Calculation for Value-Based Primary Care Payment

- Preventive Care
 - Childhood Immunization Status (NQF 0038)
 - Immunizations for Adolescents (NQF 1407)

⁵⁶ While planned for application at the health plan and not provider level, Oregon is developing a measure of kindergarten readiness. See www.oregon.gov/oha/HPA/ANALYTICS/Kindergarten%20Readiness%20Meeting%20Docs/Call-for-Applications-KR%20Metric-Technical-Workgroup.pdf. Accessed February 26, 2018.

⁵⁷ Bailit M and Houy M., op. cit.

⁵⁸ Taylor E, Dyer MB and Bailit M. “State Strategies: Value-Based Payment for Medicaid Populations with Complex Care Needs” Robert Wood Johnson Foundation, Princeton, NJ, April 2017.

- Developmental Screening in the First Three Years of Life (NQF 1448)
- Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life (NQF 1516)
- Dental Sealants on Permanent Molars for Children (Oregon Health Authority) *or* Dental Sealants for 6-9-Year-Old Children at Elevated Caries Risk (NQF 2508)
- Behavioral Health Care
 - Follow-Up Care for Children Prescribed Attention-Deficit/Hyperactivity Disorder Medication (NQF 0108)
- Chronic Illness Care
 - Medication Management for People with Asthma (NCQA HEDIS)
- Acute Care
 - None
- Patient and Family Experience
 - Clinician & Group CAHPS (CG-CAHPS) – selected domains or individual questions, supplemented with questions from one or more of the following survey question sets:
 - *CAHPS Item Set for Children with Chronic Conditions*
 - *Family Experiences with Coordination of Care (FECC) or Pediatric Integrated Care Survey (PICS) – selected domains or individual questions for children with medical complexity*

The above-listed measures are imperfect. These validated measures for children’s health care fall short in motivating needed quality improvement that links to health outcomes, especially in consideration of the impact of ACEs and SDOH. They remain the best measures that are available at this time, however.

Finally, because even risk-adjusted capitation can create a financial disincentive to expand access, it is worthwhile to consider adding a measure that assesses stinting. There are no standardized measures for this purpose, but health plans sometimes use outlier performance on ED visit utilization and urgent care as a marker, and apply a negative adjustment to the incentive formula. The same could potentially be done with medical specialist utilization. Such an approach must be applied with great care, however, given the role that random variation plays in service utilization within relatively healthy populations.

Implementation Considerations

Designing a value-based payment methodology for children is simpler than implementing one. There are three significant challenges that must be acknowledged.

- **Funding Support.** The care coordination function described herein is essential to addressing social determinants of health and ACEs. It is also seldom funded by public or private payers. For the recommended value-based payment methodologies to succeed, policymakers and payers will need to resolve that the marginal cost is a wise investment in the long-term health status of children and in their future functioning and productivity as adults.
- **Adoption of New Modes of Payment and New Care Pathways.** New payment models, including primary care capitation and total cost of care, challenge both providers and payers. *Capitation* requires changes in financial and clinical management for practices, and the addition of a care coordinator necessitates the articulation of new work flows. For payers without recent experience with capitation, new operational processes will need to be designed and tested. *Total cost of care contracting* has grown in popularity during the past several years and most payers now have at least some experience with it, but not all children's hospitals have comparable experience. In addition, experience suggests that it takes multiple years for providers to learn how to deliver care differently under a total cost of care contract.⁵⁹
- **Community Resources to Address Social Determinants of Health and ACEs.** While there are activities that care coordinators in primary care and ACO settings can do to address social determinants of health and ACEs for children with such need, "screening and navigation are only as effective as the resource landscape."⁶⁰ Because the United States invests far less in social services than in health care,⁶¹ there are limitations on what the recommended care coordination function will be able to achieve. A cultural shift to recognize and prioritize attention to the social roots of development and health status may be required before sufficient resources exist to address need.

Use Case Scenarios

To help envision how the recommended value-based payment models would support the delivery of trauma-informed care to address social determinants and ACEs, we present two sample use cases below.

Use Case Scenario 1: A two-year old boy shows signs of language delay. He lives in a single-parent household with his mother who has untreated depression and is unemployed. The family faces unstable housing and food insecurity. He receives Medicaid.

The *Primary Care Value-based Payment Model*, including a combined primary care capitation payment and care coordination payment plus performance bonus, would support improved

⁵⁹ Saunders R, Muhlestein D, McClellan M. "Medicare Accountable Care Organization Results For 2016: Seeing Improvement, Transformation Takes Time" *Health Affairs* blog, November 21, 2017.

⁶⁰ Onie RD, Lavizzo-Mourey R, Lee TH, Marks JS, Perla RJ. "Integrating Social Needs Into Health Care: A Twenty-Year Case Study of Adaptation and Diffusion" *Health Affairs* 2018;37(2):240-247.

⁶¹ Bradley EH et al. "Variation In Health Outcomes: The Role Of Spending On Social Services, Public Health And Health Care" *Health Affairs* 2016;35(5):760-8.

care for this child and his mother compared to a traditional, fee-for-service reimbursement model.

The primary care capitation payment for this provider would support the delivery of health promotion, evaluation and treatment, aligned with Bright Futures Guidelines,⁶² within a primary care home. The capitation payment includes costs associated with developmental and social determinants of health screening. This is intended to drive higher utilization of these evidence-based and best-practice approaches for identifying and targeting the social and emotional determinants of health. Finally, a risk-adjusted, per-member-per-month care coordination payment will support the clinic's care coordination infrastructure, allowing additional coordination of critical health system and community-level supports that aim to improve the conditions for this child's health and development. For this patient, coordination with housing and nutrition resources, the mother's primary care provider (i.e., to connect her with mental health care), community-based parenting education, Early Intervention, and Head Start enrollment will be critical to address the ACEs exposure. Finally, a performance bonus opportunity tied to measures such as Developmental Screening in the First Three Years of Life will ensure the timely identification of the boy's developmental delay.

Use Case Scenario 2: A 14-year old boy with Duchenne Muscular Dystrophy has increasing ventilation and ambulatory challenges, requiring nighttime mechanical ventilation and daytime wheelchair use. He has lived in medical foster care⁶³ since the age of nine, and has a history of neglect and abuse which occurred while under the care of his biological parents. Depression and PTSD are suspected, although he has been unwilling to offer insight into these symptoms and has refused mental health services.

For this patient, the *Payment Model for Children with Medical Complexity* would be appropriate. This patient receives his subspecialty care within a children's hospital setting where there is a large volume of patients with neuromuscular disorders. A total cost of care model, complemented by a care coordination payment, would allow the health providers to provide the optimal care for this adolescent facing medical complexity in addition to suspected complex trauma. The care coordination payment would specifically allow the hospital to provide targeted and enhanced care coordination services across the health care team (e.g., primary care provider, social work, behavioral health providers, subspecialty providers and inpatient care team) and with critical community resources. It would also ensure that the care team has the necessary resources to help this patient develop a patient and family-centered, shared plan of care. Finally, coordination with the school system to set up needed supports (e.g., a 504 plan⁶⁴ so that the patient can experience a modified school schedule), would be made possible with the additional care coordination resource. Finally, a performance bonus opportunity tied to measures such as Immunizations for Adolescents will ensure attention to his well-care needs in addition to his more complex subspecialty care needs.

⁶² Hagan JF, Shaw JS, Duncan PM, op. cit.

⁶³ This is foster care for children with medically complex conditions.

⁶⁴ A 504 plan is intended to serve as a blueprint for how a school will provide supports and remove barriers for a student with a disability, thereby ensuring that the child has access to the general education curriculum. It is required by the federal Rehabilitation Act of 1973.

Challenge Guide

Policy, Capacity, and Environmental Factors Needed to Optimize Payment Reform Models to Address Social Determinants of Health for Children Using a Trauma-informed Approach

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Presented To
AcademyHealth
1666 K Street, Suite 1100
Washington, D.C. 20006

Presented By
NORC at the University of Chicago
Cheryl Austein Casnoff, MPH
Senior Fellow
4350 East West Highway
Bethesda, MD 20814

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Introduction

The purpose of this challenge guide is to support efforts underway to build a national [agenda](#) to address childhood adversity and promote child and family well-being. The goal of the paper is to identify concrete recommendations related to models and methods for payment that will advance effective primary and secondary prevention and health promotion efforts related to Adverse Childhood Experiences (ACEs) and related social determinants of health. This paper outlines the range of contextual issues that must be considered for a payment model to be optimized for impact on social and emotional determinants of health (SEDH), including ACEs, and accompanies a parallel effort that examines the payment and delivery system models (e.g., risk adjustment, performance measurement, etc.) that can address primary prevention, secondary prevention, and complex trauma treatment. Specifically, this paper will discuss:

- The policy, capacity, and environmental (i.e., contextual) factors that need to exist and/or must be in place to optimize a pediatric payment model that: (1) addresses social and emotional determinants of health; and (2) uses a trauma-informed approach to target ACEs, toxic stress, and promote safe, stable and nurturing relationships. These contextual factors include issues related to:
 - Workforce;
 - Data collection, analysis, and sharing;
 - Community benefit organization/Social service organizations; and
 - Evidence (i.e., which interventions are most effective under which circumstances?).
- Actions to be performed by various stakeholders/key players who are responsible for encouraging/ensuring that those contextual factors are in place. Such stakeholders include:
 - Medicaid agencies (including through managed care contracting);
 - Other state agencies (e.g., licensing, credentialing; housing, child welfare; enacting other supporting policy issues);
 - Providers (both clinical and non-clinical);
 - Community based organizations; and
 - Health plans (both commercial and Medicaid).

Background

Consensus is increasing that social factors have a substantial impact on health outcomes and health care spending.¹² This is especially true for children, for whom social context may have an outsized impact on health and development. Ample research over the past two decades has demonstrated that early childhood adversity creates a pathway to super-utilization as the cumulative costs of negative early childhood experiences are expressed across the life span in increased risk of heart disease, early death, depression, and substance use, accompanied by greater healthcare use and costs.^{3,4,5,6,7,8,9} The immediate consequences of unaddressed psychosocial, economic, and environmental risk factors are similarly dire: children from lower income households have been found to have higher inpatient costs, spend more time in the hospital, and experience higher rates of mortality in the hospital.¹⁰

Given the documented negative impact of detrimental social and emotional determinants of health (SEDH) throughout the lifecycle,^{11,12,13} calls to redesign pediatric care to better address childhood SEDH have increased.^{14,15,16} SEDH comprise the traditionally defined social determinants of child and family health—including poverty, housing conditions, education, food (in)security, and housing (in)security—as well as the deleterious emotional and neurodevelopmental sequelae that can result from Adverse Childhood Experiences (ACEs) which include abuse, neglect, exposure to violence, and family dysfunction.^{17,18} Each of these interrelated developmental determinants have traditionally been outside the scope of the medical system. Yet there is heightened recognition that factors associated with SEDH may be mitigated through trauma-informed pediatric care that works in concert with non-health sectors to holistically advance child and family wellbeing and development. Strong evidence is showing that models designed specifically to address SEDH in the pediatric clinical care setting and in communities are emerging.^{19,20}

While these efforts encompass diverse systems, stakeholders, partners, payment, and settings, they share a major obstacle in the absence of the financial incentives needed to synergize cross-sector, trauma-informed collaboration to optimize pediatric patient outcomes and healthy child development. Children are perceived as relatively healthy due to low rates of disease and disability that generate low demand on the health care system: in the most recently published 2015 Medical Expenditure Panel Survey data, children constituted approximately 23 percent of the U.S. population children but accounted for only 8 percent of total healthcare spending.^{21,22} Yet despite their apparent health, as many as half of all children are exposed to ACEs and unhealthy environmental, school, workplace, and/or family contexts.^{23,24} Still, the current U.S. health care financing system is fundamentally designed to pay for sick care, not the social and other services that have profound implications for children's ultimate wellbeing.²⁵

To date, Medicaid has been the key innovator in efforts to address pediatric SEDH. Its leadership is perhaps appropriate given its considerable role as the nation's largest payer for health care services for low-income populations, and in particular for vulnerable, high-risk families. Since its inception in 1965, Medicaid has been the primary source of health insurance coverage for low-income mothers and their children in the United States.²⁶ In the U.S. today, Medicaid covers approximately one in three children ages 0 to 18 and slightly less than half of all births (46%).²⁷ Of particular significance to the policy and programmatic discussions surrounding SEDH is the fact that Medicaid plays a dominant role in providing coverage for the very young and the very vulnerable. In 2015, Medicaid was the most common type of health insurance among children ages 3 and younger, and in 2013 Medicaid covered 77 percent of children living at or below the federal poverty level.^{28,29} Altogether, Medicaid is uniquely positioned to address pediatric SEDH, particularly among the youngest and highest-risk children.

Several structures within Medicaid have enabled states to provide broad, inclusive coverage of preventative medical care and social services. The Early and Periodic Screening, Diagnostic and

Treatment (EPSDT) benefit provides comprehensive and preventive health care services for children under age 21, forming the foundation for preventive screening and treatment for those enrolled in Medicaid.³⁰ In addition to screening for health care, vision, dental, and hearing conditions, EPDST mandates that states provide any medically necessary service discovered through screening, regardless of whether those services are covered under the state's Medicaid State Plan.³¹ Some states have been able to use this provision to cover non-medical services that have a health benefit, such as Rhode Island's coverage of lead abatement and Massachusetts' Pediatric Asthma Pilot Program.³² Through a state plan amendment (SPA), states can additionally reimburse unlicensed practitioners for preventive services "recommended by a physician or other licensed practitioner... within the scope of their practice under state law."³³ This may allow reimbursement of non-clinical social service entities, providers, and services including community health workers, home visiting, remediation of environmental risk factors, education, group health education, and care coordination specialists. As an example, Minnesota passed enabling legislation in 2007 to secure a 2008 SPA that allows direct reimbursement of community health workers under their Medicaid program.³⁴ Other states may be utilizing Section 1115 demonstrations which are not discussed here.

The rate-setting tools present in the current federal Medicaid managed care regulations (released in 2016) offer another avenue for innovative services coverage through state Medicaid programs.^{35,36} These tools include permitted coverage of **value-added services** and **in-lieu of services**, which allow Medicaid managed care organizations (MCOs) to address their members' non-medical needs beyond the required benefits. Value-added services are those that a managed care plan chooses to spend capitation dollars on to improve quality of care and/or reduce costs, but which are not covered under the state plan and which cannot be included in capitation rates (but may be included in the numerator of the medical loss ratio).^{37,38} Examples of value-added services provided by MCOs have included housing-related services for housing insecure patients, car seats, home-delivered meals, home maintenance, non-medical transportation, among others.³⁹ In-lieu of services are defined as cost-effective alternatives that may be substituted for services or settings covered in a state plan, so long as the state determines the services are medically necessary, the beneficiary is not required to use the service, and the service is included in the Medicaid managed care plan contract.^{40,41} Examples could include medically tailored meals as a substitute for a home visit or home visits for new mothers rather than in-office mother and infant care.^{42,43} However promising, in-lieu-of services have received little traction among MCOs. In a recent survey of CEOs and financial and operational managers from 17 MCOs published March 2018, the Commonwealth Fund reported that while leadership was interested in in-lieu of services, no MCOs had yet developed such "in lieu of" agreements with their states.⁴⁴

While Medicaid may provide some flexibility to help states and providers address factors related to SEDH, challenges remain for integrating SEDH into traditional payment models both within and beyond Medicaid. These challenges include issues related to the need for increased staff with different skills (e.g., social service experience) beyond traditional clinical providers; a data infrastructure that can identify and facilitate sharing of information related to social factors (including parental social risks that impact child health such as maternal depression, tobacco use, and nutrition); and sufficient flexibility and resources to support the efforts of health plans and providers to address social issues and partner with other key stakeholders.^{45,46}

The purpose of this challenge guide is to explore this range of contextual factors that must be in place for a payment model to be optimized to impact SEDH, cite common challenges, and provide preliminary recommendations for addressing these challenges.

Methods

The guide is based on extensive review of formal and grey literature, case studies, and interviews with practitioners, experts in public and private health plans, state Medicaid agencies, academic medical centers, foundations, and other child health policy experts. Throughout, we provide a general overview of the case studies that are referenced; however, the appendix discusses these case studies in greater detail.

Environmental Scan

Several states and health care systems are systematically redesigning pediatric care to address SEDH. These initiatives are broadly aimed at aligning efforts across clinical and social services through workforce, data sharing, quality measurement, and cross-sector process improvements. Notable examples highlighted by key informants include the Help Me Grow and DULCE care models, as well as specific initiatives undertaken and/or planned by state Medicaid agencies in Arizona, Minnesota, and New York. Additionally, several similar models, such as the Massachusetts Child Trauma Project, have been written about in detail elsewhere.⁴⁷ We describe the promising practices observed in the models discussed below and highlight challenges that have surfaced in the execution of these innovative models. Worthy of mention are other initiatives in Ohio, Vermont, Oregon, and Georgia that we were not able to include in this challenge guide. These initiatives - focused on the community and exploring how partnerships between health care providers and community stakeholders including employers, faith based organizations, schools, etc. can promote healthy child development and positively impact child health outcomes – merit exploration and should be considered for future research.

