Child Health and Development Institute of Connecticut, Inc.

Connecticut Health FOUNDATION

Changing Systems, Improving Lives.

TRANSFORMING PEDIATRICS TO SUPPORT POPULATION HEALTH

Recommendations for Practice Changes and How to Pay for Them

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ABOUT THIS REPORT

This report reflects the work of the pediatric primary care payment reform study group convened by the Child Health and Development Institute of Connecticut and the Connecticut Health Foundation to explore how payment reform could support improvements in child health services. Of particular interest were reforms that could increase the contribution of pediatric primary care, services that all children use, to population health, health equity, and integration of medical and community services. The workgroup included child health experts representing insurers, public health, providers, and parents. The Center for Health Law and Economics at the University of Massachusetts Medical School facilitated the study group and prepared the report. The Children's Fund of Connecticut and the Connecticut Health Foundation provided funding for the work and the report.

ABOUT THE FUNDERS AND CONTRIBUTORS

CHILD HEALTH AND DEVELOPMENT INSTITUTE OF CONNECTICUT

The Child Health and Development Institute of Connecticut (CHDI), a subsidiary of the Children's Fund of Connecticut, is a not-for-profit organization established to improve the health and well-being of children by advancing system, policy, and practice changes. CHDI helps children reach their full potential by building stronger health, mental health, and early care systems that provide a sturdy foundation so children can thrive.

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The Center for Health Law and Economics (CHLE) at the University of Massachusetts Medical School is a sought-after partner among public agencies and foundations striving for health care system improvement and health policy analysis. CHLE's purpose—to enrich and develop reform ideas and policies that enhance coverage, quality, and affordability for vulnerable populations—drives its work analyzing new policies, crafting laws and financing frameworks for reform, designing new programs and purchasing strategies, navigating complex legal parameters, and educating through reports and webcasts.

CHILDREN'S FUND OF CONNECTICUT

The Children's Fund of Connecticut, a public charitable foundation and supporting organization of Connecticut Children's Medical Center, is dedicated to improving the quality of children's lives by building stronger health systems through its grantmaking and support for its subsidiary, the Child Health and Development Institute of Connecticut (CHDI)

CONNECTICUT HEALTH FOUNDATION

The Connecticut Health Foundation (CHF) is an independent, private foundation focused on improving health outcomes for people of color and assuring that all Connecticut residents have access to affordable and high-quality care. Through public policy, grantmaking, and leadership development, CHF works to make lasting changes that improve lives.

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EXECUTIVE SUMMARY

The path to lifelong well-being begins in childhood. Research clearly links childhood circumstances —including health, family and social relationships, and exposure to environmental influences or toxic stress—to long-term health, educational attainment, and economic opportunities. Focusing on children offers a tremendous opportunity to influence the health of individuals and the population by promoting health early, a far more effective and less costly approach than treating problems later. This is the essential work of pediatric primary care, which can bring great value to the long-term health and well-being of children and families.

This report—the product of a study group composed of a wide range of stakeholders, including payers, providers, foundations, and policymakers—makes the case for redesigning pediatric primary care to serve as the basis for a comprehensive system to support children's healthy development. It lays out key principles for designing a primary care payment system to support population health, mitigate health disparities, and better integrate health care with other services that children and families use.

The changes outlined in this report, while ambitious, are achievable. They can be an integral part of the state's ongoing work to redesign health care to improve population health. Connecticut already has a wide array of services that support children's optimal development, which can be brought to scale and marshaled to create a comprehensive system of supports for children and families. What is missing is a model for connecting child health services to such a system and a way to finance pediatric care so that it can make an optimal contribution to lifelong health and well-being. This report is intended to lay the groundwork for moving forward on such a model.

Why Pediatric Primary Care is the Right Place for Innovation

While health care is not the only sphere that can influence a child's life course, it represents a near-universal way to reach children. Nearly all children have regular visits with a pediatric primary care provider, who is often a trusted adviser to families. This positions pediatric primary care as a logical centerpiece of a comprehensive system to support the well-being of children and families.

Although multiple efforts are underway to change how health care is financed and delivered, to shift its orientation from treating people when they are sick to keeping populations healthy, many of these efforts are focused on high-cost, high-need patients, where there is the most hope for short-term return on investment. These health reform efforts typically do not include pediatrics, which offers less potential for significant short-term savings since most children are relatively healthy and inexpensive to treat.

Yet transforming pediatric primary care has the potential to bring large benefits to population health in the long term by promoting health and development and more directly addressing non-medical determinants of lifelong health for all children. Disparities in health and development—one of the most pressing challenges in Connecticut—begin early, and pediatric primary care can have a significant impact on equity by promoting health among all children, identifying problems early, and linking children and their families to helpful services.

Limitations of the Existing System

The study group's recommendations are aimed at identifying ways to redesign payment for pediatric primary care to increase its contribution to improving population health, mitigating health disparities, and connecting children and families with support services.

Members of the study group and other providers identified significant gaps in current practice. These include:

- A lack of access to and availability of behavioral health providers
- The measures used to assess pediatric services do not incentivize the aspects of care likely to improve health over the long term
- A lack of effective care coordination
- Insufficient focus on health promotion
- Screenings are insufficient in that they often do not lead to connections to care

Health services are isolated from community opportunities to promote health. This is the result of the rigid structure of delivery and payment systems, which do not allow for large-scale adoption of innovations—such as home visits, group visits, and telemedicine—that can promote health and make care more accessible, efficient, and satisfying.

Redesigning pediatric primary care to address these gaps could go a long way toward ensuring better futures for children and for the population in general.

There are numerous examples from other states, as well as programs in Connecticut, that address these challenges. There are robust opportunities

to bring innovative programs to scale to bring about practice transformation, creating pediatric practices that can meet the diverse needs of children and families, ranging from socio-emotional development and obesity-prevention to literacy promotion and creating social connections.

A Vision for Transforming Pediatric Primary Care Through Innovation

The study group envisions a more comprehensive and holistic approach to pediatric primary care that targets long-term functional capacity in addition to short-term disease outcomes, with health promotion, prevention, and commitment to the long-term development of individuals and to population health as core system components.

This would require more integration of medical care with other services, including other health services (physical, mental, developmental, and oral health) and other sectors that serve children (such as schools, Head Start, and the Women, Infants, and Children (WIC) nutrition programs. A more holistic approach could also be supported by providing, within the pediatric practice, access to and coordination with non-medical personnel to work with children and parents, including mental health providers, legal consultants, nutritionists, care coordinators, home visitors, community health workers, developmental specialists, and others.

Even the most motivated providers would struggle to offer this kind of care in the existing primary care practice model. These services are generally not supported by the fee-for-service payment system that finances most care today. In addition, this model envisions care incorporating both the child and his or her caregivers, rather than just the child, something that would require changes in the services health care providers offer or refer families to, in addition to new payment options. Making these changes will also require convincing policymakers and payers to invest now, when much of the payoff is years later. The long-term benefits of moving away from the fee-for-service payment model toward payment focused on value can outweigh the short-term costs by creating a population of learners, a healthier adult population, and stronger workforce.

Principles for New Payment Models

By divorcing services from traditional fee-for-service reimbursement, pediatric primary care can be more flexible in meeting the needs of children and families and contributing to population health. Any value-based system must build in elements that make it unattractive for providers to realize savings by limiting needed care; this is often done by linking payment to a robust set of performance and quality measures.

The study group identified additional principles that can ensure the effectiveness of new pediatric payment models:

- Costs, benefits, and the return on investments must be based on a broad conception of the benefit to society that pediatric health promotion and preventive care can produce, understanding that benefits will accrue in sectors other than health (e.g., education, juvenile justice).
- All payers must contribute equally to pediatric reforms so some payers don't benefit at the expense of others' investments.
- Funds should be braided and blended across sectors to share costs and rewards.
- The payment model must promote equity and equal opportunity for all children to thrive.

- The model must pay for developmental promotion and early detection of family concerns, and provide for connections to community services for parents, caretakers, and siblings.

- The payment system needs to allow for behavioral health and developmental intervention for children and families before the child has a diagnosis.

It is also critical to recognize that payment reform itself is not the driver for change. Rather, the need for pediatric practice transformation is the goal and the driver. The payment change would allow for innovations to be accessed from pediatric primary care and allow the system to support, rather than undermine, providers' ability to treat families in a holistic fashion, engage in health promotion, and connect families to services that could be crucial to their children's healthy development.

Recommendations for Payment Reform

The transformation of pediatric practice—the services children, adolescents, and their families receive; how care is delivered; and how effectiveness is measured—is critical to achieving lifelong well-being for individuals and improved population health. The success of practice transformation will require reform in how primary care is paid for, to ensure that pediatric primary care has the capacity and flexibility to deliver or connect families to a broader array of services. With this perspective in mind, the study group offers the following recommendations for payment reform:

1. Payment reforms in pediatrics need to reward effective health promotion and prevention for all children, regardless of practice setting or type of coverage. Primary care should enhance families' capacity to achieve health priorities including healthy weight, socio-emotional well-being, and developmental outcomes to ensure school readiness and lifelong success.

2. Payment methods need to be redesigned to encourage changes to pediatric primary care delivery to better support population health, health equity, health care quality, and address costs. Payments should:

   - Allow flexibility to support service innovations that ordinarily would not be covered within traditional fee-for-service payment, including two-generation approaches that involve parents/caregivers in care.
   - Reduce physician burden and expand practice capabilities by accommodating innovative staffing using non-physician professionals and paraprofessionals.
   - Ensure dollars are used to directly support changes at the individual practice site level.
   - Provide up-front funds, separate from payments for care and services, to support practices in developing infrastructure needed for practice innovations.
   - Support practices to report back to payers on the new capabilities, activities, and outcomes new payment structures have enabled.
   - Ensure families directly experience and realize the benefits of practice innovation for their children's health and future well-being.
   - Support existing innovative primary care models and bring evidence-informed innovations to scale.

