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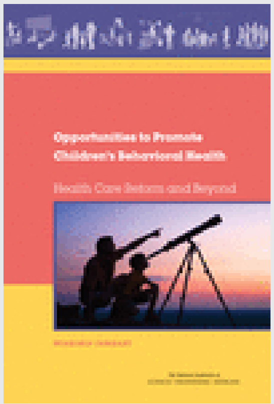

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Opportunities to Promote Children's Behavioral Health

Health Care Reform and Beyond

WORKSHOP SUMMARY

Steve Olson and Noam I. Keren, *Rapporteurs*

Forum on Promoting Children's Cognitive,
Affective, and Behavioral Health

Board on Children, Youth, and Families

Institute of Medicine

Division of Behavioral and Social Sciences and Education

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PLANNING COMMITTEE FOR THE WORKSHOP ON FUNDING OPPORTUNITIES FOR EVIDENCE-BASED PREVENTION AND INTERVENTIONS TO PROMOTE CHILDREN'S BEHAVIORAL HEALTH[1]

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Reviewers

This workshop summary has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published workshop summary as sound as possible and to ensure that the workshop summary meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the process. We wish to thank the following individuals for their review of this workshop summary:

Catherine J. Bodkin, ZERO TO THREE
Susan M. Dull, Children's Hospital Association
Lynda E. Frost, University of Texas at Austin
Jessica Jeffrey, University of California, Los Angeles

Although the reviewers listed above have provided many constructive comments and suggestions, they did not see the final draft of the workshop summary before its release. The review of this workshop summary was overseen by **Caswell A. Evans,** University of Illinois at Chicago. He was responsible for making certain that an independent examination of this workshop summary was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of this workshop summary rests entirely with the rapporteurs and the institution.

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BOX

FIGURES

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Abbreviations and Acronyms

ACA	Patient Protection and Affordable Care Act
ACO	accountable care organization
ADHD	attention deficit hyperactivity disorder
CFHA	Collaborative Family Healthcare Association
CHICA	Child Health Improvement through Computer Automation
CHIP	Children's Health Insurance Program
CHSTI	Child Health System Transformation Initiative
CMMI	Center for Medicare & Medicaid Innovation
CMS	Centers for Medicare & Medicaid Services
COPE	Creating Opportunities for Personal Empowerment
DCS	Department of Children's Services
DSM-IV	*Diagnostic and Statistical Manual of Mental Disorders*, 4th edition
EMR	electronic medical record
HRSA	Health Resources and Services Administration
IOM	Institute of Medicine
MCPAP	Massachusetts Child Psychiatry Access Project

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NASHP	National Academy for State Health Policy
NIDA	National Institute on Drug Abuse
NIH	National Institutes of Health
NRC	National Research Council
OECD	Organisation for Economic Co-operation and Development
PCPCC	Patient-Centered Primary Care Collaborative
PROMIS	Patient Reported Outcomes Measurement Information System
SAMHSA	Substance Abuse and Mental Health Services Administration
TECCS	Transforming Early Childhood Community Systems
USPSTF	U.S. Preventive Services Task Force

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Overview and Highlights of the Workshop[1]

The Patient Protection and Affordable Care Act (ACA), which was signed into law in 2010, has several provisions that could greatly improve the behavioral health of children and adolescents in the United States. It requires that many insurance plans cover mental health and substance use disorder services, rehabilitative services to help support people with behavioral health challenges, and preventive services like behavioral assessments for children and depression screening for adults. It increased funding for community health centers to improve the delivery of care for millions of children and their families. It legislated the standards of pediatric well-child and preventive coverage recommended by the American Academy of Pediatrics. It established a grant program to provide voluntary, evidence-based home-visiting services to young at-risk children and their families. These and other provisions provide an opportunity to confront the many behavioral health challenges facing youth in America.

To explore how the ACA and other aspects of health care reform can support innovations to improve children's behavioral health and sustain those innovations over time, the Forum on Promoting Children's Cognitive, Affective, and Behavioral Health held a workshop in Washington, DC, on

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[1] The planning committee's role was limited to planning the workshop. The workshop summary has been prepared by the rapporteurs as a factual account of what occurred at the workshop. Statements, recommendations, and opinions expressed are those of individual presenters and participants and are not necessarily endorsed or verified by the National Academies of Sciences, Engineering, and Medicine. They should not be construed as reflecting any group consensus.