CASE STUDIES

- **Help Me Grow (HMG)**
System-based model which encourages cross-sector partnerships and which can be applied in any community due to the model's focus on leveraging existing resources and opportunities
- **Project DULCE (Developmental Understanding and Legal Collaboration for Everyone)**
Clinic-based model that relies on the integration of both a family specialist and medical legal partners within clinics to address toxic stress in the primary care setting and strengthen the role of the parent as a change agent for their family and community.
- **Arizona: Comprehensive Medical and Dental Program**
Medicaid health plan that provides trauma-informed interagency services for Arizona's foster and corrections-involved youth
- **New York: The First 1000 Days on Medicaid**
Cross sector Medicaid redesign initiative to generate new care models and modes of investment that unite stakeholders across sectors to support optimal child outcomes throughout days 0 to 1000 of life
- **Minnesota: Integrated Health Partnership**
Accountable care organization that uses risk-adjusted population-based payments to incentivize care coordination and infrastructure enhancement to address patients' social issues

WORKFORCE

Background

One aspect of changing the culture of how SEDH is integrated into child health care is the need to reform health professions' training and experiences. There are increasing calls to redesign health professional training to both meet the changing needs of the U.S. population (e.g., aging and increasingly diverse) and the need to address SEDH to truly impact the health of the American population. One key aspect to training redesign is the need for curriculum and clinical experience that help students in the health care

profession understand the ways that social factors impact health. The goal is to prepare students to recognize that both biological and non-biological factors impact their patients and to develop skills necessary to provide treatment approaches that recognize the need to work in broader teams to care for patients and their families.⁴⁸

Modern training of healthcare professionals also needs to be team-based and inter-professional (including physicians, physician assistants, nurses, social workers, and others), emphasize the importance of the patient’s social history, take place in varied locations (e.g., hospitals, clinics, schools, community health centers), and include opportunities for service-learning that incorporate formal educational approaches with community service. Training should also recognize the need to develop non-traditional partnerships that include social services and legal consultations that may be necessary to address SEDH factors. To move towards these new models of care, health professions training and continuing education must provide a broad range of health professionals and allied health providers with the skills needed to work in a variety of areas including rural and underserved communities and the ability to refer patients to social service resources and coordinate efforts with other sectors to improve health.⁴⁹

The Advisory Committee on Training in Primary Care Medicine and Dentistry concluded that addressing SEDH must begin with educating current and future healthcare professionals on the ways that social factors impact health. The Committee noted that “SEDH should be included in the undergraduate, graduate, and continuing education curricula of health professionals, so that students are taught early in their education and throughout their careers the skills needed to help their patients achieve optimal health and to reduce health inequalities.” They also noted that SEDH should be included in competency requirements and incorporated into community-based clinical learning experiences that enable students to become aware of and sensitive to the needs of the population they serve. SDH competencies include cultural humility, reflection, advocacy, cultural competency, partnership skills, patient communication, and empathy. The report concluded that the “goal is to prepare students who take into account both biological and non-biological factors when assessing their patients and developing treatments plans.”⁵⁰ In addition to clinical training, public health departments and their partners need to consider how SEDH in the places where people live, learn, work, and play affect a wide range of health risks and outcomes. Public health departments are well situated to incorporate SEDH into all aspects of public health work and can serve as the bridge between clinical, social and other sectors invested in addressing SEDH.⁵¹

Promising Practices

Several care models have employed innovative workforce development, training, and capacity strategies to promote protective factors among families, address early childhood adversity, and manage SEDH. One such strategy, observed in the Help Me Grow, DULCE, and certain state initiatives, is the use of a centralized care “hub” or **central care coordinator** to facilitate service delivery across sectors and state and local agencies. *Help Me Grow (HMG)* is a system-based model that relies on four Core Components and three Structural Requirements (See Appendix: **Exhibit 1**). One of the HMG Core Components is a Centralized Access Point. Typically a call center (e.g., United Way’s 2-1-1) serves as an **information hub** for families and child health care providers where they can learn about community resources and begin the referral process. The call centers are staffed by **HMG Care Coordinators** who provide counseling to families regarding their child’s development and behavior and facilitate the referral and linkage process to community-based resources. HMG is also diffusing a peer-to-peer learning model across its affiliate programs known as the Care Coordination Collaborative (CCC). This model, which was first developed at Connecticut Children’s Medical Center, consists of regular meetings with child-serving programs in order to share information on local and state resource providers and discuss challenging cases and common barriers with peers and collaboratively work to identify potential solutions.^{52,53}

Project DULCE has emerged as another promising program that uses a similar hub-and-spoke infrastructure, with a **central “facilitator” that coordinates a child’s care** across sectors. Project DULCE aims to enhance family protective factors, address social determinants of health, and promote greater family autonomy during the critical first six months after childbirth through a core set of cross-sector and workforce innovations at the family, provider, and community levels. Project DULCE achieves this through its primary innovation: the **integration of both family specialists and medical legal partners within pediatric primary care clinics**. The **DULCE Family Specialist** is the focal point of the DULCE model and operates at the nexus of the child’s clinical and social care, helping connect the family to resources to address social issues and unmet legal needs, providing educational information on child development, and administering developmental, social determinant of health, and family mental health screenings. The Family Specialist works closely with a medical legal partner, who provides assistance for more complex legal issues.⁵⁴ The medical legal partner is the workplace embodiment of the Medical Legal Partnership (MLP), which is a national model that connects lawyers with medical teams in order to address patients’ legal needs that may impact their health. The MLP model is discussed in greater detail in the *Appendix*.

Several state Medicaid programs, including Massachusetts, Michigan, Arizona, and Rhode Island, have enacted initiatives with similar central “hub” features to address the complex care needs of targeted pediatric populations, most commonly **children involved in the welfare or corrections systems**. These states have each implemented team based “wraparound” practice models wherein a central care coordinator or “wraparound facilitator” coordinates the care delivered by a robust and complex clinical and social service provider network, along with complementary policy and programmatic reform (including physical infrastructure and billing system modifications) to support this unique practice model.⁵⁵

Arizona’s Comprehensive Medical and Dental Program (AZ CMDP) is a primary example. Enacted through state law in 1970,⁵⁶ the AZ CMDP provides integrated, cross-sector care for vulnerable foster- and justice-system-involved youth.⁵⁷ The AZ CMDP workforce comprises a diverse set of clinical and non-clinical service providers including the **foster care giver, the member’s custodial agency representative, care coordinators, behavioral health service providers, primary care providers, and dentists**. The custodial agency representative acts as the member’s inter-agency case manager; however, this representative does not coordinate medical care, which is a task assigned to the care coordinator staff corps. This staff corps provides support across areas of care and care activities, such as helping patients schedule and maintain appointments and assisting with referrals to community and cross-departmental programs including the Women, Infants and Children Program, Head Start, Arizona Children’s Rehabilitative Services, the Arizona Regional Behavioral Health Authority, and the Arizona Early Intervention Program.⁵⁸

Arizona’s modifications to its billing system represent one of the additional structural innovations necessary to enable the wraparound coordination of cross-sector services. The AZ CMDP’s team-based wraparound practice approach is facilitated by a Medicaid billing system designed to accommodate diverse services, levels of care, and care settings.⁵⁹ Arizona has made high-need case management a **covered Medicaid benefit** that is primarily billed as case management, a strategy that acknowledges the critical role of case management in care coordination for foster- and corrections-involved youth, given their cross-systems involvement and numerous needs.

Other helpful structural innovations include the **co-location of clinical and social service providers**, which is a seemingly small but crucial workforce and practice innovation that promotes these models’ success. To enhance the seamless integration of cross-sector services, in the AZ CMDP behavioral staff are co-located in child welfare offices, which child welfare staff have reportedly found, “extremely helpful.”⁶⁰ Additionally, co-location of the DULCE Family Specialist, MLP representative, and primary

care team is a critical enabling factor in the optimal coordination of cross-sector care for the pediatric patient. When a DULCE pediatrician needs to provide legal support for a family, they are able to communicate with the lawyer/paralegal in real time to receive advice, legal assistance, and support.

Each of these care models rely on an appropriately **trained workforce**. HMG Care Coordinators often have a background in child development and must be trained in telephone casework and cultural competency.⁶¹ In the original DULCE program, the Family Specialist has postgraduate training in child development and received additional training from *Healthy Steps* and Medical Legal Partnership - Boston (MLPB) in order to learn how to identify both legal and social needs, empower families to be their own advocates, and connect them with needed legal and social supports in the community.^{62,63} Through a specialty provider initiative, Arizona has mandated trainings on issues relevant to the child welfare population for behavioral health providers participating in Medicaid provider networks who are specialized in trauma-informed care for sexual abuse, attachment disorders, and early childhood.⁶⁴

Challenges

Additional policy and programmatic reforms may yet be necessary to address current barriers to reimbursement that inhibit the workforce innovations required to address pediatric SEDH. These include the amendment of state scope of practice laws to enable the authorized coverage and billing of nontraditional services, and the provision of sufficient funding for staff training and start-up costs.

As a part of its *First 1000 Days Initiative*, which convened a series of cross sector workgroups throughout 2017 to generate new cross-sector care models and modes of investment to support optimal child outcomes throughout a child’s first 1000 days of life, New York State (NYS) has developed 10 formal policy recommendations to address these and other workforce challenges.⁶⁵ One of these proposals (*Proposal #5*) would enact a Statewide Home Visiting program, for which New York State recently proposed a collaboration between the NYS Department of Health’s Office of Health Insurance Programs and the NYS Education Department to explore statutory changes needed to modify scope of practice laws to allow non-clinician home visits to be billable. These changes would complement a pilot program in three high-perinatal-risk communities to scale-up evidence-based home visiting. Another of these proposals - *Proposal #3 – Expand Centering Pregnancy*, which would fund pilot projects in communities with the poorest birth outcomes to encourage obstetrical providers serving Medicaid patients to adopt the Centering Pregnancy model of prenatal care - addresses the **need to provide financial support for staff training and start-up costs, as well as incentive payments to encourage provider uptake** of the model. Under *Proposal #9 – Parent/Caregiver Diagnosis as Eligibility Criteria for Dyadic Therapy*, New York is also proposing to enact billing modifications to allow pediatric providers to bill for parent/caregiver-child dyadic therapy based solely on the parent/caregiver being diagnosed with a mood, anxiety, or substance use disorder.

Key Informant-Noted Challenges: WORK FORCE

In small practices, it is **time consuming and burdensome** for PCPs to use part of their short visit-time with a patient to talk about social risk factors and enter data into an electronic medical record (EMR). To reduce burden, small providers could **consider hiring a scribe** to help enter medical and social data into the EMR.

Of note, infrastructure innovations – such as billing system modifications and statutory expansions of clinical and nonclinical providers’ scope of practice – may face regulatory and political hurdles. These hurdles would be state-specific and highly dependent on the budgetary, political, and administrative context within each state. Potential barriers can also occur when health care professionals **collaborate with legal representatives**. For example, MLPs are often unable to be sustained or expanded due to lack of funding. Often, MLPs are funded by legal aid agencies or law school clinics, which do not necessarily account for the health-related needs of the population being served by MLPs.

CROSS-SECTOR PARTNERSHIPS

Background

There is a clear understanding that addressing SEDH requires multi-sector partnerships that include entities across health, social services, food, housing, utilities (e.g. power, electric, heating), justice, faith-based organizations, and employers. Whether an initiative is driven by a health care provider, including a pediatric ACO or a managed care organization, by a state Medicaid agency, or a local children’s hospital, collaboration with the community is critical to the success of any broad initiative. Most commonly, partnerships involve a nonprofit CBO and a healthcare provider, such as a hospital, but success may also depend on partnerships at the state and local level among key government entities such as Departments of Public Health, Mental Health, Aging, and Police, or other partners such as health plans or foundations. Successful partnerships can also extend beyond the healthcare and human services sectors to bring new stakeholders, services, and resources together in pursuit of shared goals including the business community.⁶⁶ This may result in shared resources towards a common goal, including public and private funding that can help sustain SEDH initiatives.

Promising Practices

Cross-sector partnerships are an essential component of the prevailing care models that aim to address SEDH in the pediatric population. These partnerships typically take the form of service linkages among community-based organizations, formal inter-departmental contracts between state agencies, and the formation of multidisciplinary advisory boards.

HMG affiliate programs across the country are encouraged to engage in **local cross-sector partnerships with service providers, child care providers, and health care professionals**. Engagement with these cross-sector partners occurs in a variety of ways—Help Me Grow New York, for example, includes information on its website for providers on training sessions, screenings, and how to partner with HMG in their local area through contacting the Centralized Access Point (2-1-1).⁶⁷ The website also includes links to referral forms for health care, child care, and social service providers to fill out for their clients or patients who would benefit from the child development education and community resource information offered through HMG.⁶⁸ Another HMG affiliate program, HMG Alabama, has multiple partnerships across the state with organizations that **support both implementation and funding efforts**. In order to optimize engagement and ensure families obtain access to HMG services, HMG Alabama partners with the voluntary pre-K program, First class Pre-K, and the home visiting program, First Teacher, to integrate HMG into their existing referral processes.⁶⁹

The AZ CMDP Medicaid health plan relies heavily on a **formal, inter-departmental agreements**. The AZ CMDP is housed within Arizona’s Division of Children, Youth, and Families (DCYF) which exists within the Department of Economic Security. It is run by the Arizona Medicaid program, which contracts with DCYF via an Intergovernmental Agreement that allows Arizona Medicaid to be the health plan for foster care and corrections-involved children.⁷⁰ The inherently cross-sector design of the CMDP underscores its mission to provide medical, behavioral health, dental services, and comprehensive cross-sector case management. Under the CMDP, the health plan partners with the child welfare system, foster care givers, and Regional Behavioral Health Authority (RBHA) to deliver integrated physical and behavioral care.⁷¹ When an Arizona child enters the foster care service, DCS initiates what is known as a “Rapid Response Referral” through which every child receives a behavioral health assessment within 72 hours of entering foster care.^{72,73} Any urgent physical health care needs discovered during the Rapid Response screens are brought to the attention of the case coordinator. Further, a comprehensive medical screening consistent with EPSDT requirements must then occur within 30 days of entering foster care, and all subsequent EPSDT visits must include developmental and behavioral health screens. The program

also provides non-emergency medical transportation for patients to medical appointments in instances where the parent, legal guardian, or foster care giver cannot.⁷⁴ Additionally, the AZ CDMP encourages cross-sector service coordination through monthly emails to the Division of Child Safety (DCS) notifying them of children who have not received an EPSDT or dental visit within 120 days of removal from their home.

Several of the New York State *First 1000 Days* recommendations rely on **cross-sector partnerships at the individual organization and state agency levels**. These include a proposal (*See Appendix: Proposal #2 - Promote Early Literacy through Local Strategies*) to provide three years of pilot funding to any interested mainstream managed care organization to expand the use of Reach Out and Read (ROR) programs in pediatric primary care. ROR is a national evidence-based program in which pediatricians can promote early literacy by talking with parents about the importance of reading aloud with their young children, providing parents with advice and encouragement concerning book selection and reading practices, and giving the child a book to take home and keep.⁷⁵ Another (*See Appendix: Proposal #10 - Pilot and Evaluate Peer Family Navigators in Multiple Settings*) would develop, implement and evaluate a number of pilot programs to provide peer family navigator services in community and primary care settings to help families address both health needs and social determinants.

Health care and social service organization partnerships are integral to the IHP model in Minnesota. IHP 2.0 further encourages these relationships through their shared savings approach available to provider groups who select Track 2. In this track, larger provider organizations who have a higher capacity to take on more complex risk arrangements can qualify for decreased downside risk and **protection from financial loss** if they have a **contractual relationship with a social service organization**. IHPs are encouraged to develop partnerships with CBOs who focus on a variety of different social services for patients, including: housing, food security, education, and transportation.⁷⁶ Of note, IHP 2.0 gained momentum and buy-in to financially incentivize health care providers to partner with CBOs through **another state-wide initiative being carried out with a similar agenda**. The Accountable Health Model, which was developed through a State Innovation Model (SIM) grant, built on the work being done in IHP 1.0 to enhance service delivery and payment models that support integration of medical care and community prevention services.⁷⁷

Project DULCE developed an **advisory board which included representatives from both local and state programs**, including: Boston Public Health Commission, Massachusetts Children’s Trust Fund, Massachusetts Department of Children and Families, Massachusetts Department of Public Health, Smart From the Start, and Thrive in 5 Boston. Board meetings served as an opportunity for information sharing on topics such as inter-agency trainings and discuss ways to improve cross-sector collaboration (e.g., using common language).⁷⁸ In the first of its 10 *First 1000 Days* recommendations (*See Appendix: Proposal #1 - Create a Preventive Pediatric Care Clinical Advisory Group*) New York State has proposed that Medicaid convene a clinical advisory group charged with developing a framework model for how best to fully implement the Bright Futures Guidelines. Proposed topics for consideration by the advisory group include how to identify ACES and incorporate trauma-informed care into practice, and the use of multi-disciplinary teams for delivering evidence-based programs, among others. The membership of the advisory board is yet to be determined.

The use of **Community Care Teams (CCTs)** is an additional promising practice that has been used by several state Medicaid programs—including Minnesota, North Carolina, Vermont, New York, and Maine—to address medical as well as non-medical aspects of patient care. CCTs, also referred to as interdisciplinary care teams, are locally based, multi-disciplinary groups of care providers. In contrast to traditional care teams that focus solely on patients’ clinical needs, CCTs address medical issues and the social determinants of health. CCTs assist with health management, facilitate communication between patients and providers, assess social and non-clinical barriers to health, and connect patients to

appropriate treatment and other needed resources. While the structure of CCTs may vary by state and by community, CCTs generally incorporate a range of clinical and non-traditional health providers such as community health workers, peers, and navigators. The teams facilitate patient-centered health care and social service connections that are culturally appropriate, high-quality, and cost-effective.⁷⁹

Challenges

State Medicaid initiatives that address SEDH in certain high-risk targeted populations may thereby exclude the general pediatric population. For example, while Arizona’s governor and state legislature have made trauma-informed interagency services coordination a priority for foster- and corrections-involved youth through the AZ CMDP, these priorities are not being applied to the state’s general pediatric population.