3. Stakeholders in Connecticut can support efforts to improve measurement and supply data that connects effective pediatric primary care to adult health and well-being. Over time, this will supply the return-on-investment evidence needed to promote adoption of payment reform by different payers, such as state agencies and self-insured employers.

4. The participation of all payers—public and private—in payment reform solutions for pediatric primary care is essential to success.

5. Payment methods need to recognize the variety of sectors that interact with or otherwise affect the lives of children. Collaborations that incorporate multiple sectors (such as medical, social service, and education), and are financed through braided and/or blended funding, will allow for efficiency in service delivery, shared financing, accountability and, ultimately, will support improved health and other benefits.

6. The benefits of improved pediatric primary care should be considered a public good; they accrue across the lifespan, to many spheres of social policy, and to the state's economy in general. As with public education, which analogously spends on children to reap benefits across the population and over time, a public-sector role, in some form, is warranted.

INTRODUCTION

Health care in America is disjointed and expensive. Excellent and easily available for some, it can be frustratingly difficult to access for others. Results, in terms of life expectancy, chronic disease rates, and other measures of population health, are mediocre or worse compared with other advanced countries.[1]

Changing the health care system to improve its effectiveness, what it costs, and how patients and practitioners experience it has become a priority for policy makers and those who provide, pay for, and receive health care.

The Affordable Care Act (ACA) was the culmination of decades of federal efforts to effect change. In addition to national-level policies, the ACA includes provisions to support and fund states to address their specific health care challenges.

Connecticut recognizes the need to make improvements in its health care system. Health care expenditures in Connecticut were $9,859 per person in 2014, sixth highest among states and 22.5 percent higher than the national average of $8,045. And though the health of Connecticut residents in total is better than average, one in seven adults report their health status as only "good" or "fair." There also are persistent inequities across racial and ethnic groups in health status, access to health care, and health outcomes. The African American infant mortality rate in Connecticut is nearly four times the rate for non-Hispanic whites, for example.[2] A key focus of reform is Connecticut's State Innovation Model (SIM) program, funded by a multi-year federal grant. SIM seeks to improve population health,[3] improve healthcare outcomes,[4] and reduce healthcare costs.[5] SIM hopes to achieve these goals through systemic innovations.[6]

1. Squires D. U.S. health care from a global perspective. Commonwealth Fund. October 8, 2015.

2. Kaiser Family Foundation. State Health Facts. https://www.kff.org/statedata/. Accessed September 14, 2018.
3. Population Health Goals: Reduce statewide rates of diabetes, obesity, and tobacco use while reducing health disparities. See https://portal.ct.gov/OHS/Content/State-Innovation-Model-SIM. Accessed Nov. 14, 2018.
4. Healthcare outcome goals: Improve statewide performance on key quality measures, such as preventable hospital admissions and cancer screenings, while reducing health disparities in these measures. https://portal.ct.gov/OHS/Content/State-Innovation-Model-SIM Accessed Nov. 14, 2018.
5. Healthcare cost goals: 1-2 percentage point reduction in annual healthcare spending growth by 2020. https://portal.ct.gov/OHS/Content/State-Innovation-Model-SIM. Accessed Nov. 14, 2018.
6. (1) promoting payment models that reward improved quality, care experience, health equity, and lower cost, (2) strengthening capabilities of health care organizations to deliver higher quality, better coordinated, community integrated, and more efficient care, (3) empowering consumers in healthy lifestyles, preventive care, chronic illness self-management, and health care decisions, (4) promoting policy, systems, and environmental changes, (5) addressing socioeconomic factors that have an impact on health, and (6) Enabling health information exchange, analyt-

The Pediatric Primary Care Payment Reform Study Group, supported by the Children's Fund of Connecticut and the Connecticut Health Foundation, was convened in this context, to contribute to health care reform efforts across Connecticut. This report describes the Study Group's work, including its recommendations for advancing long-term goals of improving population health, promoting health equity, reducing health disparities among children and adults in Connecticut, and better connecting health with other sectors to support life outcomes.

Background

Value-Based Payment and Delivery System Transformation

There is broad consensus that methods used to pay for health care greatly influence how it is delivered, and that the "fee-for-service" method bears great responsibility for the costliness and overuse of health care. Fee-for-service is exactly what it sounds like: payment (from an insurer, a self-insured employer, or a public program such as Medicaid or Medicare) for each service provided to a patient, with limited regard for its effectiveness. Over time, the incentive of a fee-for-service model to provide more units of billable care has led to expanding services and ever-increasing spending, but not necessarily to better results.

Modern reforms seek to change this incentive with a movement to "value-based payments," which shifts the motivation from *volume*, or the amount of services provided, to *value*, or the outcome of those services. Rather than being paid per service, a physician group can be paid per patient—for an episode of illness, for example, or at a flat monthly rate—with the expectation that this payment would be used in a way that is most likely to attain positive health outcomes. Under such a model, services and payments can be adjusted to account for a patient's condition. Untethering payment from a specific service can facilitate value-promoting practice innovations, better coordination of care, and service enhancements, with the hope that, over time, we will see better health across the population, a better experience for patients and practitioners, and moderated costs.

"Value" is an imprecise term; however, it can be difficult to measure and might mean different things for different types of patients. Much of the energy in designing value-based payment methods has therefore focused on people with complex health care needs—multiple chronic conditions, for example, or combinations of physical and behavioral health conditions.[7] Such patients usually require higher levels of care, often from several providers who may not communicate with each other well or at all. High needs and high costs offer the greatest potential for reform. Improving the way that care for these patients is planned, coordinated, and delivered has clear benefits in terms of patient experience, cost, and patients' health. Delivery models such as patient-centered medical homes and accountable care organizations (ACO) are designed with the intent of achieving these kinds of improvements.

In contrast to the imprecision in measuring value, fee-for-service payments are very precise and understandable. Efforts to change provider payments date from at least the early 1970s, when Richard Nixon used his 1971 State of the Union Address to call for "incentives to doctors to keep people well rather than just to treat them when

ics, and health IT to drive transformation. https://portal.ct.gov/OHS/Content/State-Innovation-Model-SIM. Accessed Nov. 14, 2018.

7. Throughout this report, "behavioral health" refers collectively to mental health and substance use disorders.

they are sick."[8] Attempts to reform pediatric payments must identify value-based outcomes that are clearly defined and easily measured, and, therefore overcome the resilience of fee-for-service payment structures.

Pediatrics in Payment Reform

Pediatric care has not been a focus of delivery system and value-based payment reforms, because most children are relatively healthy and inexpensive to treat. Most of children's use of the health care system is for routine well visits. The typical view, then, is that there is little to gain, in either improved care delivery or costs, from trying to shift incentives in pediatric care using value-based payments. A small percentage of children have complex needs, but there is a lot of variation among them, making it difficult to design a single approach.[9]

Even without a strong short-term justification for pediatric payment reform, though, there could be a large benefit to population health in the long term. A large and growing body of evidence connects children's development and well-being with the presence or absence of costly health conditions in adulthood. There is an association, now widely established and accepted, between circumstances in childhood, both medical and non-medical, and long-term health and well-being. Personal childhood experiences (including family and social relationships), environmental influences, toxic stress, and genetic predispositions affect learning, behavior, and health across the lifespan. Negative effects of non-medical factors constitute a "new morbidity"[10] with consequences for pediatrics, public health, and society in general. As Halfon and colleagues put it:

> "Mounting evidence demonstrates how prenatal and early childhood risks that interfere with growth can increase the risk of ischemic heart disease, hypertension, obesity, and diabetes. Early exposure to infections and environmental toxins increase the likelihood of cancer, hypertension and stroke, and neurodegenerative diseases. Toxic stress and other exposures are embedded into a child's developing bio-behavioral physiology with pervasive influences on lifelong physical, cognitive, and emotional functioning."[11]
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> "Transforming the U.S. child health system," *Health Affairs*, (March/April 2007)

In short, adverse social, environmental, and biological factors in childhood development, even when they do not appear to have immediate health effects, reduce a child's health *potential* and disrupt brain development, immune systems, and other biological systems, which can affect behavioral, educational, economic, and health outcomes *decades and generations later.*[12]

Pediatric primary care that incorporates this evidence into practice can have a great impact on population health, by more directly addressing non-medical determinants of lifelong health. The American Academy of Pediatrics (AAP) stated a commitment to the "development of innovative strategies to reduce the precipitants of toxic stress in young children and to mitigate their negative

8. Richard Nixon's Annual Message to the Congress on the State of the Union. https://www.presidency.ucsb.edu/documents/annual-message-the-congress-the-state-the-union-1. January 22, 1971. Online by Gerhard Peters and John T. Woolley, The American Presidency Project.
9. Bailit Health, Value-Based Payment Models for Medicaid Child Health Services. Schuyler Center for Analysis and Advocacy and United Hospital Fund, July 13, 2016.
10. American Academy of Pediatrics, Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care, and Section on Developmental and Behavioral Pediatrics. Policy Statement: Early Childhood Adversity, Toxic Stress, and the Role of the Pediatrician: Translating Developmental Science into Lifelong Health. Pediatrics. 2012;129(1).
11. Halfon N, DuPlessis H, Inkelas M. Transforming the U.S. child health system. Health Affairs. March/April 2007.
12. Shonkoff JP. Building a new biodevelopmental framework to guide the future of early childhood policy. Child Dev. 2010;81(1):357–367. Cited in American Academy of Pediatrics, Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care, and Section on Developmental and Behavioral Pediatrics. Pediatrics. 2012;129(1).

effects on the course of development and health across the life span."[13] To do this, the boundaries of pediatric concern would ideally expand to routinely include unhealthy behaviors, social and physical environment, and socioeconomic status.

Disparities in health and development start early and have implications across the lifespan, from school success to future earning power.[14] This is why intervening early, ideally before developmental delays or behavioral health conditions are even diagnosed and with practices whose effectiveness is supported by evidence, is so critical to equity.[15] Pediatric care can do much to support equity early, when it will have the greatest impact on the future.

> "During the past 20 years, research has revealed that while family income and education, neighborhood characteristics, and other social and economic conditions affect health at every stage of life, their effects on young children are particularly dramatic. Hardships in early childhood can set off a vicious cycle of inequities—leading to disadvantage in adulthood, and then to more disadvantage for the next generation, continuing the cycle. Too many children are at risk: 19.5 percent of children under age 6 in the United States live in poverty and 16.5 percent live in impoverished neighborhoods. Fortunately, current knowledge tells us that it is possible to turn potentially vicious cycles of social disadvantage into paths toward good health and health equity by intervening early."
>
> *Early Childhood is Critical to Health Equity,* a report of the Robert Wood Johnson Foundation, May 2018

A pediatric medical home is an important platform for reducing factors related to negative developmental trajectories, and for mitigating impact on the lives of young children.

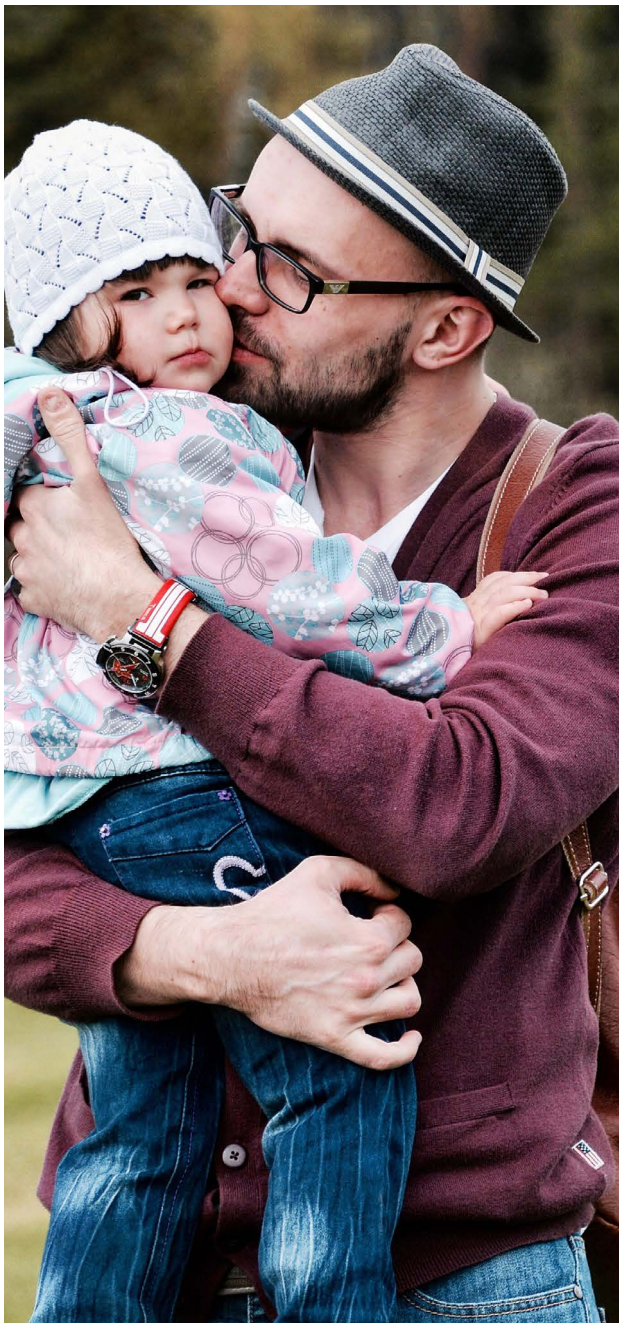
This can be facilitated by a more comprehensive and holistic approach to pediatric primary care that targets long-term functional capacity

13. American Academy of Pediatrics, Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care, and Section on Developmental and Behavioral Pediatrics. Pediatrics. 2012;129(1).
14. Early Childhood is Critical to Health Equity report. Robert Wood Johnson Foundation. University of California, San Francisco, May 2018. Children in families with limited economic resources often face multiple physical and psychosocial hardships in early childhood that can dramatically damage their health, with lifelong consequences. Poverty or low income and discrimination can limit parents' opportunities to provide their children with safe, nurturing, stimulating, and health-promoting environments, access to health care, and high-quality educational opportunities.
15. Early Childhood is Critical to Health Equity report. Robert Wood Johnson Foundation, University of California, San Francisco, May 2018. Fortunately, current knowledge tells us that it is possible to turn potentially vicious cycles of social disadvantage into paths toward good health and health equity by intervening early.

rather than short-term disease outcomes, with prevention, health promotion, and development of health potential as core system components. This would require better integration of medical care with other services, including other health services (physical, mental, developmental, and oral health) and other sectors that serve children (such as WIC, Head Start, and schools).[16] Within the pediatric practice, access to and coordination with non-medical personnel to work with children and parents—addiction specialists, attorneys, behavior change specialists, dieticians, psychiatrists, psychologists and social workers, care coordinators, and others—would support this more holistic approach.[17]

But these services, by and large, are not supported by current delivery and payment structures. Despite the evidence and the increasing understanding of the early life origins of many adult diseases, standard models of pediatric primary care give less emphasis than is warranted to non-medical causes of long-term deficits in health and well-being. This is a rational result of current training, administrative constraints, and imperatives of payment arrangements.

Demonstrating value is difficult: validated models are scarce for convincing payers, policy makers, and the public that the cost of comprehensive, holistic care for children is justified by what it can achieve in preventing adult chronic disease and improving population health. Practice innovations focused on preventing the detrimental effects of social and environmental factors are also needed. There are numerous recommendations (including from the AAP, such as in Bright Futures[18]) and examples of anticipatory guidance to strengthen family social supports, encourage adoption of positive parenting techniques, and facilitate development of a child's social, emotional, and language skills. But comprehensive and widespread implementation remains elusive.



16. Halfon N, DuPlessis H, Inkelas M. Transforming the U.S. child health system. Health Affairs. March/April 2007
17. P, Conway P, Jain SH. Fighting chronic disease sBixenstine tarts with better pediatric care. Harvard Business Review. October 17, 2017
18. Bright Futures. American Academy of Pediatrics. 2018. Accessed Nov. 14, 2018.

THE STUDY GROUP

The Children's Fund of Connecticut and Connecticut Health Foundation recognize the potential of pediatric primary care to advance population health goals and reduce health disparities through the mechanisms that connect children's development and well-being with adults' health and quality of life. Pediatricians see most children frequently, on a schedule of well visits that is standard practice; the American Academy of Pediatrics and Medicaid's Early and Periodic Screening, Diagnostic and Treatment schedules call for 12 preventive care visits before the second birthday,[19] and more than 90 percent of children use primary care services at least annually.[20] Primary care practices are well positioned to promote health among families, identify risks, provide information, and connect children and families to needed services.

Connecticut already offers opportunities to harness disease prevention and health promotion through existing pediatric programming, starting with the Person Centered Medical Home (PCMH)[21] and PCMH Plus[22] care models. Additional local capabilities are found in programs such as Wheeler Clinic,[23] Reach Out and Read,[24] MOMS Partnership,[25] Help Me Grow,[26] and the school-based health centers.[27]

To harness these opportunities and advance the thinking about reforming pediatric primary care in Connecticut, the Children's Fund and Connecticut Health Foundation engaged the University of Massachusetts Medical School's Center for Health Law and Economics to facilitate and provide conceptual support to the Pediatric Primary Care Payment Reform Study Group.

The study group, representing a range of stakeholders—pediatricians practicing in various settings, commercial insurers, HUSKY (Connecticut's Medicaid program), health services researchers, children's hospital administrators, public health officials, parent advocates, and others involved in child health and development—convened from January to July 2018, with the goal to develop recommendations that would inform value-based payment reform discussions in Connecticut.

The group's purpose was to make recommendations that aim to redesign payment for pediatric primary care to increase its contribution in three areas: (1) improving population health,

19. Recommendations for Preventive Pediatric Health Care. American Academy of Pediatrics. 2017. Retrieved from http://pediatrics.aappublications.org/content/139/4/e20170254
20. Black LI, Benson V. Tables of Summary Health Statistics for U.S. Children: 2016 National Health Interview Survey. 2018. https://ftp.cdc.gov/pub/Health_Statistics/NCHS/NHIS/SHS/2016_SHS_Table_C-8.pdf . Accessed Nov. 14, 2018.
21. Person-Centered Medical Home. Community Health Network of Connecticut. 2016. Accessed Nov. 14, 2018.
22. Person-Centered Medical Home Plus. Community Health Network of Connecticut. 2016. Accessed Nov. 14, 2018. Builds on Person-Centered Medical Home by incorporating additional requirements for care coordination, focusing on integration of behavioral and physical health care, children with special health care needs, health equity, and competency in care for individuals with disabilities.
23. Wheeler Clinic. 2018. Offers variety of behavioral health services including referral, warm hand-offs, and integration. Services for children and adolescents include early childhood programs like Birth to Three, outpatient and in-home behavioral health services, special education, and evaluation and assessment
24. Reach Out and Read. 2014 Resources list. Accessed Nov. 14, 2018.
25. Mental Health Outreach for MotherS (MOMS) Partnership. Yale School of Medicine, 2018. The MOMS Partnership® is a program that has successfully reduced depressive symptoms among over-burdened, under-resourced pregnant women, moms, and other adult female caregivers in a family. Launched in New Haven, the MOMS Partnership brings mental health within reach of women, literally meeting them where they are.
26. The Help Me Grow program helps families better understand child development. Help Me Grow has a Child Development Infoline that connects families with a care coordinator who can assist families in connecting with resources and getting questions answered. If a child is facing developmental difficulties, a child development community liaison can research programs and/or services to meet the child and family's needs. Help Me Grow's Ages & Stages program (accessed Nov. 14, 2018) helps parents and caretakers take an active role in tracking a child's development from four months to 8 years of age.
27. Connecticut School Based Health Centers. 2013 resources list (accessed Nov. 14, 2018). Connecticut's school based health centers have been delivering comprehensive health care to students in schools for 30 years, where they spend 25% of their day. Today, there are more than 96 school based health centers in the state, and the number keeps growing each year. The centers have become part of the essential system of care for children and adolescents, providing physical, mental health, and oral health services to more than 44,000 students annually in 26 communities.