Resource limitations related to available funding, staff time, and other organization/agency commitments are another well-recognized challenge. The final report of the original Project DULCE RCT noted obstacles related to partner agencies’ prior commitments to implementing other early childhood primary care initiatives such as Project LAUNCH and MYCHILD. As a result, the pediatric clinic implementing DULCE was simultaneously implementing other similar initiatives. The leadership team at the clinic and the advisory board ultimately found a way to administer all three initiatives through joint priority setting and ensuring they all provided complimentary, not duplicative, clinical services.⁸⁰

Additional anticipated challenges include **barriers to measurement** of the impact of strategies that involve cross-sector partnerships, as well as the costs associated with measuring this impact. In the case of New York’s proposed ROR initiative (*See Appendix: Proposal #2*), the primary anticipated return on investment is improved language development and consequently reduced special education costs.⁸¹ However the program proposal does not include the costs of measuring language development, and notes that, “Measuring the impact of the collaborative strategy will be difficult and could be discouraging to participants.”⁸² Furthermore, being able to trace any potential future educational cost savings back to this program would depend on mutual commitment to and resource allocation across sectors for using particular metrics and developing a common data infrastructure, which pose their own complex challenges (discussed in greater depth below).

Finally, the very factors that necessitate cross-sector action on the part of medical and social services stakeholders may inhibit efforts to address them. For example: one critical service the DULCE Family Specialist provides is telephone check-ins. In their report of findings from the Original DULCE RCT, the research team noted that connecting with participating families over the phone proved to be a major challenge. Many participating families did not have active or stable cell phone numbers, often times due to not being able to afford cell phones or running out of paid minutes. Therefore any sort of data collection, reminders, check-ins, or follow-up via telephone proved not to be the most effective approach.⁸³

DATA SHARING

Background

Nearly one in eight children (12 percent) have had three or more negative life experiences associated with levels of stress that can harm their health and development.⁸⁴ Poor children and near-poor children are more than twice as likely to have had three or more other adverse experiences compared with other children. Fourteen percent of children living at the poverty level or below had three or more adverse experiences, compared with 12 percent among children with family incomes between 101 and 200 percent of the poverty level, and six percent among children living at more than twice the poverty level.

Similarly, among children at poverty level or below, 54 percent had no adverse experiences, compared with 59 percent among children with family incomes between 101 and 200 percent of the poverty level, and 70 percent among children living at more than twice the poverty level, in 2011/12.⁸⁵

Other factors that may impact a child’s social and emotional health include:

- Economic hardship
- Divorce or separation of a parent
- Death of a parent
- Parent served time in jail
- Witnessing adult domestic violence
- Victim of or witness to neighborhood violence
- Living with someone who was mentally ill or suicidal
- Living with someone with an alcohol or drug problem
- Being treated or judged unfairly due to race/ethnicity

The complexity of this wide range of social and emotional factors that are known to impact children leads to the need to **compile information across multiple sectors** impacting a child’s life. Since so many of these factors that impact a child’s family fall outside of the health care sector, and may be confidential, it becomes extremely challenging to identify data sources, combine multiple information sources, and ultimately integrate these factors into a child’s “record” to assure that all parties involved in their care and wellbeing share this critical information. Collecting and using the SEDH data to help design innovative programs to serve key populations, including children covered by Medicaid, is key to successful models to address SEDH.⁸⁶

Despite the growing recognition of the importance of consolidating data related to SEDH, gaps persist in the ability to **access SEDH data consistently and reliably and in the ability to incorporate those data into clinical practice, outcome measurement, and payment models.**⁸⁷ In addition to defining the data components related to SEDH, there is also a need to develop consensus on how to standardize data collection approaches and how to ultimately incorporate relevant information into a child’s record. This is particularly challenging since much of the SEDH information relates to the child’s family, rather than the child.

Another major barrier is the **lack of interoperability across clinical and social information systems.** Without the capacity to support data-sharing across different systems, housed in different entities, it is virtually impossible to combine data from different sources into a single record. Additional challenges include the need to **protect patient privacy**, particularly as it involves the child and family’s social and behavioral health information that may be maintained by a variety of providers, agencies, and health plans. Sharing information across these sectors raises additional concerns about legal and regulatory data protections about **what data can be shared, with whom, and for what purposes.** This is particularly challenging in sectors beyond health care, such as social services, housing and food support, where data cannot be easily shared and are not protected by the Health Insurance Portability and Accountability Act.

⁸⁸

Promising Practices

The models referenced throughout this paper employ a mix of cross-sector data management strategies to **facilitate data storage and documentation, referrals, care coordination, and quality/performance measurement.** For instance, the HMG model does not employ a universal electronic data sharing system or platform across all HMG sites. Rather, communities **leverage existing data sharing platforms and resources** or develop their own systems based on the unique needs of population they are serving. In order to encourage the sharing of best practices and adoption of comprehensive data platforms, HMG

National offers **technical support and resources to its affiliate sites on building an IT infrastructure**. This includes sharing information on effective data platforms currently being used at various affiliate sites across the county. Additionally, HMG Utah has developed a **family database** that houses comprehensive data on follow-up information, the family record, the child record, provider information, and referrals.⁸⁹ The database has capabilities to generate reports through pulling information on data entered into the database. Through the HMG Network connections, HMG Alabama has adopted HMG Utah’s family database to improve their data collection and client reporting and follow-up processes.⁹⁰

In the original DULCE program, all communication between MLPB and the Family Specialist, referrals from the DULCE clinic to MLPB, as well as documentation of any work that the MLP performed for DULCE families was **stored in the MLPB Case Management database**.⁹¹ In addition to the MLPB Case Management database, the Family Specialists maintained an **electronic activity log via an Access database**. This log included documentation of every interaction that occurred with or on behalf of participating families—including both direct service, advocacy and resource support, and data collection results.⁹²

State Medicaid agencies vary broadly in their data-sharing capabilities. Some states have invested in updated comprehensive IT infrastructure including data-sharing relationships or cross-sector data systems with other state governmental social service organizations. In *Arizona*, the **AZ CMDP and the child welfare data systems interact**, which allows ready data sharing between the two systems and facilitates the identification and coordination of cross-sector services. *Minnesota* has the advantage of being a **consolidated agency which includes multiple health and social service programs** including Medicaid. Therefore, they have **access to many different types of data** beyond Medicaid claims, including: mental health, long-term care, chemical dependency and treatment, child welfare, economic assistance, and food supports. For Minnesota’s Integrated Health Partnership (IHP), the Department of Human Services (DHS) feeds back social risk factor data to participating clinic systems so they can learn more about their attributable population (e.g., homelessness rate, chemical dependency rate). This aggregate-level data allows each IHP to see how their patient population’s social complexity compares against the rest of the state’s Medicaid population.

Challenges

The data management strategies employed by the models referenced throughout this challenge guide are diverse; there is no uniform strategy. This may be appropriate, given the variety of systems and contexts in which each program operates. However, this lack of uniformity stymies the development of a consistent interoperability strategy necessary to facilitate concerted cross-sector care management of pediatric SEDH. For example, HMG National provides technical assistance to its affiliate programs across the country in 28 states and continues to grow and expand. Although the HMG model’s flexibility allows it to be adapted in any community, and guidelines and resources are provided to ensure that data collection and sharing occur systematically in each affiliate program, the range of local and state data resources available across the different programs means that each HMG program has a very different IT infrastructure. Ultimately, it is most likely not feasible for an adaptable model like HMG to implement a comprehensive electronic data sharing platform across all the HMG affiliate sites.

New York has included a proposal that directly addresses the **state’s current lack of a cross-sector data sharing platform** in *Proposal #7 - Data system development for cross sector referrals*. Under this proposal, New York Medicaid would direct **competitive grant funds to purchase a Medicaid determined hub and spoke data system** that enables screening and referrals across clinical and community settings for up to 3 communities. The proposal acknowledges the numerous challenges associated with this effort, including – among others – that: (1) Many social determinants of health screening/referrals tools are still in development and testing phase; (2) Medicaid managed care plans are unlikely to take on the role of "technology hub" for fear of taking on additional unreimbursed administrative costs; and (3) Proprietary data sharing solutions are already entering the market place, which may pose barriers to interoperability and frustrate community collaboration.⁹³

Cleaning data is another important, yet time-intensive component of data collection and data sharing which has implications for data sharing and program evaluation. The researchers involved in the original DULCE program noted they found multiple data discrepancies and errors, particularly pertaining to ambiguous parent-reported responses. The researchers noted that the extra time it took to clean the data was both costly and inefficient.⁹⁴

Although states like Minnesota are leveraging cross-sector data sets to share aggregate-level data with providers participating in their IHP program, these social risk factor data are not yet being fed back to providers on an individual, patient-level. Although accessing patient-level social risk factor data would allow providers to identify and mitigate issues on an individual basis, **a variety of logistical and legal factors make it challenging to share data at this level of granularity.**⁹⁵

Accessing and sharing parental and caregiver data is another notable challenge in the pediatric primary care setting. Unless a parent and child are both members of a comprehensive, integrated health care plan like Kaiser Permanente, or they live in a state with a cross-sector data-sharing platform which houses both adult and child data, it can be challenging for a pediatric provider to both access and share data pertaining to parental social risk factors (e.g., parental mental illness or substance abuse). Accessing parental data on social risk factors could greatly help pediatric providers better understand their patient’s home life and how to best provide supports to their family, which could ultimately help improve health outcomes. Similarly, when a caregiver’s physical or behavioral health issues are identified, discussed, or even treated in the pediatric care visit, a data-sharing system or communication platform between the pediatrician and the caregiver’s adult health care provider could help ensure the family receives necessary resources and treatment and that the caregiver’s health and social concerns do not fall through the cracks.

QUALITY/PERFORMANCE MEASUREMENT

Background

While there is growing interest in addressing SEDH, **lack of standardized measures and a consistent approach to measuring SEDH** remains a barrier to widespread adoption of consistent SEDH

Key Informant-Noted Challenges: DATA SHARING

- Mental health is often carved out and separate from primary care which makes it **difficult to link mental health to the rest of the child’s health data** (e.g., some PCP offices cannot electronically access data on prescriptions a patient or family received from a mental health organization and must rely on patient self-report).
- There are many challenges that go along with **sharing individual-level social risk factor data** with providers, including authorization and trust violation.
- Although education indicators (e.g., school absenteeism, kindergarten readiness) are strongly tied to health, it is **challenging for some Medicaid agencies to access education data** due to the lack of a data sharing platform across different government agencies.

performance measurement. As noted above, data sources may vary across sectors, including housing, health, employment, transportation, justice, etc. and there is a lack of commonly accepted definitions and standardized SEDH measures. There are also significant variations in how SEDH information can be aggregated across settings, how to link children and their families, and how states, payers, health plans and providers are collecting, using, and reporting this information. There are growing calls for standardized SEDH measurement, including increased roles for national organizations focused on measurement standards.⁹⁶

In order to move forward toward cross sector quality/performance measurement, key steps will include:

- Identifying SEDH priorities and associated measures;
- Outlining measure specifications;
- Creating a data collection mechanism; and
- Making the case to states, payers, health plans and providers to collect SEDH information to support care management, quality improvement efforts, and total cost of care management.⁹⁷

At the same time, some state Medicaid agencies are moving forward in using SEDH data to support quality measurement and payment initiatives. Some states are utilizing SEDH measures to make quality comparisons across plans and/or to better understand variations in quality of care across their Medicaid populations and to identify new targeted initiatives to target particular SEDH. Ultimately, SEDH data and metrics can be used to improve the ability of states, health plans, and ACOs to measure and address the needs of the populations they serve.⁹⁸

State Medicaid programs may be poised to lead efforts to coordinate partnerships between health systems and community service providers, incentivize data collection, and link Medicaid enrollee data to other data sources that can be used to assess SEDH. State Medicaid programs can serve as facilitators in working across state agencies and other stakeholder to reduce barriers to linking data across community and healthcare systems, facilitate the exchange of information, and apply new value-based payment models to deliver care that can help address SEDH. Additional research is needed to determine the value of these data and linkages if they are to be used for payment and/or risk adjustment.⁹⁹

Promising Practices

Data collection occurs at all levels in the HMG model, including outreach to providers and families and through the centralized access point, which **ensures continuous quality improvement throughout the program**. HMG uses several sets of metrics that are shared across affiliate sites: common indicators, which assess quality improvement; impact indicators, which measure the program’s effects on patient outcomes; and measures that assess affiliate sites’ fidelity to the HMG model.¹⁰⁰ Common indicators measure quality metrics such as service interactions through the Centralized Access Point, demographics of those served, and cross-sector service linkages. Impact indicators include the number of unique children served, the number of families reached, and whether their needs were met. **Fidelity measures** assess affiliate sites’ adherence to such things as the Centralized Access Point, family/community outreach, health care provider outreach, and data collection components of the HMG Model.

HMG touts a **flexible evaluation model that allows local sites to optimally tailor assessment to their particular context**, and encourages HMG affiliates to conduct locally led evaluations using HMG’s metrics as well as local, home-grown metrics developed by the affiliates. For instance, in Connecticut these measures have included systems-level performance metrics such as the number and type of referrals for program services on behalf of families, the quantity and type of outreach activities to community-based family and child service organizations, and the gaps and barriers to service.¹⁰¹ The HMG website provides publicly available Theory of Change models—one to guide local measurement and one to guide measurement at the national network. These measurement frameworks are continually enhanced through

the work of the **HMG National Evaluation Advisory Group**, which includes both experts in early childhood evaluation and individuals who are knowledgeable in HMG implementation.¹⁰²

The DULCE program uses **three nationally-recognized quality measures to assess whether participant outcomes improved over time. These measures include: well-child visit rate during the first 15 months of life; emergency department (ED) visit rate; and childhood immunization status.**¹⁰³ In addition to these measures, the DULCE program collects data from families in order to assess child development and needs over the first 12 months of life, document family’s social needs, and track whether these needs have been met over the course of the DULCE program. Additional details regarding this data collection is included in the Appendix. At the time of the original DULCE program, quality measures were not enacted to specifically assess the quality of the services provided by the MLP. As described previously, MLP-specific performance measures were developed in the past few years by the National Center for Medical-Legal Partnership—such measures could be leveraged in the future to evaluate the quality of services provided by this invaluable cross-sector partnership.¹⁰⁴

For the Population-Based Payment (PBP) component of the Integrated Health Partnership (IHP) model in Minnesota, there are no set quality measures that must be applied across all participating clinic systems. Rather, **quality measures are decided through mutual agreement between the IHP and Minnesota Department of Human Services (DHS).** The IHP proposes a quality measure which could be tied to interventions that work to mitigate their patient population’s most salient health disparities. DHS and IHP collaboratively determine an appropriate methodology to award points for performance on quality measures. DHS then calculates a population-based quality score based on the IHP’s performance on the quality measures. The IHP 2.0 program is divided into two tracks. In Track 1, the IHP receives a population-based payment (PBP) which is tied to clinical, social, and utilization metrics and adjusted based on health and social risks present in the patient population. In Track 2, the IHP receives both a PBP and a two-way risk model for shared savings/losses.¹⁰⁵ Both tracks are impacted by the IHPs’ performance on the selected quality measures. For Track 1 IHPs, in order to continue participation at the conclusion of each 3 year cycle, IHPs will be evaluated on quality, health equity, and utilization measures. For Track 2 IHPs, performance on quality measures impacts shared savings but not shared losses.¹⁰⁶

Cross-sector measurement forms the basis of New York’s *First 1000 Days Proposal #5 - New York State Developmental Inventory Upon Kindergarten Entry*. Under this proposal the **State Education Department, Medicaid, and other partners would agree upon a standardized, holistic measurement tool to assess child development upon Kindergarten entry** according to a number of parameters including cognitive, social-emotional, language, and motor development. This would create an outcome measure that could be tied to incentives or new strategies in children’s health care and other sectors.

Challenges

While emerging models may have uniform measurement strategies within their own program, the measures used across programs vary widely. This is emblematic of the largest measurement challenge in the SEDH arena: lack of consistency. Uniform cross-sector quality and performance measurement is essential to facilitating the effective coordination and delivery of clinical and social services to combat SEDH, but the sheer volume of social and clinical factors that are salient to child and family wellbeing presents ongoing challenges.

At the same time, it is important to acknowledge that measurement for measurement’s sake is not useful. Without being embedded in meaningful, concerted evaluation and feedback processes, and without joint significance to all clinical and social service entities involved in a child’s care, quality and performance measures may lose relevance and prove unnecessarily burdensome. Furthermore, measurement may have unintended negative consequences if the results are used in inappropriate ways, such as to deny a child educational services on the basis of poor outcomes on developmental or cognitive metrics. New York State has explicitly acknowledged this, and has additionally warned against the possibility that cross-sector quality measurement could generate scenarios in which **different sectors blame one another for poor child development outcomes.**¹⁰⁷

Key Informant-Noted Challenges:
QUALITY/PERFORMANCE MEASUREMENT

- It is **challenging to measure the parent-child dyad using structured data** during the time available in a pediatric health care visit.
- For referrals to community-based organizations, it is important to measure accountability every step of the way (e.g., did the referral result in uptake of services?). However, lack of a standardized, cross-sector data platform makes reliably measuring activities that occur outside of the PCP office difficult.
- It is **challenging for small provider organizations to be accountable for both social and health-related performance measurements** due to resource limitations. Often times, **resources need to be pooled** across different provider organizations (e.g., through a children’s health alliance).

PRIVATE SECTOR

Key informant interviews undertaken to inform this Challenge Guide provided the insight that, to the extent that the private sector is engaging with SEDH, it is doing so primarily with a **focus on adults**. Key informants expressed the opinion that the majority of commercial, employer-sponsored insurance is principally designed to provide coverage for the health care of those in the workforce – i.e. adult employees – with less focus on dependent children. Key informants also expressed the opinion that, insofar as private payers provide coverage of preventive pediatric services, those services tend to center on preventive clinical measures such as immunizations and well child care.