(2) mitigating health disparities, and (3) better connecting pediatric primary care with support services for families and children. The study group met four times between January and July of 2018. Each meeting had a theme, building on the previous meeting and ultimately informing the recommendations. Meetings were devoted to the following:

1. Laying the foundation: Pediatric primary care with a population health perspective

2. Population health outcomes: What would a successful contribution of pediatric primary care to population health look like? How would we measure it?

3. Transforming pediatric primary care: What do pediatric services need to look like to get to the outcomes we want?

4. Payment models: What is essential in payment methods to motivate the desired changes?

The next section of the report details the study group's work on these themes, incorporating information from an extensive literature review and background materials assembled for discussion at the meetings, the meeting discussions themselves, and supplemental conversations with individual study group members and informants from other states. The report concludes with the group's recommendations.

Population Health Goals

Framework Linking Pediatric Primary Care with Population Health Outcomes

Recognizing the important actual and potential contributions of pediatrics to population health over the long term, the Study Group considered which specific population goals are subject to influence by pediatric primary care. A particular challenge is that, while events, circumstances, and physical health in early childhood affect health across the life span and therefore overall population health, it is difficult to measure the impact over such an extended time horizon. A framework that links pediatric care to population health through near-term and intermediate conditions, which can be observed and measured, helps to make more concrete ways pediatric primary can be reformed to achieve population health goals.

There is evidence of how conditions in adulthood affect population health; for example, by reducing average life expectancy. Extending the chain back towards childhood, there is also evidence linking childhood outcomes to the adult conditions that affect population health and an understanding of how childhood health and social conditions influence those childhood outcomes. Figure 1 presents a visual representation of this chain.

When these links are recognized, identifying proximate measures at each stage can provide indicators of how care and outcomes are affecting long-term population health. For example, the population health outcome of the rate of premature death due to suicide is linked to the prevalence of mental health issues in the community. Adult mental illness is less likely when young children and adolescents develop resiliency to buffer the effects of stress, and resiliency depends in large part on the strength of family relationships, which can be addressed in a pediatric primary care setting. Employing clear, validated measures at each of these links in the chain shows how pediatric care can affect population health, as Figure 2 illustrates.

FIGURE 1:

Framework linking pediatric primary care and population health

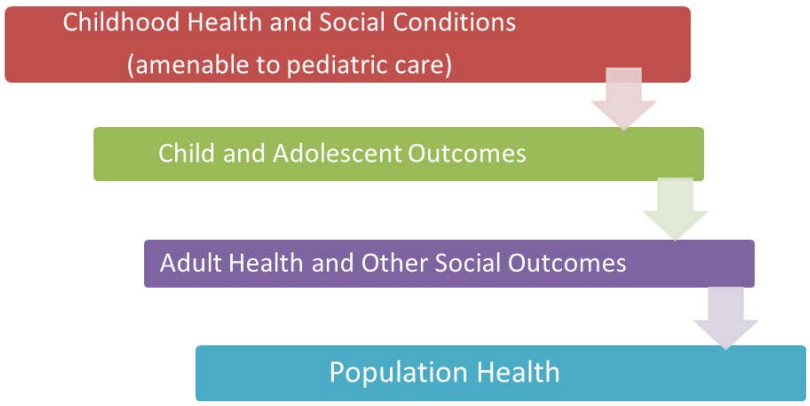
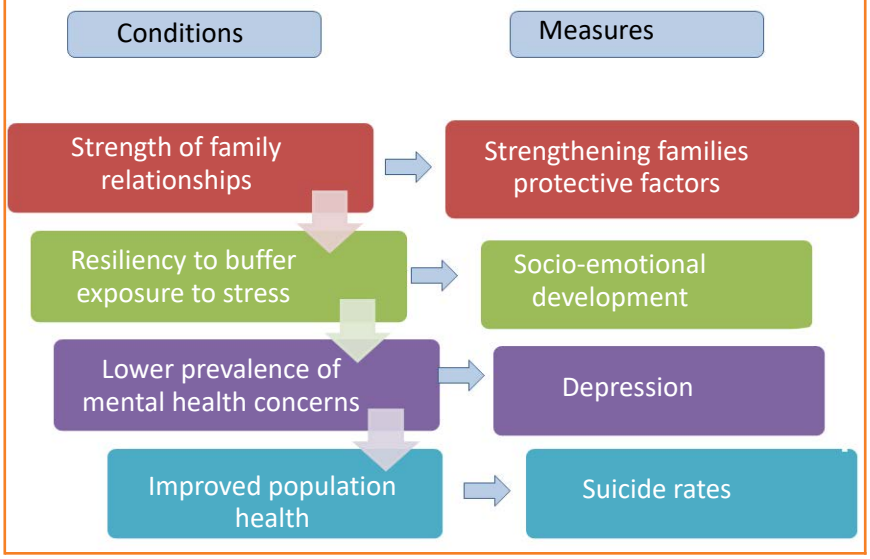


FIGURE 2:

An example of the framework



Population Health

The Study Group recognized that different measures are useful for different purposes, and can determine what ultimately gets accomplished during a health care encounter. Many of the measures that pediatric practices commonly track are process and quality measures that are set by payers and are tied to reimbursement. While these measures are often exemplary of evidence-based best practices in the field, such as the Bright Futures[28] guidelines, they are also limited to short-term measures that are easy for a practice to track and report, such as the use of screening instruments, and don't capture all the most salient and impactful aspects of pediatric care.

Determining what to measure in pediatrics and how to measure it is especially difficult. High-quality pediatric care that focuses on strengthening families[29] and health promotion results in the prevention of conditions that have consequences for physical and behavioral health. It is difficult, however, to show the connection between an intervention and the absence of a future disease state.

There is general acceptance among practitioners that the health and well-being of the family impacts the development and health of the child. Social determinants of health such as housing, access to safe places to play outside, and access to healthy food all have an impact on childhood health and development.[30]

This is well illustrated in research on the future health impacts of adverse childhood experiences.[31]

Exposure to adverse childhood experiences[32] can alter children's emotional and biological development, which can lead to long-term physical or behavioral health problems. However, through early intervention, child health providers can help families to develop family protective factors[33] and to grow resilience that mitigates the effects of toxic stress, transforming toxic stress into tolerable stress.[34]

Evidence supports the benefits of resilience developed early in life,[35] but the financial and health impacts of physical and behavioral health conditions that take root in childhood often aren't evident until adulthood. Therefore, any return on investment from early childhood interventions are difficult to assess, are hard to capture in a budget or insurance cycle, and often don't benefit the payers of children's services, thereby diminishing their immediate value in reorganizing care and payment.

Additionally, effective pediatric interventions often involve the child and their parents or caregivers. This two-generation approach[36] to care can be difficult to deliver, document, and track in the traditional pediatric practice where the pediatrician is only licensed to treat the child and able to bill for services delivered to the child.

28. Bright Futures. American Academy of Pediatrics. 2018. Accessed Nov. 14, 2018.
29. Center for the Study of Social Policy. Strengthening Families. Protective Factors Framework 2018. https://cssp.org/resource/strengthening-families101/
30. Artiga S, Hinton E. Beyond healthcare: The role of social determinants in promoting health and health equity. Kaiser Family Foundation. May 10, 2018.
31. Studies evaluating the impact of adverse childhood experiences on health from the Centers for Disease Control and Prevention. Updated April 1, 2016. Accessed Nov. 14, 2018.
32. Including poverty, exposure to sexual, physical, or emotional abuse (of the child or a family member), parental divorce and/or living with family members with a mental illness or substance use disorders.
33. Center for the Study of Social Policy, Strengthening Families Protective Factors Framework. Families and communities build protective factors that promote positive outcomes: (1) Parental resilience, (2) Social connections, (3) Knowledge of parenting and child development, (4) Concrete support in times of need, and (5) Social and emotional competence of children.
34. Center for the Study of Social Policy, Strengthening Families Protective Factors Framework; Core Meaning of Strengthening Families Protective Factors. http://strengtheningfamiliesga.net/wp-content/uploads/2014/09/Core-Meanings-of-the-SF-Protective-Factors.pdf
35. Shonkoff JP, Phillips DA, eds. *From Neurons to Neighborhoods: The Science of Early Childhood Development.* Washington, D.C.: National Academy Press, 2000.
36. 2-Gen Approach by Ascend, Aspen Institute. Accessed Nov. 14, 2018.

> "Children's health cannot be addressed in a vacuum. We need to look at it in the context of the family and caregivers and address what is often referred to as the mother-child or parent-child dyad. We need to recognize that the health of one depends on the health of the other, which means the health of both is a priority."
>
> "Taking a Two-Generation Approach to Children's Health," National Institute for Children's Health Quality website.

Goals, Outcomes, and Measures

Individual conversations with practitioners in the study group identified the following l*ong-term population health goals* for pediatric practices: reduction of disparity in the incidence of obesity, depression, lung disease, mental health diagnoses, diabetes, cardiovascular disease, and other chronic health conditions.

The *long-term population health outcomes* that would reflect those goals include a long-term reduction of chronic illness and disability, the ability to achieve full life expectancy, and an overall reduction in morbidity and mortality rates.[37] Because children's health and well-being starting at birth affect their health status throughout the lifespan, addressing long-term population health goals starts in pediatrics.

The impact of robust pediatric care goes beyond merely reducing the incidence of chronic physical and mental health conditions; it also has the potential to reduce the impact these chronic conditions have across a person's lifespan. This includes improving third grade reading levels, high school completion rates, workforce participation, and increasing lifelong productivity.

The group identified the following population health outcome measures that pediatric primary care may affect in working towards the larger population health goals identified above. This list is not exhaustive.

1. Infant mortality rates
2. Attainment of appropriate developmental skills
3. Healthy weight/Body Mass Index
4. Dental health[38]
5. Healthy lifestyle (reductions in tobacco use, increases in daily exercise, etc.)
6. Healthy reproductive status
7. School measures:
   (a) kindergarten readiness
   (b) third grade reading level
   (c) school attendance
   (d) high school graduation rates
8. Employment measures:
   (a) employment rates
   (b) absenteeism
9. Morbidity including:
   (a) child and adult prevalence of depression
   (b)chronic illness
10. Justice involvement

The typical pediatric practice and payment model does not allow for innovations in care that are necessary for achieving these long-term population health outcomes.

37. Parish RG. Measuring population health outcomes. *Preventing Chronic Disease*. July 2010. Accessed Nov. 14, 2018.

38. Dental disease is an important children's health issue and a health equity concern as well. Addressing prevention and promotion of oral health is an important part of well child visits and can affect morbidity and costs through adulthood.

> "Children who are chronically absent are more likely to drop out of school, and we know that the number of years a person attends school is a leading predictor of long-term health. For children in our community, long-term health is the foundation for a happy and healthy life."[39]
>
> Kaiser Permanente Northwest press release, February 2018.

Description of Service Gaps in Pediatric Primary Care

Individual interviews with Study Group members and other informed practitioners identified six gaps in current pediatric practice each of which are identified and described below:

1. **Lack of access/availability of behavioral health providers**

   There is a widespread need for timely access to behavioral health providers—for both mental health and substance use disorders—to treat pediatric patients, including adolescents. This, together with the lack of shared medical records between pediatricians and behavioral health providers, and the lack of flexibility in billing codes for behavioral health providers (many payers require a diagnosis for reimbursement), has left many pediatricians feeling that they are not able to adequately meet their patients' behavioral health needs. Ideally, the goal would be to identify children in need of behavioral health supports and to connect the children and their families to services before the children experience any significant setbacks. The perceived shortage of pediatric behavioral health providers and family-based services for very young children and their families makes it difficult for practices to implement a culture of early risk identification and disease prevention. Separations in delivery and funding between physical and behavioral health further impede practices' ability to connect their patients to mental health services.

2. **Practices are not measuring the most important things**

   "What is measured is what gets done." The performance measures that are currently used in pediatric practice dictate what is accomplished in well and sick visits. Many population health goals that are connected to improvements in child and adolescent health and development require a longer-term perspective than most current measures allow, making it difficult to connect practice reforms to cost savings or return on investment. One way to incentivize change in pediatric practice would be to incentivize population health outcomes by adopting performance measures relevant to pediatric care that are also associated with those outcomes.

3. **Care coordination is needed**

   There is limited capacity and support to coordinate care between primary care providers and specialists, including community service providers and behavioral health specialists. For families with more complex social needs, there may be the need for a care coordinator both to help the family meet necessary growth and development goals and to help coordinate social supports and critical services. These services might be beyond the traditional health care realm, such as assistance with housing, transportation, heat, and legal services, working with the school or the school-based health center on behalf of the child, and helping parents access public benefits.

39. Grant to Address Absenteeism Rates in Northwest, Kaiser Permanente press release. February 14, 2018. Kaiser Permanente Northwest has awarded more than $1 million in grants to seven local organizations to help stem the tide of chronic absenteeism in Washington and Oregon.

4. **There is not enough focus on health promotion in pediatric primary care practices**

   Health promotion and wellness are important aspects of pediatric care. The current pediatric primary care and behavioral health frameworks tend to focus on disease management, and, to a lesser degree, prevention. A focus on health promotion, and a mechanism to reimburse providers for these services, would allow providers to begin interventions for vulnerable children prior to the development of a diagnosable condition. Other opportunities in health promotion that are not realized due to the lack of support for interventions in pediatrics include nutrition support, lactation consultations, and literacy promotion programs.[40]

5. **Screenings are insufficient and often don't result in connections to care**

   Screenings are effective tools that pediatricians use to identify clinical concerns such as depression and developmental challenges. However, before a screening is done, the pediatrician should know he or she can provide the family a referral to address a positive screening. Follow-up should also be timely. For example, a "warm hand-off" to a practitioner known to the pediatrician provides more benefit to the patient and the family than simply handing the family a list of potential providers to call. Many pediatricians are not able to do a "warm hand-off" following a positive screen because behavioral health professionals are not well integrated into the current practice structure. Additionally, some providers are uncomfortable with screening mothers for depression. While maternal mental health is a critical factor in a child's health,[41] the maternal depression screen raises potential conflicts because the mother is not the pediatrician's patient.[42]

6. **The need for a more innovative delivery system**

   To provide more holistic care to children and their families, the pediatric practice structure needs to allow for innovations including home visits, group visits, using a family or two-generation approach, incorporating parent groups into the child's well-visit schedule, telemedicine, and offering more flexible office hours.

40. Reach Out and Read Connecticut/Massachusetts chapter. 2014. Accessed Nov. 14, 2018.
41. Maternal Screenings Policy Trends. National Academy for State Health Policy. 2018.
42. Earls MF et al. Clinical report: Incorporating recognition and management of perinatal and postpartum depression Into pediatric practice. *Pediatrics*. 2010;126(5).

REFORMS IN OTHER STATES ADDRESS PRACTICE GAPS

The six service gaps identified above by pediatric practitioners in Connecticut mirror many of the programmatic challenges that states committed to innovative pediatric primary care models are addressing. Following are examples culled from a comprehensive national scan. Many of these innovations have been introduced recently enough that their results have not yet been evaluated.

1. Lack of access/availability of mental health and behavioral health providers

Many states are starting to develop strategies to better treat children's and families' behavioral health needs. Common strategies include integrating care and partnering with pediatric behavioral health providers at children's hospitals and other locations.

New York: Under one of the New York First 1000 Days proposals, Medicaid would allow health care providers to bill for the provision of evidence-based parent/caregiver-child therapy (also called dyadic therapy), under the child's Medicaid Client Identification Number, based solely on the parent/caregiver being diagnosed with a mood, anxiety or substance-use disorder. The goal of these therapies is to repair the parent/caregiver-child relationship in support of healthy child development.[43]

Oregon: The Child Psychiatry ECHO Clinic in Oregon helps primary care physicians throughout the state diagnose and treat child and adolescent patients with ADHD, anxiety, depression, learning disabilities, trauma, PTSD, and other issues.[44] The clinic hosts weekly one-hour videoconferencing sessions where participating physicians can present cases for review and discussion.[45]

Washington: The Healthier Washington initiative requires all participating primary care providers, including pediatricians, to provide "whole-person care" to their patients—integrated physical and behavioral health care, including substance use disorder treatment.[46] This is to be achieved through coordination of care and "warm hand-offs" between physical and behavioral health providers, through Collaborative Care Models[47], and through co-location of physical and behavioral health providers. To assist with the pediatric transformation of care, new billing codes are available for behavioral health, making the collaboration of care delivery for the child or adolescent more attainable.[48] Southwestern Washington started delivering integrated "whole-person" care on April 1, 2016, and North Central Washington began on January 1, 2018.

2. Practices are not measuring the most important things

Many states are working to improve pediatric outcome measures by promoting new, innovative population health measures, through investigations into evidence-based measurement tools, and by holding multiple childhood service sectors accountable for cross-sector outcome measures such as kindergarten readiness.

New York: New York First 1000 Days proposes to create (through collaboration among Medicaid, State Education Department, and others) a measurement tool to assess child developmental status upon kindergarten entry, which has been shown to relate to third grade reading. Further, third grade reading correlates with high school graduation rates, and high school graduates have better health outcomes than those who do not meet this milestone. Improving child development by kindergarten could therefore drive long-term improvements in both the child's health and the child's education status.[49]

Oregon is working to improve outcomes for children and families by aligning early childhood systems such as Early Learning Hubs and the Coordinated Care Organizations (CCOs) that share the common goal of school readiness.[50]
Oregon requires pediatric providers in CCOs to perform developmental screenings as a criterion for recognition as patient-centered medical homes.[51] This is also a success metric for Oregon's Early Learning Hubs, making this another shared goal between early childhood agencies. Oregon's State Performance Test Measures[52] include measures on access for both primary care and follow-up care to incentivize equitable access to care for all Oregon residents. The Oregon measure set changes yearly to reflect current state goals.

One CCO, Health Share Oregon[53], has the "start strong" goal of making children ready for kindergarten.[54] The CCO hopes to achieve this through several initiatives, including partnerships with Early Learning Hubs and public health agencies and through collective regional efforts supporting children in foster care.

3. Care coordination

Many states are looking to support families of children with complex medical or social needs with care coordination. Care coordinators can help families keep their medical appointment schedules and access community resources to address social determinants of health. An additional challenge in this area is, ironically, the fragmentation of care coordination, where families may have coordinators for behavioral health, medical care, and other systems, but little coordination across the systems. Reform initiatives present an opportunity to move toward centralizing care coordinators across child-serving systems, and training and supporting them to be truly cross-systems in their knowledge base and approach.