Yet recent media reports indicate that the commercial sector is paying greater attention and devoting increased resources to addressing social determinants. In the 8th Annual Industry Pulse survey, Change HealthCare found that 80 percent of payers are currently taking steps to address the social determinants of their members.¹⁰⁸ While encouraging, the industry has acknowledged continued barriers to increasing the uptake of social services as a business practice. Through structured interviews with 33 U.S. health care payer and provider executives between August 2016 and September 2017, KPMG and the Commonwealth Fund reported that common, perceived barriers include challenges in communication and data sharing, lack of clarity on the legal and regulatory parameters of social service investments, obscure and delayed return on investment, inability to track cost of care changes, and the absence of social service codes from fee schedules, rate setting formularies, and the like.¹⁰⁹

To-date, foundations and philanthropic initiatives have undertaken the bulk of work done to address health-related social factors, some in collaboration with private payers. Health Legacy Foundations (HLF), which are formed with the proceeds from nonprofit health care mergers, acquisitions, and other transactions, provide almost \$1 billion in strategic investments each year to local initiatives in the communities they serve.^{110,111} While most of these charitable investments focus on community-level, issues, some are including pediatric SEDH related to broader efforts to support family and community health. Examples include programs that employ community-wide strategies to improve health equity, as well as child-specific programs that aim to promote school-readiness or to strengthen relationships

between fathers and children through – among other tactics – father-friendly training for child welfare workers.¹¹² The philanthropic divisions of major private payers have also historically funded local strategies to proactively address community-level SEDH. One such example is the Humana Foundation, which since 1975 has donated over \$286 million to local initiatives in the communities it serves.¹¹³

In 2015, a portion of these funds went to the BOUNCE: Building Resilient Children and Families coalition in Louisville, KY, which is fostering whole-child wellness through resilience by providing trauma-informed training on ACEs to school staff and after-school activity providers.^{114,115} Another is the WellCare CommUnity impact model, which was launched in 2011 and which to-date has referred over 45,000 people to over 145,000 social services and supports, the most common of which are transportation, food assistance, housing, medication assistance, and financial assistance.¹¹⁶ Among social service recipients, improvements have been observed in body mass index, primary care visit attendance rates (among others) with an average per-patient reduction in annual medical spending of \$3,200, almost all of which was driven by decreases in ED use. The WellCare CommUnity impact model comprises four components: (1) a micro-grant program that provides funding to community-based social service partners; (2) a call center that facilitates referrals to social services; (3) community liaisons who effectuate referrals; and (4) field-based teams who contract with social service organizations to establish data sharing.¹¹⁷

Key Informant Noted Challenges:
PRIVATE SECTOR

Employer health plans often focus predominantly on the immediate health of the employee, not necessarily the social well-being of the employee and their family. Any wellness initiatives that occur via employee health plans rarely incorporate employees' families.

Additionally, certain major commercial insurance entities have recently announced initiatives to address social determinants. In March 2018, the Blue Cross Blue Shield Association announced the creation of the BlueCross BlueShield Institute.¹¹⁸ This new subsidiary was created to address social and environmental determinants of health and, “Reduce the ‘zip code effect’ on health”, through a focus on transportation, pharmacy, nutrition and fitness deserts in specific neighborhoods.¹¹⁹ Through this institute, the BCBS Association intends to undertake community-oriented work to address SEDH, including barriers in transportation and access to care, through partnerships with Lyft, CVS Health® and Walgreens®. In a similar vein, on the brink of a possible merger between CVS and Aetna, Aetna’s chief executive Mark Bertolini has indicated possible plans to leverage CVS’ 10,000 brick-and-mortar storefronts to coordinate patients’ health and social services such as physician appointments, nutrition support, and transportation.¹²⁰

Ultimately, how or whether these novel commercial efforts will address SEDH among the pediatric population remains to be seen. Still, private payers have an opportunity to address SEDH among their employees and children, given that almost half of America’s children are covered under these plans.¹²¹

Recommendations

There is emerging consensus that addressing pediatric SEDH requires a broad range of health care providers and other stakeholders to work together to move towards a system that effectively screens for risky or maladaptive family conditions and intervenes with families early and continuously to assure that a child has every opportunity to thrive.¹²² Below is a summary of the major facets of this consensus, with key recommendations drawn both from a synthesis of findings from the case studies discussed above, as well as interviews conducted with key informant subject matter experts, outlined in the textboxes below.

WORK FORCE

Team-based approaches to care are key to successful family-focused prevention, including screening and intervention related to SEDH. Barriers remain, however, to building relationships among clinicians of different disciplines and staff at related agencies and in other sectors. New efforts need to support initiatives that promote interdisciplinary initiatives, including linking primary care and mental health providers.

Modifications to payment mechanisms must also be adapted to encourage consultation among multidisciplinary providers, participation in cross-sector team meetings, and systems of care that reward comprehensive approaches to SEDH.¹²³

Historically, primary care providers have not received **training that focuses on SEDH** risk identification and referral to effective resources. As a result, there is often discomfort with screening and a lack of knowledge about what to do with the results. Medical school and residency training has focused on the etiology of disease and treatment while training has not adequately addressed who is qualified to screen and interpret the results, how frequently should a child and their family be screened, where screening and referral fit into a typical visit, and what screening and treatment services will be reimbursed for the child and their family.¹²⁴ Workforce training must emphasize ways to improve knowledge of the importance of screening for SEDH of both the child and family, as well as methods to **identify and refer to community resources**.

Another potential barrier to widespread adoption of family prevention models is the **ethical and legal obligations of the provider**. A key issue is whether screening for SEDH establishes a legal and/or ethical obligation to ensure that patients and their families receive “treatment” for identified social needs. Another concern is who is responsible for following up to assure that children and their families are

Key Informant Recommendations:

WORK FORCE

- Reduce stigma and expedite care for families **through co-locating primary care and behavioral health** by, for example, housing clinical psychologists who can help address caregiver issues in the pediatric primary care setting
- To **reduce stigma among families who need access to behavioral health care**, refer to clinical psychologists in the pediatric primary care setting as “infant toddler specialists”.
- **Encourage all staff (providers, nurses, social workers, etc.) to administer developmental surveys**, and avoid putting the onus on one person or role. This allows all members of the team to have ownership over this issue and develop curiosity for how to address it.
- Ensure there is a **shared agenda** across the organization, including those at the very top, so everyone understands the importance in investing in social risk factors, beyond financial incentive.
- Utilize models in the pediatric primary care setting that **use a licensed social worker, a navigator** (non-clinical, non-licensed individuals who are experts in community resources and can connect families to services), and **a lawyer**.
- In primary care offices with co-located social workers, if baseline data or risk score results demonstrate that a child’s predominant issues are social in nature, **the social worker, rather than the PCP, should perform the child’s assessment**.

receiving services. Clear guidance for providers around these key issues is critical to encourage collaboration between social services and clinical practices.

Another key challenge is **how to engage families in care** that includes SEDH at a time when both clinicians and families have limited time and resources to broaden their reach. A second challenge is the ability to **successfully make referrals to other providers and sectors**, including mental health professionals who may be unavailable in certain areas, or other services such as housing. Systems must be developed to assure that **families follow through** and coordination is not solely the responsibility of the primary care provider. Methods to share information across stakeholders is also key to successful referrals between clinical and community settings. All of these factors are critical to the success of new models of partnering¹²⁵

In addition to traditional providers, there is a need to **train a new workforce** that can bridge the clinical and social services critical to the success of new models that address SEDH.¹²⁶ It is clear that no one type of professional can succeed in this interdisciplinary, cross-sector model, so new models that are built around interdisciplinary teams that include a diverse group of healthcare professionals, along with lawyers, community leaders, and policy experts are critical to the success of these new approaches to care.

Future workforce training will need to be **team-based and interdisciplinary** (including physicians, physician assistants, nurses, social workers, and others); recognize the importance of the patient’s social history on their health; and be convenient to the family in varied locations (e.g., hospitals, clinics, community health centers, schools). Workforce training must emphasize the need to develop and sustain cross-sector partnerships for patients and their families and be designed to support their health, social services, and legal needs that are critical to addressing SEDH. Ultimately, the success of new models that address SEDH will require buy and dedication to new models of care for all relevant parties- including the pediatric primary care workforce. It is critical that all staff in a pediatric primary care setting have buy-in to the importance of addressing social determinants of health and are dedicated to the issue.

Policymakers are increasingly aware of the need to address patients’ social and clinical concerns. Community Care Teams (CCTs) offer one promising strategy for doing so. Payment models for CCTs vary widely, with many using an “episode of care” model that includes a single payment covering all services for a specified intervention. Other CCTs use a risk-sharing agreement for provider partners. States can also consider purchasing strategies such as including CCT services as a requirement in provider delivery systems (e.g., accountable care organizations) and as a provision in managed care contracts. States may also look to Medicaid reimbursement for non-clinical preventive services that have been recommended by a licensed health care provider. All of these options may help CCTs play a bigger role in addressing the complex needs of Medicaid’s most vulnerable beneficiaries.¹²⁷

CROSS-SECTOR PARTNERSHIP

This new approach to child health and development raises multiple challenges, however, including **who is responsible for the screening, who is responsible for the follow up, and who will pay for the clinical and social impacts identified in the screening**. This approach will require a major shift in public policy as well as in payment policy beyond traditional coverage for clinical services as well as a shift from caring for illness to focusing on a broad range of prevention and development services. In addition, current insurance and reimbursement policies discourage primary health care providers from implementing approaches that emphasize cross sector collaboration and team based care, including multi-disciplinary meetings, informal consultation, and regular case conferences.¹²⁸

While a new focus on **family-centered prevention and intervention** may begin in the clinical setting, there will always be limits to what will be covered by insurance, and many of the factors identified for the child and their family will need to be addressed outside of the insurance payment model. Fortunately, there are some innovative approaches underway that are building on the potential return-on-investment (ROI) of SEDH screening and interventions to share financial responsibility for these services beyond the clinical setting.¹²⁹

One way to share responsibility for addressing the child’s health and social needs is to **form clinical community partnerships**. There are emerging examples emanating from new value-based payment models that may serve to incentivize providers to form clinical-community collaborations that may offer a ROI for their practices.

Addressing SEDH may also **need to move away from a clinical-focused location**. Community involvement in a child’s development may involve local settings beyond health care facilities. One opportunity to reach children where they are and to

address both clinical and social issues is in the **school setting**. Schools are perceived by children and their families as a safe, trusted, healthy environment. Schools can also help educate children and their families on positive social interactions and effective problem solving. These programs are effective at promoting social-emotional skills, reducing problem behavior, and enhancing academic achievement.¹³⁰ **Trust is a critical, yet often intangible factor**, to impacting SEDH. It is critical that families trust their child’s health care provider as well the community partners involved in social and health care referrals and linkages. A trusted environment may also encourage families to utilize available services, build a caring relationship with community providers, and seek help before it is acutely needed.

Key Informant Recommendations:
CROSS-SECTOR PARTNERSHIPS

- Facilitating productive cross-sector partnerships is often a matter of the state **defining the services, turning on the code, and informing providers that they’re paying for it** (e.g., dyadic parent/caregiver-child therapy; co-located physical and behavioral health services; home visiting services; non-traditional provider reimbursement).
- PCPs should ensure their **community partners are culturally competent** in their approach to addressing their patient population’s needs (e.g., a clinic with a large Latino population partnered with a Latino nutritionist, employed by a food bank, who takes families shopping and teaches them how to cook healthy, culturally appropriate meals on food stamps).
- In **risk arrangements**, incentivize the development of cross-sector partnerships through **providing bonuses** or **decreasing downside risk** if health care organizations have a contractual relationship with a social service organization.
- In order to gain the trust of patients and their families, health care organizations should **develop relationships with credible community-based organizations who have a shared agenda** and commitment to improve their resident’s health and well-being.
- Provider systems should **focus on bridging mental health and behavioral health** as a building block to physical health and social service integration.
- **Political capital** is essential for driving the SEDH issue and garnering support and resources within the community; having the backing and buy-in of a cohesive, well-organized political and business community fundamentally changes the conversation and enables widespread, holistic change on behalf of the patient.
- Providers and systems cannot rely on the patient to come to them – they must **take SEDH interventions to the patient by treating the community and not the individual**—e.g., through partnering with local business community to revitalize the housing stock in marginalized and depreciated neighborhoods.

DATA SHARING AND PERFORMANCE/QUALITY MEASURES

Moving towards a system that addresses the family, and moves beyond the clinical setting for the child, raises a set of opportunities and challenges for data and measurement. The first challenge is defining what data are necessary to assess and monitor SEDH. Additional questions then emerge including **what data should be collected; for what purpose; by whom; how much will it cost to collect; who will pay for the data collection, retrieval, storage, and analysis; the quality of the data and the ability to merge the data; what level of granularity the data need to be; and how privacy and security will be protected.** ¹³¹

Additional challenges include how to collect and integrate parental social risk factor data that can be used in the pediatric care setting. One opportunity to help share and store data is the use of health technologies (e.g., EHRs, personal health records) already in use for children and their families.¹³² Additional steps will be needed, however, to harmonize tools that assess SEDH; create standards for inputting and extracting SEDH data from electronic health records; and increase information sharing between government agencies and other organizations serving the child and their family.¹³³

Investments in **cross-sector data sharing models** will require the development of standardized, validated **SEDH definitions and data sources**. A related challenge is the **lack of interoperability** across clinical information systems, and the challenges associated with storing and extracting SEDH data from EHRs. While there appears to be general agreement about broad SEDH categories that are relevant to health — housing, employment status, and food security — additional challenges linking behavioral health and behavioral risk factors for the child and their family remain. Currently, there are significant **limitations on the degree to which SEDH information can be aggregated across care settings**, limiting its usefulness for providers, policy makers, and payers. Lack of consistent definitions and integrated systems also pose challenges and administrative burdens for providers that are already burdened with tracking and reporting outcome measures under various existing requirements.¹³⁴

Key Informant Recommendations:

DATA SHARING AND PERFORMANCE/QUALITY MEASURES

- **Social risk factor data should be shared at multiple levels** including the county, payer, physician, and patient.
- EHRs are an ideal platform for sharing SEDH data across providers, but it may necessitate that **providers have the same EHR system in place**.
- To protect privacy, **when sharing social and medical risk scores with providers, only share the numerical risk score**. This way, providers cannot pinpoint how their patients achieved a certain risk score (e.g., if the patient's mother has SUD), but can assess the patient with their numerical risk score in mind.
- Develop **data-sharing agreements with different arms of state government** to ensure Medicaid departments can easily access social data.
- **Sharing social risk factor data** with health plans or providers **at the aggregate-level** allows providers to identify any red flags in their patient population.
- When addressing social determinants and measuring performance, it's necessary to **keep in mind the structural root causes** of such social determinants (e.g., racism).
- **Selecting social determinants for measurement** should involve **expertise across sectors**, the use of **state-specific data**, and an **analysis** to determine which factors are associated with the highest costs and worst health outcomes.
- Social and medical service providers **must agree on and start using the same performance measurement language**: e.g., truancy and kindergarten readiness are health-related but are not embedded in current measures.
- There are **misconceptions that certain data cannot be shared** because of privacy/legal/organizational limitations. These barriers are often a myth, so it is critical that information about data-sharing restrictions and allowances is made public.

If these data challenges can be addressed, new opportunities to utilize cross-sector data can emerge. One tool that can benefit from data harmonization, for example, is **predictive analytics**. Developing systems

that can accurately share data could allow states and communities to develop systems that allow the development of algorithms regarding children and their families to help providers access information in real time and target the children and families in need and respond to immediate threats to the child.¹³⁵ In order to maximize the potential of new approaches to family-centered care that includes SEDH, collaborating organizations must collectively agree on **standardized definitions; ensure data validity and accuracy; and structure and standardize data to allow it to be integrated into a single data system**. Additional efforts are also needed to determine which social determinants of health data can be integrated into existing data systems, such as electronic health records.¹³⁶

INNOVATIVE FUNDING MODELS

Funding remains one of the most significant challenges to moving towards a new system of care that addresses SEDH for the child and their family. While some aspects of these emerging models can be reimbursed by traditional health care payers, there will always be components that **fall outside of the health financing infrastructure**. Therefore, innovators are exploring new models of financing that will help build and sustain the new models.

One option that is garnering attention is **Social Impact Financing (SIF)**. Under SIF, a state government agrees to pay a third party to conduct an intervention, but only if that intervention succeeds and results in a prompt return on investment and meet other goals. Financing is provided by an investor or group of investors who assume financial risk in exchange for the opportunity to receive full repayment and a financial return if the intervention is successful. Programs can also be designed for investors to receive a percentage of the intervention's savings, with the remaining savings going back to the state.

Analysis of the SIF model indicates that several key elements must be in place to attract investors: (1) the potential for a substantial impact for both the investor and the taxpayer; (2) measurable outcomes; (3) a distinct target population; and (4) a rigorous evaluation. SIF may therefore only be appropriate for new initiatives that have significant stakeholder support and involvement, are rigorously designed, and are evidence-based. SIF may also be an option for states or communities that are expanding existing pilots that have already demonstrated successful outcomes.¹³⁷

Another approach that offers promise to engage multiple sectors into the SEDH model is **blended or braided funding**. Under this model, a state or community that is seeking to integrate health and social services with other sources of financing, including Medicaid funding, identifies opportunities to combine multiple funding sources through the process of braiding or blending. Both braiding and blending funding streams can enhance flexibility for the types of services offered and allow for more efficient access to funds.¹³⁸

Braided funding: Supports coordinated multi-agency funding, but keeps different funding streams separate, allowing each funding sources to be separately tracked at the administrative level. This strategy allows resources to be closely tracked and accounted for by each contributing agency. An Administrative Services Organization (ASO) or other coordinating body may assume responsibility for tracking funds.