Maryland: The Johns Hopkins Harriett Lane Clinic team[55] screens patients (and their families) for basic needs like food and heat that can affect health and then "prescribes" resources to meet these needs. Health Leads helps the families obtain the prescribed

43. New York First 1000 Days Proposal 18: Parent/Caregiver Diagnosis as Eligibility Criteria for Dyadic Therapy. Evidence-based dyadic therapies include Child-Parent Psychotherapy, Parent-Child Interaction Treatment, and Parent-Toddler Therapy. New York State Department of Health. 2017.
44. The OHSU ECHO Child Psychiatry Clinic is a pilot project funded by the Oregon Health Authority. Oregon Health and Science University. 2018.
45. Weitzman ECHO (Extension for Community Health Outcomes) provides specialty support for primary care providers seeking to gain expertise in the management of certain complex illnesses and conditions. Community Health Center, Inc., the parent organization for the Weitzman Institute is the only Federally Qualified Health Center to operate its own Project ECHO® clinics. Weitzman ECHO clinics are specifically designed to meet the needs of safety net primary care providers and their communities and address the integration of behavioral health in primary care. This provider education model and increasing support services could benefit Connecticut Pediatric Primary Care providers on a larger scale.
46. Healthier Washington Integrated Physical and Behavioral Health integrates and coordinates the payment and delivery of physical and behavioral health services for people enrolled in Medicaid managed care. Washington State Health Care Authority, 2018.
47. An ideal blended model of pediatric integrated care would combine the key task of the collaborative care model for specific diagnoses (for example, depression, anxiety, ADHD) with other interventions provided by a behavioral health provider to assist pediatricians in identifying children in need of mental health services and ensuring their seamless connection to them. This model could be achieved in different ways depending on the practice size, location, workforce capacity, and other factors. More information available from: Integrated Care: A Briefing Guide for Pediatric Providers in Washington. The Washington Chapter of the American Academy of Pediatrics 2017 briefing.
48. Codes support the time spent by the behavioral health care manager and psychiatric consultant for non-billable activities. The new codes from CMS provide a monthly bundled payment to cover the cost of staff who are providing: outreach, brief interventions, monitoring of outcomes (using 2017 AAP Briefing Value-Based Payment for Children's Health Care validated scales), registry maintenance and data entry, child psychiatric caseload review, and other care management duties. Integrated Care: A Briefing Guide for Pediatric Providers in Washington. The Washington Chapter of the American Academy of Pediatrics 2017 briefing.
49. New York First 1000 Days. Proposal 5: New York State Developmental Inventory Upon Kindergarten Entry. New York State Department of Health. 2017.
50. Early Childhood Systems Alignment. https://www.oregon.gov/oha/PH/HEALTHYPEOPLEFAMILIES/BABIES/HEALTHSCREENING/ABCD/Pages/early_childhood_systems.aspx. Accessed Nov. 13, 2018.
51. Oregon Health Authority. Early Childhood Developmental Screening. https://www.oregon.gov/oha/PH/HEALTHYPEOPLEFAMILIES/BABIES/HEALTHSCREENING/ABCD/Pages/index.aspx. Accessed Nov. 14, 2018.
52. Oregon's State Performance Test Measures. July 2017. Accessed Nov. 13, 2018.
53. Health Share of Oregon Coordinated Care Organizations. 2017. Accessed Nov. 13, 2018.
54. Ready & Resilient 2017-2020. Health Share of Oregon's 3-year strategic investment plan to create a long-term roadmap to support the wellbeing of children, families and communities through prevention, support for recovery and focused investment in health equity. Accessed Nov. 13, 2018.
55. Harriet Lane Clinic. Johns Hopkins Medicine. Accessed Nov. 13, 2018.

resources.[56]

New York: New York First 1000 Days proposes nine pilots providing peer family navigator services to help high-risk families access services that address health and social determinants of health.[57]

Oregon: One CCO, All Care Health, is starting to implement care coordination specifically for pediatrics.[58] With the help of The Oregon Pediatric Improvement Plan, All Care is looking to implement a system that will help providers identify the best type of coordination for children based on both the child's medical health needs and the family's social needs. All Care also offers services such as: (1) Ready Ride[59] (free rides to non-emergency visits to covered dental, medical, therapy, grocery stores, counseling, and behavioral health appointments, available 24 hours a day, 7 days a week) to ensure access for members, and (2) Personal Health Navigators[60] to assist with care coordination.

4. There is not enough focus on health promotion in pediatric primary care practices

Private and public payers universally reimburse for up to 12 well visits for children in their first two years of life. This access to children and their families gives pediatricians a unique view into the family early on and throughout critical developmental years. Immunizations, parent guidance, and physical health are the focus of these visits. Some initiatives are now aiming to go beyond traditional prevention to promote lifelong well-being during visits.

Maryland: Johns Hopkins Harriet Lane Clinic[61] includes programs that focus on health and wellness promotion such as: After-School Tutoring; Considering College Program (assisting adolescents in college preparation); and *Reach out and Read*[62] as well as other reading programs that promote adolescent and family literacy.

New York: New York First 1000 Days proposes launching 3-year pilots to expand the use of the evidence-based program *Reach out and Read* in pediatric primary care settings in support of the kindergarten readiness goal and socio-emotional development. Medicaid would also foster local cross-sector collaboration with the focus of improving early language development skills in children ages 0-3.[63]

Oregon: While kindergarten readiness is not yet part of the Oregon Health Authority Measure set, the Metrics and Scoring Committee selected measures that focus on early childhood health as a step toward connecting with the kindergarten readiness measure in 2018.[64]

5. Screenings are insufficient and often don't result in connections to care

There is currently an emphasis in pediatric practice on screening families, children, and adolescents for risks such as maternal depression, development, social determinants of health, and adverse childhood events. While the screenings have been found to be very effective at determining whether a child is at risk for poor outcomes, there is concern among providers about system capacity for ensuring follow-up treatment or other assistance. States are looking to mitigate this in a variety of ways.

Oregon: The Oregon Pediatric Improvement Plan[65] has several current programs to ensure there are effective and appropriate follow-up steps taken to address risks identified through developmental screening tools. The Oregon Pediatric Improvement Plan also provides improvement tools for primary care providers to enhance the quality of their referrals.[66] These tools include decision supports, parent educational materials, care coordination methods, and referral tracking to ensure referred children receive the appropriate follow-up services.

Health Share Oregon Community Care Organization (CCO) has introduced a strategy that aims to improve both the quality and the quantity of screenings for women and children in community settings.[67] Health Share hopes to accomplish this in a number of ways, including through building capacity to provide screenings in a more culturally competent way. Health Share has introduced another strategy that aims to enhance the clinical and community intervention and referral system so families can more easily access community resources for children with behavioral and developmental needs. *Help Me Grow* will serve as the linkage resource in several Oregon communities.

6. The need for a more innovative practice delivery system

The traditional fee-for-service pediatric care model does not support practice innovations in health promotion and practice enhancements such as care coordinators, telemedicine, and extended practice hours. States are using the move to value-based purchasing as a chance to introduce innovations in how care is provided.

New York: New York First 1000 Days[68] proposes taking steps to ensure the sustainability of home visiting in New York so that every child and pregnant woman in New York who is eligible for and desiring of home visiting services receives them.[69] A workgroup will convene to explore ways to increase Medicaid reimbursement for evidence-based, evidence-informed, and promising home visiting programs including *the Nurse-Family Partnership* and *Healthy Families*. New York First 1000 Days also proposes expanding access to *The Centering Pregnancy Model*, which uses a group-based model of prenatal care and has been shown to result in dramatic improvements in both birth-related outcomes as well as reductions in associated disparities.[70]

Oregon: All Care Health[71] offers innovative care models to meet family need including community health workers and peer wellness specialists.[72] Telemedicine also is used for pediatric behavioral health intakes, screenings, and some follow-up appointments. All Care Health has found that children enjoy being on the screen and, therefore, engage in the behavioral health process more readily, and teenagers are often more comfortable talking on the screen without a practitioner in the room with them.

56. Health Leads. What We Do. 2018. Accessed Nov. 13, 2018.
57. New York First 1000 Days. Proposal 8: Pilot and Evaluate Peer Family Navigators in Multiple Settings. New York State Department of Health. 2017
58. "Medicaid." All Care Health. Accessed Nov. 13, 2018.
59. Ready Ride. Rides to Doctor's Appointments. All Care Health. Accessed Nov. 13, 2018.
60. All Care Health Member Handbook, p. 55. https://www.allcarehealth.com/media/1958/2017accco-member-handbook-en-web.pdf

61. Harriet Lane Clinic. Johns Hopkins Medicine. Accessed Nov. 13, 2018.
62. Reach Out and Read. 2014. Accessed Nov. 14, 2018.
63. New York First 1000 Days Proposal 5: Promote Early Literacy through Local Strategies. New York State Department of Health. 2017.
64. Oregon's State Performance Test Measures. Oregon Health Authority Measure Sets, July 2017. The measures selected include: childhood immunization rates, which are quite low in Oregon, developmental screenings in first 36 days of life, assessments within 60 days for children in CHS custody, and timely prenatal care.

65. Oregon Pediatric Improvement Plan (OPIP). http://www.oregon-pip.org/focus/FollowUpDS.html
66. OPIP Quality Improvement Tools and Strategies. 2001. Accessed Nov. 13, 2018.
67. Health Share of Oregon Coordinated Care Organizations: Ready & Resilient 2017-2020. Strategy 1 aims to improve both the quality and the quantity of screenings for women and children in community settings. Accessed Nov. 13, 2018.

68. New York First 1000 Days. Proposal 2, Statewide Home Visiting. New York State Department of Health. 2017.
69. New York State Department of Health. Home Visiting Programs in New York. Accessed Nov. 13, 2018.
70. Centering Healthcare Institute. The Centering Pregnancy Model. 2018.
71. "Medicaid." All Care Health. Accessed Nov. 13, 2018.
72. Member Handbook, August 2017.Community Health Workers and Peer Wellness Specialists.

Child Health Initiatives that Provide Opportunities to Address Service Gaps

Child health innovations in several states and communities support care delivery in addressing early childhood development and social determinants of health. *Help Me Grow* is a system that nurtures early childhood sectors to collaborate in service delivery to promote development, identify risks early, and connect children and families to services. Help me Grow, which started in Connecticut and has spread to 27 other states, supports pediatric primary care through a centralized point of access. The United Way 211 Child Development Infoline provides this service for pediatric primary care sites in Connecticut.[73]

Healthy Steps is a unique, evidence-based pediatric primary care program committed to healthy early childhood development and effective parenting so that all children are ready for kindergarten and success in life.[74] A developmental specialist works within the pediatric primary care practice to meet families' needs and help them promote optimal development.