Blended funding: Combines money from different sources into a single pool. This approach reduces administrative burden of tracking individual funding streams and offers spending flexibility to target funds where they are most needed.

While states and communities are exploring innovative ways of financing SEDH initiatives, their success ultimately depends on the ability to sustain the programs. As noted previously, emerging VBP models may provide new financial incentives for providers to identify and address SEDH, such as accountable care organizations, coordinated care organizations, enhanced reimbursement models, and shared savings models. However, all of these payment models depend on reducing the cost of care and improving quality

of health outcomes. Given the need to show value and quality results, these financial incentives may work against tackling community-wide initiatives addressing SEDH among the hardest-to-serve populations. On the other hand, these models could be used to invest in cross sector community efforts that ultimately reduce health care costs and health disparities among vulnerable populations.¹³⁹

Conclusion

Given the complexity of these models, several factors are critical to assure that cross-sector collaborations have the opportunity to be successful. First, there must be a **shared value proposition** that means that diverse stakeholders reach consensus on shared goals and incentives for the initiative. As noted previously, data sharing is critical to any cross-sector collaboration so each partner must be willing to identify data sources and commitment to sharing them across the stakeholders. This is particularly challenging as SEDH initiatives seek to include sectors beyond health that leads to significant variations in language and metrics that serve as barriers to development of consensus and meaningful sharing of data across all stakeholders. A second key is **building trust** among stakeholders. Finally, success is dependent upon **strong governance and transparency** among stakeholders.¹⁴⁰

Whatever model is considered, success of these new cross-sector collaborations will require **agreement on the problems and potential solutions, shared consensus on program goals, clear leadership, resource alignment, a plan for sustainability, clear communication, and processes that support data sharing and collaboration**. Ultimately, partners must share a vision for approaching SEDH within their community, and see the potential for mutual benefit from their collaboration and joint opportunities for success.¹⁴¹ Finally, the partners will need to reach consensus on a plan of actions and identification and alignment of resources. As the effort evolves, regular communication that allows all participants to reflect, adapt, and evolve the partnership is necessary. This is also dependent on agreement for metrics and consensus on how to track and analyze data. Finally, identifying how to sustain and grow the partnership requires ongoing reassessment by all partners.¹⁴²

Finally, it is critical that all stakeholders in the community have a **shared commitment to improving the lives of their community's residents and our not duplicating or contradicting each other's work**. For example, in Massachusetts the Community Benefit Guidelines have a strong emphasis on health care facilities collaborating with other health care facilities. When administering Community Health Needs Assessments (CHNAs), instead of surveying and interviewing the same people and duplicating results, health care facilities in the same local area should collaborate to ensure their efforts support and enhance the same agenda.

Appendix: Case Studies

MODEL 1: Help Me Grow

Help Me Grow (HMG) is a system-based model which encourages cross-sector partnerships in order to promote protective factors among families and address early childhood adversity through implementing universal and early screening and surveillance for all children. HMG can be applied in any community due to the model's focus on leveraging existing resources and opportunities. HMG National provides technical assistance to affiliate programs in 28 states across the country in order to support them in operationalizing and enhancing a comprehensive, cross-sector HMG system across their respective states.¹⁴³

Summary of Model

The cornerstones of the HMG model are four Core Components and three Structural Requirements, which are outlined in *Exhibit 1*. Using a systematic framework to assess fit and feasibility, HMG National diffuses early childhood innovations to a subset of their affiliate programs prior to disseminating them nationally. These innovations, which are being supported by different foundations and partnerships, include: a quality improvement initiative which works to enhance pediatric primary care providers' capacity to address toxic stress,¹⁴⁴ an online tool known as the "well-visit planner" which helps engage parents in their children's well-care visits,¹⁴⁵ and a structured learning collaborative of early-childhood professionals which promotes the use of a Program Self-Assessment Tool so participating sites can reflect on how they can improve workflow processes and procedures to better operationalize how they empower families through the Strengthening Families Protective Factors Framework.¹⁴⁶

Exhibit 1: HMG MODEL

Core Components

1. A Centralized Access Point
2. Family and Community Outreach
3. Child Health Care Provider Outreach
4. Data collection

Structural Requirements

1. Backbone or Organizing Entity
2. Scale and Spread
3. Continuous System Improvement

Innovations/Challenges

Workforce

HMG Care Coordinators: One of the core components of the HMG model is a Centralized Access Point. Typically a call center (e.g., United Way's 2-1-1), the Centralized Access Point serves as an information hub for families and child health care providers where they can learn about community resources and begin the referral process. The call centers are staffed by HMG Care Coordinators who serve a critical role through providing education and addressing families' questions and concerns surrounding their child's development and behavior and facilitating the referral and linkage process to community based resources. HMG Care Coordinators often have a background in child development and must be trained in telephone casework and cultural competency.¹⁴⁷

As one of their innovations to diffuse across HMG affiliate programs, the Care Coordination Collaborative (CCC) model consists of regular meetings with child-serving programs in order to share information on local and state resource providers and discuss challenging cases and common barriers with peers and collaboratively work to identify potential solutions.¹⁴⁸

Cross-Sector Partnerships

HMG National partners with *Birth to Five: Watch Me Thrive!* which was created by the U.S. Department of Health and Human Services and Department of Education. The initiative focuses on increasing community capacity for providing developmental screenings, services, and referrals and aligns with HMG's mission and goals. *Birth to Five: Watch Me Thrive!* has developed a variety of resources which can be accessed through the HMG National website, including: 1) Developmental Screening Passport for parents to track details surrounding the developmental screenings their child receives; 2) a Compendium of Screening Measures for Young Children, which serves as a comprehensive guide of federally-endorsed screening measures for early childhood providers; and 3) Audience Guides which outline the role of various stakeholders and partners in the early childhood screening, referral, and linkage processes.¹⁴⁹ HMG affiliates are encouraged to engage in local cross-sector partnerships with service providers, child care providers, and health care professionals. Engagement with these cross-sector partners occurs in a variety of ways—Help Me Grow New York, for example, includes information on their website for providers on training sessions, screenings, and how to partner with HMG in their local area through contacting the Centralized Access Point (2-1-1).¹⁵⁰ The website also includes links to referral forms for health care, child care, and social service providers to fill out for their clients or patients who would benefit from the child development education and community resource information offered through HMG.¹⁵¹

Another HMG affiliate program, HMG Alabama, has multiple partnerships across the state with organizations that support both implementation and funding efforts. For example, in order to support provider outreach, HMG Alabama partners with Reach Out and Read-Alabama, a program through the American Academy of Pediatrics (AAP) which incorporates books and promotes family reading into pediatric primary care. HMG Alabama has also partnered with their state chapter of AAP to collaborate on quality improvement activities. To best engage families and the communities in the HMG model, HMG Alabama partners with the voluntary pre-K program, First class Pre-K, and the home visiting program, First Teacher, to integrate HMG into their existing referral processes.¹⁵²

Data Sharing

Storing data electronically and sharing data across partners is crucial for sustaining the success of HMG's cross-sector collaborative model. There is not, however, a universal electronic data-sharing system or platform across all HMG sites. Rather, communities and/or states should leverage existing data-sharing platforms or resources and also utilize their Central Access Point as a hub for information sharing across different sectors.

Although HMG National does not provide an electronic database or data-sharing system to be used across affiliate sites, they have offered technical support and resources on building an IT infrastructure. This includes sharing information on effective data platforms currently being used at various affiliate sites across the country. For example, HMG Orange County uses the web-based application System for Tracking Access to Referrals (STAR). The system can be used by multiple users at the same time working on different cases in different locations. Additionally, HMG Utah has developed a family database that houses comprehensive data on follow-up information, the family record, the child record, provider information, referrals. The database has capabilities to generate reports through pulling information on data entered into the database.¹⁵³ Through the HMG Network connections, HMG Alabama has adopted HMG Utah's family database to improve their data collection and client reporting and follow-up processes.¹⁵⁴

Although the HMG model's flexibility allows it to be adapted in any community, and guidelines and resources are provided to ensure that data collection and sharing occur systematically in each affiliate program, the range of local and state data resources available across the different programs means that

each HMG program has a very different IT infrastructure. Ultimately, it is most likely not feasible for HMG National to implement a comprehensive electronic data sharing platform across all the HMG affiliate sites.

Cross-Sector Quality/Performance Measurement

Data collection and analysis, another core component of the program model, ensures that continuous quality improvement remains integral to HMG. Data collection occurs at all levels in the model, including outreach to providers and families and through the centralized access point. A shared set of metrics is applied across HMG National Affiliates supplemented by home-grown, local measures. HMG separates out the shared metrics into “common indicators” (metrics that are impacted by local differences across the HMG affiliate programs) and “impact indicators” (metrics that aren’t impacted by local factors—e.g., ones that describe spread and scale—which can ultimately be used to measure collective impact across the programs). HMG National provides detailed Data Collection and Reporting Guidelines, which are not publicly available and only accessible on their website through logging in as an HMG affiliate. The HMG website, however, provides publicly available Theory of Change models—one to guide local measurement and one to guide measurement at the national network. These measurement frameworks are continually enhanced through the work of the HMG National Evaluation Advisory Group, which includes both experts in early childhood evaluation and individuals who are knowledgeable in HMG implementation.

One key component of the national network evaluation is the HMG Fidelity Assessment. The purpose is to ensure that the core components of the model are operationalized appropriately across the affiliate programs. Affiliate programs are asked to complete an assessment on an annual basis, and their fidelity to the HMG model is measured based on their current implementation stage, which is determined based on a set list of criteria. HMG National leverages the results of the annual Fidelity Assessment to strategize how to most effectively provide technical assistance and diffuse innovations to the range of affiliate programs in different stages across the country.¹⁵⁵

Funding Sources

HMG National is funded by foundation support. In 2010, the W.K. Kellogg Foundation funded a three-year grant to expand HMG to 16 states. HMG affiliates also often receive funding from organizations in their respective states through various means. Help Me Grow California is funded primarily by the First 5 Association of California, which works with 58 county commissions across the state to promote a common agenda surrounding a comprehensive and cross-sector early childhood system of care. Challenges have been noted, however, with First 5 being able to continue to invest substantially in the HMG program across California. Due to First 5’s continual drop in revenue, by 2020, the association will have to decrease funding from \$9500 per child to \$125 per child. First 5 is actively working to partner with other organizations in order to find additional funding through sources such as Early and Periodic Screening, Diagnostic and Treatment (EPSDT), California’s Mental Health Services Act, and private foundations. Despite these funding concerns, First 5 is committed to extending the HMG model to 80% of children in California by the end of 2018.¹⁵⁶

In addition to affiliate programs, some states have developed “look alike” models which are not officially affiliated with HMG National but provide similar services. For example, services through Ohio’s “look-alike” Help Me Grow program receives funding both from their Department of Health and Department of Developmental Disabilities.¹⁵⁷

Results

HMG Affiliates perform local evaluations to assess their program's impact on children, families, and issues of health care and social service access. For example, one HMG affiliate evaluated the program's impact on parents' perceptions of protective factors. Parents reported a positive change in their family circumstances and a strengthening of protective factors through their experience in the HMG program.¹⁵⁸ Another study from 2006 which evaluated pediatric providers' satisfaction level with trainings on developmental surveillance and the use of the HMG referral system and whether or not the trainings impacted surveillance and referral patterns. The study found that the trainings led to increased identification of developmental and behavioral concerns and increased referral rate to a resource information hub—The Child Development Infoline.¹⁵⁹

Future Directions

The HMG National Affiliate Network continues to grow and expand across the country to different states and look for sustainable funding avenues across the different programs.

MODEL 2: DULCE

Summary of Model

Project DULCE (Developmental Understanding and Legal Collaboration for Everyone) has emerged as a promising program with goals to enhance family protective factors, address social determinants of health (SDOH), and promote greater family agency by supporting families during the critical first six months after the birth of their child. The project involves work at the family, provider, and community levels through identification and linking of a core set of innovations to address toxic stress in the primary care setting and strengthening of the parental role and their position as change agents for their families and communities. The innovation involves the integration of both a family specialist and medical legal partners within clinics. The family specialist works closely with families of children aged birth to six months to provide education, support, and connections to public benefits and services within the community, and a medical legal partner provides assistance for more complex legal issues.¹⁶⁰

Innovations/Challenges

Workforce

DULCE Family Specialist. The DULCE Family Specialist is the focal point of the DULCE model. Each DULCE clinic should be staffed with one Family Specialist who partners with families during clinic visits and provides support to them during the baby's first six months of life. The Family Specialist helps connect the family to resources to address social issues and unmet legal needs, provides educational information on child development, and administers developmental, social determinant of health, and family mental health screenings. The DULCE Family Specialist attends all well child visits with the family and is available for home visits and telephone check-ins on an as-needed basis. After the baby turns six months old, the DULCE Family Specialist transitions care to the patient's primary care team.¹⁶¹ In the original DULCE program, the Family Specialist has postgraduate training in child development and received additional training from *Healthy Steps* and MLP|Boston (MLPB) in order to learn how to identify both legal and social needs, empower families to be their own advocates, and connect them with needed legal and social supports in the community.^{162,163}

One critical service the Family Specialist provides is the telephone check-in. The researchers noted, however, that connecting with participating families over the phone proved to be a major challenge. Many participating families did not have active or stable cell phone numbers—often times this is due to not being able to afford cell phones or running out of paid minutes. Therefore any sort of data collection, reminders, check-ins, or follow-up via telephone proved not to be the most effective approach.¹⁶⁴

Medical Legal Partnership (MLP). MLP is a national model that connects lawyers with medical teams in order to address patients’ legal needs that may impact their health. Such issues may include a family’s immigration status which could unjustly preclude a child from receiving necessary social services benefits or housing conditions, such as the presence of mold which could cause or exacerbate asthma. In the original DULCE program at Boston Medical Center, the project team partnered with MLPB the founding site in the national MLP network. MLPB coordinates free legal assistance for patients through its network of 20 law firms and pro bono partners. For DULCE, when a pediatrician needed to provide legal support for a family, they were able to communicate with the lawyer/paralegal in real time to receive advice, legal assistance, and support. If necessary, some families received a referral to MLP for a more extensive legal intake and support. If necessary, some families were triaged via a referral to MLPB for a more extensive legal intake and support.

Staff at MLPB engaged in active consultation with the Family Specialist on behalf of 75 of the participating families in the original DULCE program. These consultations averaged out to a 2.5 hour call between MLPB and the Family Specialist per family. Of the 75 consults that occurred in the original DULCE program, 72 (96%) did not necessitate direct MLP involvement with the family via legal intake and representation. Due to the Family Specialist’s capacity to address many social and legal issues due to their receipt of training and consultation from MLPB throughout the course of the program, MLPB was able to reserve their direct legal services for the few families who were experiencing more complex social and legal situations. Of note, since the original DULCE program, the MLPB program has expanded and now has an email system with same day responses.¹⁶⁵

Although literature on the DULCE program does not explicitly note any challenges in regards to working with MLPB, other literature has noted some potential barriers that can occur when health care professionals collaborate with legal representatives. For example, MLPs are often unable to be sustained or expanded due to lack of funding. Often times, MLPs are funded by legal aid agencies or law absentee clinics—institutions which don’t necessarily account for the health-related needs of population who is utilizing the legal services. In order to mitigate the financial barrier of incorporating MLP in the primary care setting, some experts have recommended that health care organizations can fund MLPs as an “enabling” or “wrap-around” service under Section 330 of the Public Health Service Act.¹⁶⁶

Alternatively, an MLP can be incorporated into value-based payment models which can be leveraged with MLP-specific performance measures which were recently developed by the National Center for Medical-Legal Partnership.¹⁶⁷

Clinical Team: The DULCE Clinical Team is comprised of primary care provider, a mental health professional, and a legal representative from the MLP. The clinical team convenes with the Family Specialist for weekly case conferences to discuss every case seen by the Family Specialist that week and to prepare for the following week. Additionally, the mental health professional is available to provide mental health supervision for the Family Specialist. In the original DULCE program, the Boston Medical Center Clinic also had an in-house social worker, extended MLP services, and a help desk operated by HealthLeads.¹⁶⁸

Research Assistants: The original DULCE program also staffed part time research assistants who performed a variety of invaluable tasks, including: recruitment, survey administration, data collection,

data management and statistical programming. The research staff was comprised heavily of graduate students at the School of Public Health at Boston University who left throughout the course of the program due to graduation and other opportunities. Although students are useful resources for supporting data collection and analysis tasks, their high turnover rate leads to delays in research activities due to the amount of time it takes to on-board and train their replacements.¹⁶⁹

Cross-Sector Partnerships

In addition to the partnership between the clinic implementing DULCE at Boston Medical Center (BMC) and Medical Legal Partnership Boston (MLPB), Project DULCE developed an advisory board which included representatives from both local and state programs, including: Boston Public Health Commission, Massachusetts Children's Trust Fund, Massachusetts Department of Children and Families, Massachusetts Department of Public Health, Smart From the Start, and Thrive in 5 Boston. The advisory board provided community support and assisted with joint priority setting for DULCE and other initiatives that were simultaneously being implemented in the BMC clinic. The advisory board also consisted of two parents, in order to receive parental feedback and perceptions on the program. Board meetings served as an opportunity for information sharing on topics such as inter-agency trainings and discuss ways to improve cross-sector collaboration (e.g., using common language).¹⁷⁰

One key challenge noted in the final report for the Project DULCE randomized control trial (RCT), was related to partner agencies' prior commitment to implementing other early childhood primary care initiatives, focusing on child mental health (e.g., Project LAUNCH and MYCHILD). As a result, the pediatric clinic implementing DULCE was simultaneously implementing other similar initiatives. The leadership team at the clinic and the advisory board ultimately found a way to administer all three initiatives through joint priority setting and ensuring they all provided complimentary, not duplicative, clinical services.¹⁷¹