Project DULCE (Developmental Understanding & Legal Collaboration for Everyone) incorporates into a Strengthening Families intervention model a medical-legal partnership to provide needed supports to families; Brazelton Touchpoints training to strengthen parent, child, and provider relationships; and social connections through city and county partners. The providers participating in the DULCE intervention partner with parents to learn about and adapt to their newborns with the dual goals of improving child development and reducing maltreatment. The original Project DULCE was based at the Boston Medical Center and combined elements of two existing programs: Healthy Steps and MLPB, a Boston-based medical-legal partnership organization.[75] Today, Project DULCE operates at clinic sites in three counties in California, one in Florida, and one in Vermont.[76]

Many of the identified gaps in Connecticut pediatric practice delivery can be addressed by existing programming in the state. Coupled with interventions such as *Reach Out and Read*,[77] group well-child care, and home visiting programs,[78] there are robust opportunities to bring programs to scale in a way that leads to practice transformation—creating pediatric practices that can meet the diverse needs of children and families from socio-emotional development to literacy promotion and creating social connections.

Paying for Transformed Pediatric Primary Care

Challenges to Payment Reform

The Study Group includes representatives of two prominent commercial payers in Connecticut, as well as the medical director of Medicaid. Individual conversations with these members identified current barriers to implementing pediatric payment innovations.

First, the return on investment for pediatric payment reform is low. Excluding the costs of care for the small segment of children with complex

73. Connecticut Child Development Infoline. Help Me Grow. Accessed Nov. 14, 2018.
74. Zero to Three. Healthy Steps. 2017.
75. MLPB was formerly called Medical Legal Partnership Boston. See: http://www.mlpboston.org/
76. Center for the Study of Social Policy. 2018. Project DULCE starting in 2016.
77. Reach out and Read Connecticut/Massachusetts chapter. 2014. Accessed Nov. 14, 2018.
78. Connecticut Office of Early Childhood Home Visiting Programs. 2018. Connecticut Home Visiting programs are for expectant parents, families with children birth through age 8, and those children's other caregivers. Home visiting professionals work with families to build on family strengths and provide support focused on both the caregiver (often a parent, grandparent, foster parent, or child care provider) and the child or children. Programs also make sure the services families are getting are the right services for the family.

medical needs, pediatric care is generally not a health care cost driver.[79] In addition to the long-term payoff of pediatric primary care innovations described earlier, the financial return on investment for them tends to be diffuse—it may not come back to the original funder of the innovation, and may not even accrue to the health care sector (for example, education and juvenile justice may reap greater benefits).

Up to 70 percent of commercial insurance in Connecticut is now self-insured by employers; these employers pay for their employees' care directly. Self-funded employers often seek a shorter-term return on investment from value-based payment models and seek returns within their own population rather than across an insurer's whole book of business or market. They also may change the carrier administering their plan and face turnover in the employees covered under their plan, which can make the return on investment from value-based models challenging. All preventive care is currently paid for by insurance, so payers need to see the value in changing the payment methodology and need to know that everyone, including public and private payers, is participating, so that downstream benefits accrue to everyone.

The Medicaid system struggles with similar barriers to pediatric payment reform. The Connecticut state budget is adopted on a two-year cycle, too short a timeframe to show any significant return on investment in pediatric care. However, the long-term benefits of pediatric care provide a multi-sector public benefit that can be seen in reductions in special education and juvenile justice involvement and improved long-term health.

Despite these challenges, the benefits of moving away from the fee-for-service payment model towards payment that is focused on value are just as applicable to pediatric patients as they are to adult patients. Value-based payment systems that use bundled payments can provide the flexibility needed to support practice innovations such as integrated mental and physical health care, home visits, and care coordination. Any value-based system must build in elements that make it unattractive for providers to realize saving by limiting needed care; this is often done by linking payment to a robust set of performance measures.

By divorcing services from traditional fee-for-service reimbursement, pediatric primary care can be more flexible in meeting the needs of children and families and contributing to population health.

Potential Models

Private and public payers in several states are also looking to move away from fee-for-service payment models for the pediatric population: Washington, through its Medicaid *Healthier Washington* program; Ohio's *Partner for Kids* Pediatric Medicaid Accountable Care Organization; and Blue Cross Blue Shield of Massachusetts's *Alternative Quality Contract*. New York has outlined recommendations for how to incorporate value-based payments into the pediatric Medicaid system. Through the *New York First 1000 Days* initiative, New York also produced detailed proposals for how to better utilize Medicaid and other state resources to provide care for children across sectors. To achieve these cross-sector goals, New York suggests blending and braiding both funding and accountability across the childhood sectors; for example, the kindergarten readiness intervention includes pediatric health care providers, the department of education, and representatives from other invested sectors.

79. More innovations have been seen in payment structures for children with complex and/or chronic childhood conditions, which more closely mirrors adult care, where savings are both timely and visible.

Connecticut has already begun to explore innovative payment models through its existing Medicaid Person-Centered Medical Home and Person-Centered Medical Home Plus models, which include per member per month performance payments, shared savings, and a care coordination add-on payment.[80]

The Study Group identified some of the important principles that can ensure the effectiveness of new pediatric payment models:

- Payments and associated health care cost based on a broad conception of the benefit to society of pediatric health promotion and preventive care.
- All payers contribute equally to pediatric reforms, so some payers don't benefit at the expense of others' investments.
- Child Centered Systems built across sectors. Pediatric care, if done well, can create savings across sectors (by reducing costs for special education, reducing justice involvement, etc.).
- Funds braided and blended across sectors to share costs and rewards.
- The payment model promotes equity and equal opportunity for all children to thrive.
- The model pays for developmental promotion and early detection of family concerns, and provides for connections and linkages to community services.
- The payment system allows for behavioral health and developmental intervention for children and families before the child has a diagnosis (early intervention/health promotion).
- Payment reform is not the driver for change; rather, the need for pediatric practice transformation is the goal and the driver. The payment change allows for innovations to be accessed from pediatric primary care, a place where all children go. It is important to frame payment reform as part of the comprehensive system for children and ensure that the larger system supports child health services.

80. Husky Health Connecticut. Person-Centered Medical Home. 2016. Also, Connecticut Department of Social Services. Person-Centered Medical Home Plus. 2018.

EXAMPLES OF PEDIATRIC PAYMENT MODELS

Ohio: Partners for Kids, one of the nation's largest and oldest pediatric accountable care organizations,[81] defines "value" as preventing adult chronic disease and realizing the many benefits of adult wellness (eg, increased work productivity and income, decreased crime and incarceration, and so on).[82] In order to incentivize cross-sector cooperation and success, payment is shared among all parties and organizations contributing to the overall wellness of the child, including pediatricians and hospitals, teachers and schools, social workers and public health departments.

Massachusetts: The Blue Cross Blue Shield of Massachusetts Alternative Quality Contract (AQC) establishes a global budget for provider organizations to cover all services and costs.[83] The contract model is designed to include inpatient, outpatient, pharmacy, behavioral health, and other costs and services associated with each of their Blue Cross Blue Shield of Massachusetts patients.

This arrangement empowers physicians and hospitals to provide the care they believe is needed to improve the health of their patients. They are liberated from many of the constraints of traditional payment models, giving them the flexibility to have e-mail exchanges with patients (e-visits), offer group visits for patients who share a common chronic illness, or provide follow-up home visits for patients after hospitalizations. Independence from many of the limitations associated with traditional payment models is the foundation of the AQC.

The ACQ payment structure starts with an initial global budget that is based on historical health care cost expenditure levels.[84] It is adjusted each year for inflation, and the health status of the provider's specific Blue Cross Blue Shield of Massachusetts patients. *Providers retain the margins derived from the reduction of inefficiencies.*

A study evaluating the success of AQC in pediatrics found that after two years, *there was a small but significant positive effect on the quality of pediatric preventive care that was tied to the pay-for-performance model.*[85] This effect was greater for children with special health care needs than for children with no special health care needs.

New York: *New York First 1000 Days* captures the social utility of providing care to children by defining ROI broadly to include social benefits. This proposal includes many cross-agency collaborations and recommends different funding strategies for the different proposals.[86]

Washington: *Healthier Washington* espouses the triple aim to achieve better health, better care, and lower costs through a collaborative regional approach that integrates physical and mental health care and pays for value instead of volume.[87] The goal is to leverage Washington's purchasing power to drive 80 percent of state-financed health care and 50 percent of commercial health care to value-based payment (VBP) by January 1, 2019, and to move 90 percent of state-financed health care to VBP by 2021. While much of the focus to date has been on adult care, to reach the state's goals of 90 percent of payments in value-based care, VBP must also focus on child health care. The aim of value-based payment models is to disrupt the volume incentives present in fee-for-service payment models and to support non-visit treatment modalities that are traditionally non-reimbursed activities, such as care coordination, and reward high quality and efficient care.[88]

Washington created a policy paper setting forth recommendations for implementing pediatric-focused VBP models. The recommendations were largely informed by the 2016 United Hospital Fund report on pediatric VBP for New York.[89]

The report stresses the importance of having a common VBP model for children that includes all payers, both private and public. The development of any new payment models needs to be done in a way that recognizes the financial impact that high quality children's health care can have on the entire health care system, in the near and long term. Integrating behavioral health services into the pediatric primary care setting "offers a unique opportunity for early intervention on a population level to prevent behavioral health problems from interfering significantly with functioning in both childhood and adulthood," thereby lowering the lifelong costs of health care, social assistance programs, education, and the justice system.

81. Nationwide Children's Hospital. Partners for Kids: Pediatric Accountable Care. 2018. https://www.nationwidechildrens.org/impact-quality/partners-for-kids-pediatric-accountable-care. Accessed Nov. 14, 2018.
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85. Chien A, Song Z, Chernew ME, Landon BE, McNeil BJ, Safran DG, Schuster MA. Two-year impact of the alternative quality contract on pediatric health care quality spending. *Pediatrics*. January 2014.
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87. Washington State Department of Health. Transforming Clinical Practices Initiative. Value-Based Payment. 2018.
88. Value-Based Payment for Pediatric Providers. http://19zoo424iy3o1k9aew2gw2ir-wpengine.netdna-ssl.com/wp-content/uploads/2017/09/2017-VBP-primer.pdf
89. Ibid. Also, Value-Based Payment Models for (NY) Medicaid Child Health Services, Bailit Health Report. July 13, 2016.