Data Sharing

In the original DULCE program, all communication between MLPB and the Family Specialist, referrals from the DULCE clinic to MLPB, as well as documentation of any work that the MLP performed for DULCE families was stored in the MLPB Case Management database.¹⁷²

In addition to the MLPB Case Management database, the Family Specialists maintained an electronic activity log via an Access database. This log included documentation of every interaction that occurred with or on behalf of participating families—including both direct service, advocacy and resource support, and data collection results.¹⁷³

One key challenge was the amount of time involved with cleaning the data which is an issue both for sharing data and evaluating the impact of a program. The researchers involved in the original DULCE program noted they found multiple data discrepancies and errors particularly pertaining to ambiguous parent-reported responses. The researchers noted that the extra time it took to clean the data was both costly and inefficient.¹⁷⁴

Cross-Sector Quality/Performance Measurement

Three nationally-recognized quality measures were utilized to assess if outcomes improved over time due to involvement in DULCE. These measures include: well-child visit rate during the first 15 months of life, emergency department (ED) visit rate, and childhood immunization status.¹⁷⁵ At the time of the original DULCE program, quality measures were not enacted to specifically assess the quality of the services provided by the MLP. As described previously, MLP-specific performance measures were

developed in the past few years by the National Center for Medical-Legal Partnership. Such measures could be leveraged in the future to evaluate the quality of services provided by this invaluable cross-sector partnership.¹⁷⁶

In addition to the three quality measures noted above, an integral component of the DULCE program is to collect data from families in order to assess child development and needs over the first 12 months of life, document family's social needs, and track whether these needs have been met over the course of the DULCE program. Data are collected at baseline, immediately after the cessation of the intervention (6 months), and follow-up (12 months). Self-reported measures, which were pulled from the Quality Improvement Center on Early Childhood (QIC-EC) common measures and three additional questionnaires, focus on: optimal child development, parenting factors, family hardships, strengths/risks, social networks, and receipt of concrete support. Uptake of concrete supports, which was measured through self-report in a Resource Questionnaire, ask if families have heard of, tried to receive services from, or already received services from the following programs: local food programs, Supplemental Nutrition Assistance Program (SNAP), Special Supplemental Nutritional Program for Women, Infants, and Children (WIC), discounted telephone service (Lifeline), low-income utility discount or shut-off protection (LIHEAP), Emergency Aid to the Elderly, Disabled, and Children (EAEDC), and Transitional Aid to Families With Dependent Children (TAFDC).¹⁷⁷

Funding Sources

The original Project DULCE, which was developed at Boston Medical Center, was funded as a research and demonstration project by the National Quality Improvement Center on Early Childhood (QIC-EC). QIC-EC funded by the U.S. Department of Health and Human Services, Administration for Children, Youth and Families, Office on Child Abuse and Neglect. Funding was matched by the Child Health Foundation at Boston University, and additional donations were provided to the Boston Medical Center Child Protection Team.¹⁷⁸

Legislative/administrative authority

Project DULCE is currently not covered under Medicaid, but as described above, the program received funding through the U.S. Department of Health and Human Services, Administration for Children, Youth and Families, Office on Child Abuse and Neglect, under Cooperative Agreement 90CA1763.¹⁷⁹

Results

The DULCE program collected both process and outcome data and reported on them in their final report. Notable results from the DULCE RCT include: improved retention of families in primary care at BMC, better adherence to BMC's well-child visit recommended schedule, improved immunization rates, lower ED visit rates, and increased access to concrete resources.

Improved Retention of Families in Primary Care at Boston Medical Center: At 12 months of age, 93% of intervention families continued to receive primary care services BMC versus 86% of control families (P= 0.056).

Better Adherence to Routine Healthcare Visit Schedule: DULCE intervention infants were more likely to have five or more well-child visits during the first year of life than infants participating in the control group (P<.01).

Improved Immunization Rates: Infants participating in the intervention were more likely to complete their 6-month immunization schedule in their first 7 months of life than control infants (77% vs 63%, $P < .005$).

Lower ED visit rates: DULCE infants were less likely to utilize the emergency department by 6 months of old for concern's related to a lack of understanding around child development (37% vs 49.7%, $P < .03$).

Increased access to concrete resources: Families participating in the DULCE intervention had a significantly higher likelihood of successful uptake of concrete supports. Specifically, at the 6 month mark, DULCE families received support for food, utility, and housing issues at a significantly higher rate than control families.¹⁸⁰

Future Directions

The information about the DULCE program outlined above is all specific to the original DULCE RCT at Boston Medical Center. In the spring of 2016, the national demonstration of DULCE was implemented at seven pilot clinic sites in three states (Florida, California, and New York). The national demonstration of DULCE is funded by the Center for the Study of Social Policy (CSSP) and carried out with the support of local partners across the three states including: California First 5 commissions in Alameda, Los Angeles and Orange counties, the Children's Service Council of Palm Beach County, Florida, and the Lamoille Valley Family Center in Vermont. Each of the five communities across the three states is implementing DULCE in at least one clinic, and the program is being evaluated across the different clinics to assess its impact on emergency department (ED) visit rates and the uptake of preventive care services.

Like the original DULCE program, clinics participating in the national DULCE demonstration will be connected with local MLPs to ensure families have access to concrete supports. The DULCE model has been adapted slightly since the original RCT. While the original program included combined components of Healthy Steps and MLPB, the national demonstration includes key components from the MLP model, training of Family Specialists through Brazelton Touchpoints¹⁸¹, and promoting social connection through the Early Childhood Learning and Innovation Network for Communities (EC-LINC) framework^{182, 183}. At the time this paper was written, no results were available from the DULCE national demonstration as it is still in its implementation phase across the participating clinics.

MODEL 3: New York

Summary of Model

In 2017, New York State launched *The First 1000 Days on Medicaid* campaign. This cross-sector Medicaid redesign initiative is based on current neuroscience indicating that a child’s basic brain architecture is built by the age of three, and that, consequently, this period presents a pivotal period of opportunity to support lifelong wellbeing through optimal early childhood development.¹⁸⁴ This initiative strives to generate new care models and modes of investment that unite stakeholders across sectors to support optimal child outcomes throughout this critical period. *First 1000 Days* follows on the *Value Based Payment for Children Subcommittee and Clinical Advisory Group*, which developed recommendations for a child-specific Value-Based Payment (VBP) model and a set of measures that could be applied to pediatric VBP models in 2018, including measures and recommendations relevant to co-located/integrated services and screening for ACEs, SDOH, domestic violence, and maternal depression.¹⁸⁵

Exhibit 2. THE FIRST 1000 DAYS ON MEDICAID – 10 PROPOSALS

1. Create a Preventive Pediatric Care Clinical Advisory Group
2. Promote Early Literacy through Local Strategies
3. Expand Centering Pregnancy
4. New York State Developmental Inventory Upon Kindergarten Entry
5. Statewide Home Visiting
6. Require Managed Care Plans to have a Kids Quality Agenda
7. Data system development for cross-sector referrals
8. Braided Funding for Early Childhood Mental Health Consultations
9. Parent/Caregiver Diagnosis as Eligibility Criteria for Dyadic Therapy
10. Pilot and Evaluate Peer Family Navigators in Multiple Settings

Throughout 2017, *First 1000 Days* convened a series of cross-sector workgroups of over 200 stakeholders from numerous fields, including education, pediatrics, child welfare, and mental health. These successive workgroup meetings generated 10 final evidence based, family focused policy/programmatic recommendations that are: (1) intentionally broad and cross sectoral; (2) evidence based; (3) build on existing programs and services; and (4) emphasize the value of parent/caregiver health.^{186,187} These recommendations span the clinical and social service arenas and include cross-sector approaches to addressing a variety of issues including mental health, home visiting, primary care, early literacy, health care quality outcome measures, social determinants service provision, and dyadic parent/caregiver referrals and treatment. (See *Exhibit 2*) These 10 Recommendations are discussed in detail below.

Innovations/Challenges

Workforce

The majority of 10 *First 1000 Days* proposals would expand existing New York State programs. As appropriate, the preliminary fiscal analyses provided for certain proposals account for staffing needs and/or for the per-child costs associated with staff training, program administration, and the facilitation of non-health partnerships and community outreach.

Certain proposals propose to address particular workforce challenges. *Proposal #5 – Statewide Home Visiting* addresses the statutory changes needed to modify scope of practice laws such that non-clinician home visits would be allowed to be billable. *Proposal #3 – Expand Centering Pregnancy*, which would fund pilot projects in communities with the poorest birth outcomes to encourage obstetrical providers serving Medicaid patients to adopt the Centering Pregnancy model of prenatal care, addresses the need to provided financial support for staff training and start-up costs, as well as incentive payments to encourage

provider update. Additionally, *Proposal #8 – Braided Funding for Early Childhood Mental Health Consultations* notes that demand from early care staff for mental health consultation exceeds the capacity of New York State’s current Early Childhood Mental Health Consultation pilot program, and argues for the provision of braided funding to address this unmet need. Under *Proposal #9 – Parent/Caregiver Diagnosis as Eligibility Criteria for Dyadic Therapy*, New York is also proposing to enact billing modifications to allow pediatric providers to bill for parent/caregiver-child dyadic therapy based solely on the parent/caregiver being diagnosed with a mood, anxiety, or substance use disorder. Altogether, it is evident from these proposals that various strategies are needed to modify both the size and practice capabilities of the health and non-health workforce to accommodate holistic care tactics undertaken through cross sector collaboration.

Cross-Sector Partnerships

Several of the *First 1000 Days* recommendations emphasize cross-sector partnerships. The very first of the 10 recommendations (*Proposal #1 - Create a Preventive Pediatric Care Clinical Advisory Group*) proposes that Medicaid convene a clinical advisory group charged with: (1) developing a framework model for how best to organize well-child visits/pediatric care in order to fully implement the Bright Futures Guidelines; and (2) making recommendations to the New York Medicaid program on how to turn the advisory group’s implementation guidance into practice. Proposed topics for consideration by the advisory group include how to identify ACEs and incorporate trauma-informed care into practice, models for the integration of maternal and child mental health into pediatric primary care, and the use of multi-disciplinary teams for delivering evidence-based programs, among others. The membership of the advisory board is yet to be determined.

Other proposals focus on establishing service linkages. *Proposal #2 - Promote Early Literacy through Local Strategies* would provide three-year pilot funding to any interested mainstream managed care organization (MCO) to expand the use of Reach Out and Read (ROR) programs in pediatric primary care. ROR is a national evidence-based program in which pediatricians can promote early literacy by talking with parents about the importance of reading aloud with their young children, providing parents with advice and encouragement concerning book selection and reading practices, and giving the child a book to take home and keep.¹⁸⁸ Stated strengths and benefits of this program include its scalable cross-sector design and evidence-based foundation. Anticipated challenges include barriers to measurement of the impact of this strategy and that the projected costs do not include the associated costs of measuring language development. *Proposal #10 - Pilot and Evaluate Peer Family Navigators in Multiple Settings* would develop, implement, and evaluate a number of pilot programs to provide peer family navigator services in community and primary care settings to help families address both health needs and social determinants. The stated strengths of this proposal include that this evidence-based strategy would expand upon New York’s existing use of parent-child therapy and support of maternal depression screening in the pediatric office and be readily accomplished through administrative action by the NY Department of Health. Concerns include lack of a specific evidence base for providing peer family navigators in the proposed settings; the proposal stipulates that New York State would conduct internally or contract externally for both qualitative and quantitative evaluations of this proposed program.

Data Sharing

New York explicitly addresses data sharing through *Proposal #7 - Data System Development for Cross Sector Referrals*. Under this proposal, New York Medicaid would direct competitive grant funds to purchase a Medicaid determined hub and spoke data system that enables screening and referrals across clinical and community settings for up to 3 communities. This proposal acknowledges the numerous challenges associated with this effort, including—among others—that: (1) Many social determinants of health screening/referrals tools are still in development and testing phase; (2) Medicaid managed care

plans are unlikely to take on the role of "technology hub" for fear of taking on additional unreimbursed administrative costs; and (3) Proprietary data sharing solutions are already entering the market place, which may poses barriers to interoperability and frustrate community collaboration.

Cross-Sector Quality/Performance Measurement

Cross-sector measurement forms the basis of *Proposal #4 - New York State Developmental Inventory Upon Kindergarten Entry*. Under this proposal, the State Education Department, Medicaid, and other partners would agree upon a standardized, holistic measurement tool to assess child development upon Kindergarten entry according to a number of parameters including cognitive, social-emotional, language, and motor development. This would create an outcome measure that could be tied to incentives or new strategies in children’s health care and other sectors.

Other proposals include a cross-sector measurement as a tactic to incentivize better performance from the state’s providers. For instance, under *Proposal #6 - Require Managed Care Plans to have a Kids Quality Agenda*, New York’s Department of Health would work with its External Quality Review Organization (EQRO) to develop a two-year Performance Improvement Project (PIP) for all Medicaid managed care plans called the “Kid’s Quality Agenda.” The focus of the common PIP would be threefold: 1) to increase performance on young child related Quality Assurance Reporting Requirements (QARR) measures (well-child visits, lead screening, child immunization combo); 2) to enhance rates of child developmental, maternal depression, and other forms of screening; or 3) to improve performance on existing QARR measures related to perinatal health. As an incentive, plans that invest adequately in their PIP would receive bonus points toward their scores on relevant quality measures (well-child visits first 15 months, timeliness of prenatal care, and postpartum care).

Funding Sources

Several of the 10 Proposals include blended and braided funding strategies. *Proposal #5 - Statewide Home Visiting* suggests blending funding across a variety of public and private funds that presently support the services that make up New York’s current home visiting programs, including federal Maternal, Infant and Early Childhood Home Visiting (MIECHV) program funds as well as Temporary Assistance to Needy Families (TANF), Title V Maternal and Child Health Block Grant, Individuals with Disabilities Education Act (IDEA) Part C, and Medicaid dollars. *Proposal #8 – Braided Funding for Early Childhood Mental Health Consultations* calls for a braided funding approach as the main thrust of a strategy for paying for mental health consultation services to early childhood professionals in early care and education setting. This proposal given special consideration to combining Medicaid Administrative Funds (CMS) for training for mental health consultants; Federal block grants including the Child Care and Development Fund and Community Mental Health Services Block Grant, and Head Start and Early Head Start funding.

While these proposals share in the advantage that they would tackle systemic funding challenges that have long stymied cross sector effort to address child development and wellbeing, concerns include the lack of communication between sister agencies regarding available funding sources, and – in the case of *Proposal #5* – reports that some home visiting programs that are eligible for reimbursement of Targeted Case Management activities are not submitting all claims to Medicaid for payment because the reimbursement rate is not worth the time/resources expended for submitting claims. It remains to be seen how New York will address these challenges.

Legislative/administrative authority

The 10 *First 1000 Days* proposals rely on a variety of legislative/administrative strategies, with a range of relative ease and involvement. Possible strategies including administrative action by NY’s Department of

Health (DOH), statutory change, IT/data infrastructure changes, submission of a State Plan Amendment, Federal Waiver applications, and New York State budget requests.

Only one proposal, *Proposal 5 – Statewide Home Visiting*, would require federal approval; this proposal would require administrative action by the NY DOH, a legislative budget request, as well as submission of either a State Plan Amendment or a Federal Waiver to cover components of the program not already authorized under New York’s current State Plan Amendment agreement with CMS. Of the remaining proposals, three rely on administrative action alone: *Proposal 1 – Create a Preventive Pediatric Care Clinical Advisory Group*, *Proposal 4 – New York State Developmental Inventory Upon Kindergarten Entry* and *Proposal #6 – Require Managed Care Plans to have a Kids Quality Agenda*. Five of the 10 rely solely on a combination of administrative action by the NY DOH and formal budget requests to the state legislature. These include *Proposal 3 – Expand Centering Pregnancy*, *Proposal 2 – Promote Early Literacy through Local Strategies*, *Proposal 8 – Braided funding for Early Childhood Mental Health Consultations*, *Proposal 9 – Parent/Caregiver Diagnosis as Eligibility Criteria for Dyadic Therapy*, and *Proposal 10 – Pilot and Evaluate Peer Family Navigators in Multiple Settings*. Finally, *Proposal 7 – Data system development for cross-sector referrals*, would require IT/data infrastructure innovation as well as administrative action and a legislative budget request.

Results

Results are not yet available, as the programmatic and policy changes resulting from these 10 recommendations are currently in the formative stages of development and implementation.

Future Directions

Funding to begin implementation of the 10 *First 1000 Days* recommendations was included in the Executive Budget proposal that is now being considered by the New York State Legislature. The Governor’s budget proposes \$2.9 million (\$1.45 million State) in Medicaid funds toward the *First 1000 Days* initiative in 2018-19, with the expectation of \$11.6 million (\$5.8 million State) in 2019-20 (Medicaid is on a two year budget).¹⁸⁹

MODEL 4: Arizona

Arizona’s governor and state legislature have made trauma-informed interagency services coordination a priority for certain targeted pediatric populations. Below we discuss the Comprehensive Medical and Dental Program (CMDP), which provides integrated care for vulnerable foster- and justice-system-involved youth.

Summary of model

Arizona’s Comprehensive Medical and Dental Program (CMDP) is a Medicaid health plan that is housed within Arizona’s Division of Children, Youth, and Families within the Department of Economic Security. The inherently cross-sector design of the CMDP underscores its mission to provide medical, behavioral health, dental services, and comprehensive case management for children and youth ages 0-18, and up to age 21 in instances where the member is not Title XIX eligible, who are in foster homes or are placed out of homes and are in the custody of the Arizona Department of Child Safety (DCS), the Arizona Department of Juvenile Corrections, or the Arizona Juvenile Probation Offices.^{190,191}

As summarized in the *Making Medicaid Work for Children in Child Welfare: Examples from the Field* report by Center for Health Care Strategies, Inc., which was commissioned by the Annie E. Casey

Foundation to explore strategies to improve Medicaid for children in child welfare and which examined the Arizona CMDP model in detail, the core goals of this program include:¹⁹²

- Immediate delivery of behavioral health care through “urgent behavioral health response;”
- Contracts with behavioral health providers that require an understanding of the unique needs of children in child welfare;
- Assessments that better meet child welfare system needs through a strengths-based, individualized, holistic approach that includes assessments of risk, trauma, substance use, etc.; and
- Specialty services available for post-traumatic stress; sexually inappropriate behaviors; loss, attachment, and bonding; family functioning, parenting skills, and family preservation; youth in transition to adulthood; adoption support; etc.

Innovations/Challenges

Workforce

The CDMP workforce comprises a diverse set of clinical and non-clinical service providers including the foster care giver, the member’s custodial agency representative (who acts as the member’s inter-agency case manager), care coordinators, behavioral health service providers, primary care providers, and dentists. Together, these providers form a team-based Wraparound practice approach, which is facilitated by a Medicaid billing system designed to accommodate diverse services, levels of care, and care settings.¹⁹³ Arizona has made high-need case management a covered Medicaid benefit that is primarily billed as case management, a strategy that acknowledges the critical role for case management in care coordination for foster- and corrections-involved youth, given their cross-systems involvement and numerous needs. Additionally, the CDMP has a designated staff corps that provides support across areas of care and care activities, such as helping patients schedule and maintain appointments and assisting with referrals to community and cross-departmental programs including Women, Infants and Children Program [WIC], Headstart, Children’s Rehabilitative Services [CRS], Regional Behavioral Health Authority [RBHA], and the Arizona Early Intervention Program [AzEIP].¹⁹⁴

To enhance the seamless integration of cross-sector services, behavioral staff are co-located in child welfare offices. Further, through a specialty provider initiative Arizona mandated that behavioral health providers specialized in trauma-informed care for sexual abuse, attachment disorders, and early childhood and who were already contracted with the child welfare system become Medicaid certified and participate in Medicaid provider networks.¹⁹⁵ These providers are also required to complete the training *Understanding the Unique Behavioral Health Needs of Children and Families involved with the Department of Child Safety* about issues relevant to the child welfare population.¹⁹⁶

Cross-Sector Partnerships

The Arizona behavioral health system is carved out from the medical care system. As such, Arizona Medicaid must contract with the Arizona Department of Health Services’ Division of Behavioral Health Services to provide behavioral health services under the CMDP. Arizona Medicaid then contracts with individual behavioral health Medicaid MCOs called Regional Behavioral Health Authorities (RBHAs) for the provision of direct services.

Under the CMDP, the health plan partners with the child welfare system, foster care givers, and RBHAs to deliver integrated physical and behavioral care. When an Arizona child enters the foster care service, DCS initiates what is known as a “Rapid Response Referral” through which every child receives a behavioral health assessment within 72 hours of entering foster care.^{197,198} Any urgent physical health care

needs discovered during the Rapid Response screens are brought to the attention of the child welfare worker. Further, a comprehensive medical screening consistent with EPSDT requirements must then occur within 30 days of entering foster care, and all subsequent EPSDT visits must include developmental and behavioral health screens. The program also provides non-emergency medical transportation for patients to medical appointments in instances where the parent, legal guardian, or foster care giver cannot.¹⁹⁹

Data Sharing

The CMDP and the child welfare data systems interact, which allows ready data sharing between the two systems and facilitates the identification and coordination of cross-sector services. The CDMP encourages cross-sector service coordination through monthly emails to the Division of Child Safety (DCS) notifying them of children who have not received an EPSDT or dental visit within 120 days of removal from their home.

Cross Sector Quality/Performance Measurement

CMDP performance is measured on an annual basis by Arizona Medicaid. Performance measures include access to primary care providers (PCPs), well-child visits, adolescent well care, annual dental visits, as well as EPSDT and EPSDT dental participation rates in the CMPD population.²⁰⁰

For all lines of business, Arizona Medicaid developed new performance measures that became effective October 1, 2014, which aligned with the start of a new contract period. This allowed Medicaid to align with the CMS measure sets for the Children's Health Insurance Program Reauthorization Act (CHIPRA) Core Measure Set, the Adult Core Measure Set, and Meaningful Use.

Funding Sources

Funding for the CMDP is generated by braiding traditional Medicaid dollars with funds the child welfare system contributes to the Medicaid Behavioral Health system as a match. Using child welfare general state revenue in this fashion allows Arizona to receive a 50 percent or higher federal matching rate for those dollars, which liberates more resources for services.²⁰¹ Care is financed through risk-adjusted capitation rates for medically necessary physical health and dental services for CMDP members. Providers in Arizona's Regional Behavioral Health Authorities also receive risk adjusted rates for seeing children in CMDP; their rates are on average 29% higher than rates paid for non-CMDP patients.

Legislative/administrative authority:

The CMDP program was enacted in 1970 through state law.²⁰² It is located within the Arizona Department of Economic Security (DES), Division of Children, and Families (DCYF), but is administered by the State's Medicaid program through an Intergovernmental Agreement that permits Medicaid to be the health plan.²⁰³

Results

As summarized in the *Making Medicaid Work for Children in Child Welfare: Examples from the Field* report, CMDP has demonstrated positive results. For instance, CMDP has had the highest rates statewide for access to primary care providers for all age groups combined and for adolescent well-care visits. State results have also indicated better behavioral health outcomes for children with Wraparound child and family teams as compared with those without, when evaluated according to a set of outcome indicators including acceptable emotional regulation, avoiding delinquency, achieving success in school, increased

stability, living with a family, and decreasing safety risks, substance abstinence, stable housing, employment, education, arrest-free, and participation in self-help groups.

Future Directions

Arizona Senate Bill SB1375, passed in the fifty-first legislative session of the State's Assembly in 2013, required the DCS, Department of Health Services, and the State's Medicaid department to undertake an evaluation of the most efficient and effective way to provide comprehensive medical, dental and behavioral health services for children in foster care and to submit a report of their findings.²⁰⁴ This report,²⁰⁵ submitted October 2, 2015, recommended that numerous procedural improvements be made to the existing CMDP program through September of 2019, such as integrating case planning activities and ensuring that all physical and behavioral health care provided to CMDP enrollees is delivered through a trauma-informed lens. The report ultimately recommended that, commencing October 2019, the CMDP plan transition to an Integrated CMDP Contracted Network Model, which would carve behavioral health services into the CMDP and expand the CMDP's provider network in order to leverage value-based purchasing arrangements for improved outcomes. The report cites various advantages of this recommended model including the alignment of DCS and healthcare mission and resources under one administrative agency and the integration of behavioral and physical health services under a single payer (as opposed to the current behavioral health carve-out).

This is a sizeable transition that will require various legislative changes to amend the CMDP statute such that the CMDP may contract with providers outside of the Arizona Medicaid provider network and such that CMDP provider reimbursement rates are no longer tied to Arizona Medicaid fee schedule. DCS/CMDP will also be required to invest significant staff and resources to ensure that the CMDP has the capacity to function as its own integrated health plan replete with key leadership positions including Chief Executive Officer (CEO) and Chief Operations Officer (COO), and will be required to develop its own business operations infrastructure including information technology/data systems in order to function as a health plan.

Arizona is continuing with preparatory evaluation of implementing this integrated CMDP transition and recently hired the Mercer Government Human Services Consulting (Mercer) to perform an analysis of the operational and infrastructure of this transition.²⁰⁶ The results of this analysis were published in January 2018 and include numerous recommendations for necessary legislative changes, provider network development, staffing requirements, organizational infrastructure, and performance measures. Whether and/or how the state acts on these recommendations remains to be seen.

Model 5: Minnesota

Summary of model

The Minnesota Department of Human Services (DHS) has been addressing pediatric SEDH through a variety of facets in its Medicaid program. In 2015, MN DHS was asked by the state legislature to examine the inclusion of social risk in payments to plans and providers that serve Medicaid patients. The first step of this process was to assess which Medicaid populations had the greatest health disparities, and to examine which social risk factors were most strongly associated with poor health outcomes and high costs.²⁰⁷ In order to collect and analyze these data, Minnesota built a large dataset which includes Medicaid enrollment and claims data, child protection services, cash assistance, and other sources.²⁰⁸ Social risk factors are also addressed through the Integrated Health Partnership (IHP)—Minnesota's Medicaid Accountable Care Organization (ACO). In 2015, the Minnesota state government required DHS to provide a higher payment to IHP providers who serve a disproportionate number of individuals with

high social risk factors.²⁰⁹ These adjusted payments, along with innovative ways to incentivize providers to collaborate with community based organizations (CBOs), were rolled out in early 2018 through IHP 2.0.²¹⁰ In addition to the data collection efforts and payment innovations described above, Minnesota DHS also has instituted requirements and payment incentives for Medicaid providers across the state to administer comprehensive trauma screenings (with an emphasis on social risk factors and ACEs) at all child and teen primary care visits.²¹¹

Innovations/Challenges

Workforce

Minnesota's accountable care organization, the Integrated Health Partnership, has been enhanced in 2018 [IHP 2.0] to include population-based payments (PBPs) to providers adjusted based on the social complexity of their patient population. The assumption is that the PBP will be used towards care coordination and infrastructure enhancement in order to address their patients' social issues. Presumably, addressing these social factors with the enhanced PBP would be carried out by care coordinators and case managers.

Of note, Minnesota authorizes grant funds for clinical medical education programs meeting certain criteria to train an array of health providers, including community paramedics or community health workers.²¹²

Cross-Sector Partnerships

Health care and social service organization partnerships is integral to the IHP model. IHP 2.0 further encourages these relationships through their shared savings approach available to provider groups who select Track 2. In this track, larger provider organizations who have a higher capacity to take on more complex risk arrangements can qualify for decreased downside risk and protection from financial loss if they have a contractual relationship with a social service organization. IHPs are encouraged to develop partnerships with CBOs who focus on a variety of different social services for patients, including housing, food security, education, and transportation.²¹³

The drive to improve integration between health care and community organizations in a measurable way was influenced by other work with a similar agenda occurring at the state-level- namely, Minnesota's Accountable Health Model. One key component of the Accountable Health Model, which was developed through a State Innovation Model (SIM) grant, was to build on the work being done in IHP 1.0 to enhance service delivery and payment models that support integration of medical care and community prevention services.²¹⁴

Data Sharing

Minnesota has extensively invested in collecting and analyzing social risk factor data across its Medicaid program at the aggregate-level. For example, in 2015 DHS developed a report that looked at the prevalence of family risk factors among children who receive Medicaid services. Data were gathered using Minnesota's eligibility data system—MAXIS. MAXIS houses eligibility data across the Medical Assistance (MA), food support, and cash assistance programs. Minnesota plans to use the data collected through MAXIS to identify child and family social risk factors which most necessitate supportive services and to enhance partnerships between DHS and community organizations working with at-risk children.²¹⁵

Minnesota has the advantage of being a large agency which comprises multiple health and social service programs beyond just Medicaid. Therefore, they have access to many different types of data beyond Medicaid claims, including: mental health, long-term care, chemical dependency and treatment, child

welfare, economic assistance, and food supports. Additionally, DHS worked with the Department of Justice to access prison data and, as of early 2018, was attempting to access county jail data. For the IHP program, DHS feeds back these social risk factor data to participating clinic systems so they can learn more about their attributable population (e.g., homelessness rate, chemical dependency rate). This aggregate-level data allows each IHP to can see how their patient population's social complexity compares against the rest of the Medicaid population. These social risk factor data are not yet being fed back on an individual, patient-level. Although accessing patient-level social risk factor data would allow providers to identify and mitigate issues on an individual basis, a variety of logistical and legal factors make sharing data at this level of granularity challenging.²¹⁶

Cross-Sector Quality/Performance Measurement

For the Population-Based Payment (PBP) component of the IHP model, there are not set quality measures that must be applied across all participating clinic systems. Rather, quality measures are decided through consensual agreement between the IHP and DHS. Through conversations with the clinic systems during the contract process along with a review of DHS data, each IHP's most pronounced health disparities will be assessed. The IHP must then propose a quality measure which could be tied to interventions that work to mitigate their patient population's identified health disparities. DHS and IHP collaboratively determine an appropriate methodology to award points for performance on quality measures. DHS then calculates a population-based quality score based on the IHP's performance on the quality measures.

The IHP 2.0 program is divided into two tracks. In Track 1, the IHP receives a population-based payment (PBP) which is tied to clinical, social, and utilization metrics and adjusted based on health and social risks present in the patient population. In Track 2, the IHP receives both a PBP and a two-way risk model for shared savings/losses.²¹⁷ Both tracks are impacted by the IHPs' performance on the selected quality measures. For Track 1 IHPs, in order to continue participation at the conclusion of each 3-year cycle, IHPs will be evaluated on quality, health equity, and utilization measures. For Track 2 IHPs, performance on quality measures impacts shared savings but not shared losses.²¹⁸

Funding Sources

Minnesota's accountable care organization, the Integrated Health Partnership (IHP) rolled out IHP 2.0 in January 2018. One key component of the enhanced IHP is a quarterly population-based payment (PBP) to providers which is adjusted based on patient's social complexity. Per member per month (PMPM) amounts are adjusted based on patient's social risk factors, incorporating Minnesota's research on the costs associated with those risk factors. To offset the high cost of serving patients with social complexities, providers are given an enhanced PBP, with the assumption that the money will be used for care coordination and infrastructure development.

Legislative/administrative authority

The IHP 2.0 was authorized through MN Statute 256B.0755, subd. 4(d) (as amended in 2017 1st Special Session).²¹⁹

Results

Since IHP 2.0 was rolled out in early 2018, no results are available yet.

Future Directions

The IHP model will likely evolve over time as DHS monitors the impact the PBP has on health outcomes, utilization, and cost.

Table 1. Predominant Features of Case Studies

CASE STUDIES	Workforce	Cross-Sector Partnerships	Data Sharing	Cross-Sector Quality/Performance Measurement	Funding Sources/Billing & Reimbursement	Legislative/Administrative Authority
Help Me Grow (HMG)	<ul style="list-style-type: none"> ■ Care coordinators with background in child development cultural competency training.²²⁰ ■ Primary care physicians ■ Social service representatives 	<ul style="list-style-type: none"> ■ Centralized Access Point Call Center facilitates service linkages ■ Formal national partnership with <i>Birth to Five: Watch Me Thrive!</i> ■ HMG affiliates foster local cross-sector partnerships 	<ul style="list-style-type: none"> ■ Centralized Access Point ■ Communities and/or states leverage own or existing data sharing platforms 	<ul style="list-style-type: none"> ■ Data collection occurs at all levels in the model, including outreach to providers and families and through the centralized access point ■ Two sets of metrics applied across HMG National Affiliates: “common indicators” (capture local differences) and “impact indicators” (capture spread and scale) ■ Standardized data collection and reporting guidelines ■ HMG Fidelity Assessment 	<ul style="list-style-type: none"> ■ National foundation support ■ State-based philanthropy 	<ul style="list-style-type: none"> ■ No legislative or administrative modifications needed
Project DULCE (Developmental Understanding and Legal Collaboration for Everyone)	<ul style="list-style-type: none"> ■ DULCE Family Specialist ■ Medical Legal Partner ■ Primary Care Provider ■ Mental health professional ■ In-house social worker (original RCT only) ■ Research assistant (original RCT only) 	<ul style="list-style-type: none"> ■ Partnership between Boston Medical Center and Medical Legal Partnership Boston ■ Advisory board of representatives from both local and state programs and parents 	<ul style="list-style-type: none"> ■ MLPB Case Management database ■ Access database electronic activity log for cross-sector service coordination 	<ul style="list-style-type: none"> ■ Well-child visit rate during the first 15 months of life ■ Emergency department (ED) visit rate ■ Childhood immunization status ■ Self-reported measures (QIC-EC): optimal child development; parenting factors; family hardships; strengths/risks; social networks; receipt of concrete support ■ Uptake of concrete supports including: SNAP, WIC, Lifeline, 	<ul style="list-style-type: none"> ■ Original Project DULCE RCT funded by the National Quality Improvement Center on Early Childhood as a research and demonstration initiative ■ The Project DULCE program receives funding through the U.S. Department of Health and Human Services, Administration for Children, Youth and Families, Office on Child Abuse and 	<ul style="list-style-type: none"> ■ No legislative or administrative modifications needed