RECOMMENDATIONS FOR REFORMING PAYMENT IN PEDIATRIC PRIMARY CARE

The Pediatric Primary Care Payment Reform Study Group recognizes that physical, emotional, and social factors affect children's lifelong health and well-being. Building on existing structures of primary care, changes to pediatric practice can advance long-term goals of improving population health, promoting health equity, and reducing health disparities among children and adults in Connecticut, and better connecting health with other sectors to support life outcomes. These improvements, in turn, will have positive societal effects: an economy made stronger by a better-educated, healthier workforce, and a populace with better prospects for social mobility.

The path to lifelong well-being, characterized by a variety of health and other developmental assets (eg, supportive social relationships, healthy weight, reduced risk of chronic illness, and economic productivity), begins in childhood. While health care is not the only sphere that can influence a child's life course, the regular, frequent, and near-universal engagement of children and families with pediatric primary care is an opportunity to better work within a comprehensive childhood-to-adolescent system to increase pediatrics' contributions and value.

Not all families have the same resources available to provide for their children early in life.[90] Acknowledging these disparities early on, through development of protective factors among families that have been shown to signify resilience[91] and

90. University of California, San Francisco. Early Childhood is Critical to Health Equity report. Robert Wood Johnson Foundation. May 2018.
91. Strengthening Families, Center for the Study of Social Policy. Protec-

other pediatric-led early intervention and health promotion mechanisms, can mitigate long-term impacts of childhood poverty and other social determinants of health.[92]

The transformation of pediatric practice—the services children, adolescents, and their families receive, how care is delivered, and how effectiveness is measured—is critical to achieving goals of lifelong well-being for individuals and improved overall population health. The success of practice transformation will require reform in how primary care is paid for, to ensure providers have the flexibility to deliver new kinds of services that are integrated within the larger social context in which children and their families live and grow. With this perspective in mind, the Study Group offers the following recommendations for payment reform.

1. Payment reforms in pediatrics should reward effective health promotion and prevention among all children, receiving care in all practice settings, and covered by all payers. Primary care should enhance families' capacity to achieve such priorities as:

    a. Promoting healthy weight (eg, through lactation consultation, nutritional counseling, connecting families to community nutrition support such as the federal Women, Infants, and Children program

    b. Promoting socio-emotional well-being among all children, and particularly children with social or medical complexity. This can be achieved through parent support and education interventions such as the Positive Parenting Program, strategies for enhancing family and child resiliency as used in the family protective factors framework, and greater integration of behavioral health services with primary care throughout childhood and adolescence.

    c. Promoting developmental outcomes to ensure school readiness and success for all children, and particularly children who may have lower rates of success in school due to language, cultural, and other barriers.

2. Payment methods for pediatric primary care should motivate the restructuring of practices that can improve population health, health equity, health care quality, and address costs. Payments should:

    a. Allow flexibility to support service innovations that would ordinarily not be covered within traditional fee-for-service payment, including two-generation approaches that involve parents/caregivers in care. New capabilities in a restructured practice might include:

        i. care coordination for children and families with medical or social complexity, or who are at risk of falling behind on health and related goals;

        ii. flexible office hours that include some weekend and evening hours;

        iii. alternative visit capabilities (such as e-consults, group visits, and telehealth video-appointments);

        iv. embedded or easy access to behavioral health screening, follow up, and consultations;

tive Factors Framework Overview 2018.

92. The Interdependence of Families, Communities, and Children's Health: Public Investments That Strengthen Families and Communities, and Promote Children's Healthy Development and Societal Prosperity. "[…] therefore a crucial factor in optimizing health in this developmental period is building the capacities of families and communities, which includes access to community-based early childhood enrichment services (for example, early care and education, home visiting, and parent support programs.)"

v. embedded or easy access to additional practitioners such as nutritional counselors and pharmacists;

vi. transportation assistance.

b. Reduce physician burden, optimize efficiency, and expand practice capabilities by accommodating innovative staffing using non-physician professionals and paraprofessionals;

c. Ensure dollars are used to directly support changes at the individual practice site level;

d. Provide up-front funds, separate from payments for care and services, to support practices in developing infrastructure needed for practice innovations;

e. Support practices to report back to payers on the new capabilities, activities, and outcomes new payment structures have enabled;

f. Ensure families directly experience and realize the benefits of practice innovation for their children's health and future well-being;

g. Support existing innovative primary care models and bring evidence-informed innovations to scale.

3. Stakeholders in Connecticut should support efforts to improve measurement and supply data that connects effective pediatric primary care to adult health and well-being. Focusing on both process and outcome measures (proximate and distal) will fortify the evidence base for primary care innovations. Population health outcomes identified by the study group (page 19) can inform improvements in measurements. Over time, this will supply the return on investment evidence that is needed to promote adoption of payment reform by different payer constituents (eg, state Medicaid agency, health insurers, self-funded employer sponsors, etc.).

4. The participation of all payers in payment reform solutions for pediatric primary care is essential to success.

   - Practice transformation to achieve significant contributions to population health and health equity requires pervasive change in the delivery of primary care services. Such change is only feasible if implemented across the entire practice population, not just for those insured by one plan only.

   - Participation by all payers mitigates the disincentive any single payer has to finance innovations that may yield its benefits (savings) to other payers later.

5. Payment methods need to recognize the variety of service sectors' overlapping encounters with and responsibilities for children. Cross-sector collaborations (eg, medical, social service, education), financed through braided and/or blended funding, will allow for efficiency in service delivery, shared financing and accountability, and, ultimately, will support improved health and other benefits.

6. The benefits of improved pediatric primary care are a public good; they accrue across the lifespan, to many spheres of social policy, and to the state's economy in general. As with public education, which analogously spends on children to reap benefits across the population and over time, a public-sector role, in some form, is warranted.

CONCLUSION

A healthy child is a child who is physically well, but true health encompasses much more than that. A complete picture of a child's health includes behavioral health (child and parent), a healthy socio-emotional development trajectory, and strong family and caregiver supports to mitigate the effects of adverse childhood circumstances. These factors contribute to a child's health potential over his/her entire life. It is important for pediatric practice and payment to promote these factors because deficits in any of them, though they may or may not manifest as health problems in the near term, can have lifelong ramifications. These include individual effects such as risky behaviors (eg, smoking, drug use) and chronic disease (eg, obesity, cardiovascular conditions, depression) in adulthood. And there are social costs as well—for treating chronic illness, to be sure, but also additional costs for special education and juvenile justice, and perhaps public assistance (eg, housing subsidies, unemployment benefits) for adults who are not able to realize their full economic potential. These social needs compete with others for scarce public resources and limit progress for the entire population.

The pediatric practice is the appropriate centerpiece for an expanded, comprehensive focus on children's well-being, and for payment reform that supports this renewed focus. Most children engage with pediatricians frequently and regularly from birth through adolescence, providing an ideal opportunity to monitor a child's development and coordinate services and interventions that go beyond the walls of the pediatric practice.

> "A stronger focus on promoting health and reducing disparities is a crucial, underused approach to our current health care cost crisis. Effectively addressing the conditions that drive disparities in care has the potential not only to reduce health care expenditures, but to yield better health, productivity, and well-being for our most vulnerable children now and throughout their lives."[93]
>
> "Cutting the children's health care cost," *Pediatrics, 2018*

93. Landrigan C. Cutting children's health care costs. *Pediatrics.* 2018;142.

Payment reform should support this expanded role and recognize that improved services for children today will result in a healthier, more prosperous population tomorrow, likely at lower costs. Because these savings would accrue across sectors beyond health care, and across time, payment reform must also address the equitable distribution of costs and benefits. Reform, properly designed, can create a long-term benefit to population health that greatly exceeds its cost.[94]

The time is ripe in Connecticut for action on these recommendations. Energy and resources are being marshaled by the State Innovation Model process, which seeks to improve population health and health care outcomes, promote health equity and reduce health care costs through health care delivery and payment innovation and transformation. SIM includes a Primary Care Modernization initiative, which will include formal contributions from this Study Group. SIM is also pursuing a vision of health enhancement communities, a concept that recognizes the important influence of non-medical factors on population health and seeks to move beyond treating illness to address root causes, behavior, and other social determinants of health. The vision is to shift the focus of the health care system to prevention and to involve the business, municipal, educational, social service, and public health sectors in creating community-wide solutions and reaping the rewards.[95] The Study Group's reasoning and recommendations are in complete harmony with this vision; acting on the recommendations will help to make pediatric primary care a strong contributor to realizing this vision.

94. Nichols LM, Taylor LA. Policy insight: Social determinants as public goods: A new approach to financing key investments in healthy communities. *Health Affairs* August; 8. "This article argues that underinvestment in social determinants of health stems from the fact that such investments are in effect public goods, and thus benefits cannot be efficiently limited to those who pay for them—which makes it more difficult to capture return on investment. Drawing on lesser-known economic models and available data, we show how a properly governed, collaborative approach to financing could enable self-interested health stakeholders to earn a financial return on and sustain their social determinants investments."

95. Connecticut Office of Health Strategy. Connecticut State Innovation Model Health Enhancement Community Initiative. April 2018. https://www.healthreform.ct.gov/ohri/lib/ohri/work_groups/pop_health/2018/april_26,_2018/phc_slides_4.26.2018_final.pdf. Accessed Nov. 14, 2018.

ADDITIONAL RESOURCES

Adverse Childhood Experience (ACE)

- ACE Score Calculator
- CDC Page on Adverse Childhood Events

Trauma-Informed Care

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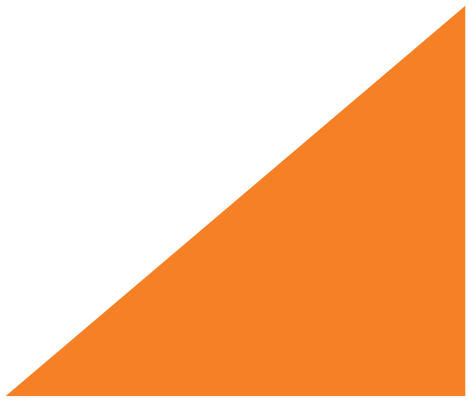

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