CASE STUDIES	Workforce	Cross-Sector Partnerships	Data Sharing	Cross-Sector Quality/Performance Measurement	Funding Sources/Billing & Reimbursement	Legislative/Administrative Authority
				LIHEAP, EAEDC, TAFDC	Neglect, under Cooperative Agreement 90CA1763	
Arizona: Comprehensive Medical and Dental Program	<ul style="list-style-type: none"> ■ Child’s custodial agency representative/inter-agency case manager ■ Care coordinator ■ Behavioral health service providers/Regional behavioral health authority ■ Primary care providers ■ Dentists 	<ul style="list-style-type: none"> ■ Co-location of physical and mental/behavioral health staff in child welfare offices ■ Designated staff corps facilitates inter-agency linkages and service coordination ■ Rapid Response Referral ■ Non-emergency medical transportation 	<ul style="list-style-type: none"> ■ CMDP and the child welfare data systems interact 	<ul style="list-style-type: none"> ■ Program-wide performance measured on an annual basis ■ Performance measures include: access to primary care providers (PCPs); well-child visits; adolescent well care; annual dental visits; EPSDT and EPSDT dental participation rates.²²¹ 	<ul style="list-style-type: none"> ■ High-need case management designated as a covered Medicaid benefit ■ Medicaid dollars combined with funds contributed by the child welfare system as a Medicaid match ■ Care services financed through risk adjusted capitation rates 	<ul style="list-style-type: none"> ■ Enacted through state law in 1970 ■ Arizona Senate Bill SB1375 (2013) required an assessment of the CMDP care model – the resulting report recommended that behavioral health services be carved into the CMDP model; state-led evaluations of this recommended change are ongoing
New York: The First 1000 Days on Medicaid	<ul style="list-style-type: none"> ■ <i>Proposed policy and programmatic innovations include:</i> ■ Modifying scope of practice laws to enable reimbursement of nontraditional providers (<i>Proposal #5</i>) ■ Provision of braided funding to address this unmet workforce capacity need (<i>Proposal #8</i>) ■ Provision of pilot funding to encourage provider uptake of particular care models (<i>Proposal #3</i>) ■ Enact billing modifications to 	<ul style="list-style-type: none"> ■ <i>Proposed policy and programmatic innovations include:</i> ■ Convening a clinical advisory group charged with developing a framework model for how to best and fully implement the Bright Futures Guidelines, and making recommendations to the New York Medicaid program (<i>Proposal #1</i>) ■ Establishing cross-sector service linkages (<i>Proposal #2, Proposal #10</i>) 	<ul style="list-style-type: none"> ■ <i>Proposed policy and programmatic innovations include:</i> ■ Purchasing a Medicaid-determined hub and spoke data system that enables screening and referrals across clinical and community settings for up to 3 communities (<i>Proposal #7</i>) 	<ul style="list-style-type: none"> ■ <i>Proposed policy and programmatic innovations include:</i> ■ Developing a standardized measurement tool to assess child development upon Kindergarten entry according to (e.g.) cognitive, social–emotional, language, and motor development; the resulting outcome measure could be tied to incentives in children’s health care and other sectors (<i>Proposal #4</i>) ■ Cross-sector measurement as a tactic to incentivize better performance from 	<ul style="list-style-type: none"> ■ <i>Proposed policy and programmatic innovations include:</i> ■ Blending funding across public and private funds that currently support New York’s current home visiting programs (<i>Proposal #5</i>) ■ Braiding federal funding sources (Medicaid administrative funds, federal block grants, head start, etc.) to pay for mental health services in early care and education settings (<i>Proposal #8</i>) ■ <i>Funding to begin implementation of</i> 	<ul style="list-style-type: none"> ■ <i>Proposed policy and programmatic innovations rely on a variety of strategies:</i> ■ Administrative action by the NYS Department of Health ■ Legislation ■ IT/data infrastructure modifications ■ Submission of State Plan Amendments ■ Federal Waiver applications ■ New York State budget requests

CASE STUDIES	Workforce	Cross-Sector Partnerships	Data Sharing	Cross-Sector Quality/Performance Measurement	Funding Sources/Billing & Reimbursement	Legislative/Administrative Authority
	<p>allow for parent/caregiver dyadic therapy (Proposal #9)</p>			<p>the state's providers (Proposal #6)</p>	<p><i>the 10 First 1000 Days recommendations was included in the Executive Budget proposal that is now being considered by the New York State Legislature</i></p>	
<p>Minnesota: Integrated Health Partnership</p>	<ul style="list-style-type: none"> ■ Accountable Care Organization ■ 	<ul style="list-style-type: none"> ■ MN DHS comprises multiple health and social service programs in addition to Medicaid ■ Per-beneficiary payment (PBP) nominally used for care coordination and infrastructure enhancement to address patients' social issues ■ Provider organizations who can qualify for decreased downside risk and protection from financial loss if they have a contractual relationship with a social service organization 	<ul style="list-style-type: none"> ■ MAXIS – houses eligibility data across Medical Assistance (MA), food support, and cash assistance programs ■ Other types of agency data: mental health; long-term care; chemical dependency and treatment; child welfare; economic assistance; and food supports ■ Medicaid enrollment and claims data ■ Child protection services, cash assistance, and other sources 	<ul style="list-style-type: none"> ■ Quality measures decided through consensual agreement between the IHP and DHS during the contracting process 	<ul style="list-style-type: none"> ■ Quarterly PBP to providers adjusted based on patient's social complexity ■ Per member per month (PMPM) amounts are adjusted based on patient's social risk factors, incorporating Minnesota's research on the costs associated with those risk factors. ■ Higher payment to IHP providers who serve a disproportionate number of individuals with high social risk factors ■ Payment incentives for Medicaid state-wide to administer comprehensive trauma screenings ■ DHS calculates a population-based quality score based on the IHP's performance on quality measures ■ Track 1: the IHP receives a 	<ul style="list-style-type: none"> ■ The IHP 2.0 was authorized through MN Statute 256B.0755, subd. 4(d) (as amended in 2017 1st Special Session).

CASE STUDIES	Workforce	Cross-Sector Partnerships	Data Sharing	Cross-Sector Quality/Performance Measurement	Funding Sources/Billing & Reimbursement	Legislative/Administrative Authority
					population-based payment (PBP) which is tied to clinical, social, and utilization metrics and adjusted based on health and social risks present in the patient population ■ Track 2: the IHP receives both a PBP and a two-way risk model for shared savings/losses	

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Appendix D: In-Person Agenda and Meeting Participants

April 23 - 24, 2018
AcademyHealth
1666 K. St. NW, Suite 1100
Washington, DC 20006

Agenda

Meeting Objective: Building on existing policies and practice transformation efforts, the meeting will seek to spur discussion and identify payment and incentive models that specifically support and incentivize health plans and provider organizations to address the social and emotional determinants of health and use a trauma-informed approach to target Adverse Childhood Events (ACEs), toxic stress, and promote safe, stable and nurturing relationships.

Monday, April 23

5:00 – 7:30 PM Reception and Dinner

5:00 – 5:45 PM Reception and Networking

5:45 – 7:30 PM Dinner with Keynote Speaker: Eliot Fishman, Families USA

10:45 – 11:00 AM Discussants:
– David Labby, Health Share Oregon
– Rich Antonelli, Boston Children’s Hospital
– Joseph Thompson, Arkansas Center for Health Improvement

11:00 – 12:00 PM Full Group Discussion

Tuesday, April 24

8:00 – 8:30 AM Registration and Breakfast

8:30 – 9:00 AM Welcome, Opening Remarks and Introductions
Lisa Simpson, President and CEO, AcademyHealth
Mark Wietecha, President and CEO, Children’s Hospital Association

9:00 – 10:00 AM Project and Meeting Framing Session
• Christina Bethell, The Child and Adolescent Health Measurement Initiative

Perspectives:

- Charles Gallia, State of Oregon
- Kay Johnson, Johnson Group Consulting
- Angelo Giardino, Texas Children’s Hospital

Session will provide a brief overview of goals for the meeting and overall project as well as review assumptions related to interventions and care models (e.g., what is known already) needed to address social and emotional determinants of health for children.

10:00 – 10:30 AM Networking Break

10:30 – 12:15 PM Payment Reform Models to Address Social Determinants of Health for Children Using a Trauma-informed Approach
Moderator: Enrique Martinez-Vidal, *AcademyHealth*

10:35 – 10:45 AM Overview of Payment Models Challenge Guide and Recommendations
• Michael Bailit, President, Bailit Health

12:00 – 12:15 PM Prioritization of Recommendations

12:15 - 12:45 PM Attendees Get Lunch

12:45 – 2:30 PM Policy, Capacity, and Environmental Factors Needed to Optimize Payment Reform Models to Address Social Determinants of Health for Children Using a Trauma-informed Approach

Moderator: Lisa Simpson, AcademyHealth

12:50 – 1:00 PM Overview of Policy, Capacity, and Environmental Factors Challenge Guide and Recommendations
• Cheryl Casnoff, Senior Fellow, NORC

1:00 – 1:15 PM Discussants:
• Maria Prince, Aetna
• Joyce Liu, Physician with Kaiser Permanente
• Cathy Caldwell, CHIP Director, Alabama

1:15 – 2:15 PM Full Group Discussion

2:15 – 2:30 PM Prioritization of Recommendations

2:30 – 2:45 PM Networking Break

2:45 – 3:50 PM Recommendation Prioritization Review and Next Steps
Moderator: Kay Johnson, Johnson Consulting Group

3:50 – 4:00 PM Closing Remarks & Adjourn

In-Person Meeting Participants

Invitational Meeting: April 23-24, 2018

Rich Antonelli

Medical Director of Integrated Care
Boston Children's Hospital
richard.antonelli@childrens.harvard.edu

George Askew

Deputy Commissioner of Health
New York City Department of Health and
Mental Hygiene, Division of Family and Child
Health
gaskew@health.nyc.gov

Jennifer Babcock

Vice President for Medicaid Policy
Association for Community Affiliated Plans
jbabcock@communityplans.net

Michael Bailit

President
Bailit Health
mbailit@bailit-health.com

Megan Bair-Merritt

Associate Professor, Pediatrics
Boston University
mbairme1@bu.edu

Harolyn Belcher

Director of the Center for Diversity in Public
Health Leadership Training
Kennedy Krieger Institute, Johns Hopkins
hbelche1@jhmi.edu

Scott Berns

President and CEO
National Institute for Children's Health Quality
(NICHQ)
sberns@nichq.org

Christina Bethell

Director
Child and Adolescent Health Measurement
Initiative (CAHMI)
Johns Hopkins University
cbethell@jhu.edu

Alex Billioux

Director, Division of Population Health
Incentives and Infrastructure
Center for Medicaid and Medicaid Innovation
Centers for Medicare and Medicaid Services
Alexander.Billioux@cms.hhs.gov

Charles Bruner

Senior Fellow, Center for the Study
of Social Policy
RISE Institute
bruner@childequity.org

Cathy Caldwell

Director, Bureau of Children's Health Insurance
Alabama Department of Public Health cathy.
caldwell@adph.state.al.us
Suzanne Campanella
Principal Research Analyst
NORC at the University of Chicago
campanella-suzanne@norc.org

Cheryl Casnoff

Senior Fellow
NORC at the University of Chicago
casnoff-cheryl@norc.org

Debbie Chang

Senior Vice President, Policy and Prevention
Nemours Childrens Health System
debbie.chang@nemours.org

Alyna Chien

Assistant Professor of Pediatrics
Boston Children's Hospital and Harvard
Medical School
alyna.chien@childrens.harvard.edu

Nathaniel Counts

Senior Director of Policy
Mental Health America
ncounts@mentalhealthamerica.net

Guy D'Andrea

Managing Partner
Discern Health
gdandrea@discernhealth.com
Lekisha Daniel Robinson
Health Policy Associate
Institute for Medicaid Innovation
ldanielrobinson@medicaidinnovation.org

Martha Davis

Senior Program Officer
Robert Wood Johnson Foundation
mbdavis@rwjf.org

Lacy Fehrenbach

Director
Office of Healthy Communities Director
Washington State Department of Health
lacy.fehrenbach-marosfalvy@doh.wa.gov

Eliot Fishman

Senior Director of Health Policy
Families USA
efishman@familiesusa.org

Charles Gallia

Oregon State Senator
Former Senior Policy Advisory
Oregon Medicaid
cgallia@ccgmail.net

Angelo Giardino

Senior Vice President and Chief Quality Officer
Texas Children's Hospital
apgiardi@texaschildrens.org

Jonathan Goldfinger

Chief Medical Officer, Healthy Steps
Zero to Three
jgoldfinger@zerotothree.org

Kimberly Hoagwood

Cathy and Stephen Graham Professor of Child
and Adolescent Psychiatry
New York University Langone Health
kimberly.hoagwood@nyumc.org

Larke Huang

Senior Advisor
SAMHSA
larke.huang@samhsa.hhs.gov

Kay Johnson

President
Johnson Consulting Group, Inc.
kay.johnson@johnsongci.com

Susan Kennedy

Senior Manager
AcademyHealth
susan.kennedy@academyhealth.org

Deborah Klein Walker

President
Global Alliance for Behavioral Health and
Social Justice
debbie.walker@earthlink.net

Meshie Knight

Program Officer
Robert Wood Johnson Foundation
mknight@rwjf.org

Dennis Kuo

Associate Professor and Chief
General Pediatrics
University at Buffalo, SUNY
dkuo@upa.chob.edu

Dave Labby

Health Strategy Advisor
Health Share Oregon
david@healthshareoregon.org

Joyce Liu

Medicaid Medical Director
Kaiser Permanente, NW Region
joyce.liu@kp.org

Enrique Martinez-Vidal

Vice President
AcademyHealth
enrique.martinez-vidal@academyhealth.org

Natalie Mikat-Stevens

Research Program Manager
Child and Adolescent Health Measurement
Initiative (CAHMI)
nmikats1@jhu.edu

Tyler Norris

Chief Executive
Wellbeing Trust
speuquet@udel.edu

Aimee Ossman

Vice President, Policy Analysis and
Implementation
Children's Hospital Association
aimee.ossman@childrenshospitals.org

Susmita Pati

Professor & Chief, Division of Primary Care
Pediatrics
Stony Brook University School of Medicine and
Stony Brook Children's Hospital
susmita.pati@stonybrook.edu

Maria Prince

Medical Director
Aetna
princem@aetna.com

Kalpana Ramiah

Vice President
America's Essential Hospitals
kramiah@essentialhospitals.org

Rachel Ruback

Research Assistant
AcademyHealth
rachel.ruback@academyhealth.org

Kelsey Shields

Principal Research Analyst
NORC at the University of Chicago
shields-kelsey@norc.org

Jeff Schiff

Medical Director
Minnesota Department of Human Services
jeff.schiff@state.mn.us

Lisa Simpson

President and Chief Executive Officer
AcademyHealth
lisa.simpson@academyhealth.org

Sam Smith

Senior Manager
AcademyHealth
samantha.smith@academyhealth.org

Joseph Thompson

President & CEO
Arkansas Center for Health Improvement
thompsonjosephw@uams.edu

Tom Valuck

Partner
Discern Health
TValuck@discernhealth.com

Melissa Vickers

Project Director
Family Voices
mvickers@familyvoices.org

Debra Waldron

Senior Vice President of Child Health and
Wellness
American Academy of Pediatrics (AAP)
dwaldron@aap.org

Ellen Marie Whelan

Chief Population Health Officer, Center for
Medicaid and CHIP Services and
Senior Advisor, Center for Medicare and
Medicaid Innovation
Centers for Medicare & Medicaid Services
EllenMarie.Whelan@cms.hhs.gov

Mark Wietecha

President and CEO
Children's Hospital Association
mark.wietecha@childrenshospitals.org

Felicia Willems

Senior Campaign Director for Healthcare
MomsRising
felicia@momsrising.org

Amy Wimpey Knight

Chief Operating Officer
Children's Hospital Association
amy.knight@childrenshospitals.org

Charlene Wong

Adolescent Medicine Pediatrician
Duke-Margolis Center for Health Policy
Duke University
charlene.wong@duke.edu

Appendix E: Roundtable Agenda and Meeting Participants

AcademyHealth's Annual Research Meeting (ARM) Washington State Convention Center – Room 204 (Level Two)

June 24, 2018
12:30 – 1:30 pm PT

Agenda

Roundtable Objective: Building on our April 24, 2018 Payment Reform for Children's Health Meeting, which reviewed existing policies and practice transformation efforts, we have compiled a set of recommendations on care models, support structures, and interventions/services that should be incorporated into provider settings to address children and families social and emotional determinants of health (SEDH). We would like to gain your insights on how these various recommendations can be encouraged/supported by various funding/financing mechanisms, such as advanced payment models and other contractual arrangements, or through the leveraging of existing state and federal policies and programs.

12:15 PM	Boxed Lunch Available	12:45 – 1:15 PM	Open Discussion
12:30 – 12:35 PM	Welcome Remarks Lisa Simpson, President and CEO, AcademyHealth	1:15 – 1:25 PM	Round Robin Moderator: Christina Bethell, CAHMI
12:35 – 12:40 PM	Project Framing Christina Bethell , The Child and Adolescent Health Measurement Initiative (CAHMI)		What is the one recommendation that is "actionable" and, if implemented, would demonstrate progress in addressing SEDH for children?
12:40 – 1:20 PM	Roundtable Discussion Moderator: Enrique Martinez-Vidal, AcademyHealth	1:25 – 1:30 PM	Closing Remarks & Adjourn
12:40 – 12:45 PM	Overview of Recommendations Enrique Martinez-Vidal , AcademyHealth		

Participant List

David Bergman: Stanford Children's Health

Helen Burstin: National Quality Forum

Jennifer Cartland: Lurie Children's – Chicago

Deena Chisholm: The Research Institute at Nationwide Children's Hospital

Richard Epstein: Chapin Hall Center for Children

Anthony Goudie: University of Arkansas for Medical Sciences

Katherine Grimes: Children's Health Initiative at Cambridge Health Alliance

Kristin Kan: Lurie Children's – Chicago

Larry Kleinman: Center for Child Health and Policy, UH Rainbow Babies and Children's Hospital

David Meltzer: The Center for Health and the Social Sciences, University of Chicago

Alice Middleton: Hilltop Institute at UMBC; previously at Maryland Medicaid

Kamila Mistry: Agency for Healthcare Research and Quality

Lynne Olson: American Academy of Pediatrics

Lauren Wisk: Boston Children's Hospital

Charlene Wong: Duke Clinical Research Institute

Donna Woods: Northwestern Medicine

Joe Zickafoose: Mathematica Policy Research

Project Team

Lisa Simpson, AcademyHealth

Christina Bethell, The Child and Adolescent Health Measurement Initiative

Enrique Martinez-Vidal, AcademyHealth

Susan Kennedy, AcademyHealth

Rachel Ruback, AcademyHealth