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BOX 1-1
Forum on Promoting Children's Cognitive, Affective, and Behavioral Health

The Forum on Promoting Children's Cognitive, Affective, and Behavioral Health was established as an outgrowth of the 2009 National Research Council and Institute of Medicine report *Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities*, which called on the nation to make the prevention of such disorders and the promotion of mental health of young people a high priority. The forum engages in dialogue and discussion to connect the prevention, treatment, and implementation sciences with settings where children are seen and cared for, including health care settings, schools, social service and child welfare agencies, and the juvenile justice system, and to create systems that are effective and affordable in addressing children's needs. Members of the forum include representatives from the sponsors and additional experts in the implementation and evaluation of mental and behavioral health interventions for youth.

The workshop on health care reform and children's behavioral health was the fourth held by the forum. The first, on April 1–2, 2014, examined strategies for scaling tested and effective family-focused preventive interventions so they can have widespread economic and social benefits (IOM and NRC, 2014a). The second, on June 16–17, 2014, was on harvesting the scientific investment in prevention science to promote children's cognitive, affective, and behavioral health (IOM and NRC, 2014b). The third, on November 5–6, 2014, explored innovations in the design and utilization of measurements systems to monitor the well-being of children and guide the implementation of services (IOM and NRC, 2015).

April 1–2, 2015, titled "Opportunities to Promote Children's Behavioral Health: Health Care Reform and Beyond" (see Box 1-1 for details about the forum). The workshop grew out of a learning collaborative formed within the forum to look at how the ACA might provide new opportunities to promote children's cognitive, affective, and behavioral health. Through a series of phone calls, the initiative was broadened to include health care reform more broadly, with a focus on children's behavioral health. (The workshop Statement of Task is provided in Appendix A.)

The workshop format was designed to stimulate discussion among experts, forum members, and the workshop audience. (Appendix B provides the workshop agenda.) Moderators directed questions to panels of experts and then opened each session up for general discussion. Each panel included representatives of different sectors and areas of expertise to explore the areas where disciplines and fields intersect and to break down silos of thinking and discussion. (Appendix C provides the biographies of the workshop speakers.) The workshop explicitly addressed the behavioral health needs

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of all children, including those with special health needs. It also took a two-generation approach, looking at the programs and services that support not only children but also parents and families, because many evidence-based prevention programs and interventions involve parents.

HIGHLIGHTS OF THE WORKSHOP

At the end of each day of the workshop Mary Ann McCabe, associate clinical professor of pediatrics at George Washington University and affiliate faculty in psychology at George Mason University, synthesized the major concepts that arose over the course of the day's discussions. *The highlights that she identified are presented here as an introduction to the broad range of issues discussed by workshop participants and should not be seen as the conclusions of the workshop as whole. The chapter numbers in parentheses provide the locations in this summary report where workshop presenters discuss these issues in greater detail:*

- The ACA has brought such issues as prevention, health promotion, and accountability to the forefront of the policy agenda. This has provided an opportunity to make changes in primary care, but such changes also call for integration across other systems that affect health care. (Chapter 6)
- Many opportunities for alignment and collaboration exist, such as between education and health. Nevertheless, gaps still exits. Though capital expansion of school-based health centers was funded in the ACA, their operations were not, representing a gap in the legislation. "I find it so ironic that we used to have a federal Department of Health, Education, and Welfare," said McCabe. "Here we are again saying, 'Why do we have these silos of health, education, and welfare?'" (Chapter 7)
- The ACA offers the opportunity to pay attention to parents and to parenting. However, in many cases, children are insured while their parents are not, which is "a huge problem," said McCabe. "We still have a lot of work to do on the public policy side." (Chapter 5)
- The adult health community could partner with the pediatric system, especially if practitioners were engaged and learn to adopt a life course health development perspective. (Chapter 2)
- The policy emphasis in the ACA has been on access to care, but the workforce does not necessarily exist to deliver that care. (Chapter 5)
- Terminology differences continue to pose a barrier to collaboration. The terms *integration*, *behavioral health*, and *evidence* still have different definitions among stakeholders. (Chapter 2)

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- Many good screening measures are not yet well translated or validated for certain populations. (Chapter 3)
- One prominent item on the research agenda is to track both investments and outcomes across social services, education, and health. Social services, for example, may have outcomes on health, but they are not being measured, and vice versa. (Chapter 8)
- Policy makers get part of their information about science from the news, and scientists need to pay attention to this dissemination of information and how priorities are established in communities and other stakeholder groups, McCabe said. Communications science and behavioral economics tools can help tell a compelling story. (Chapter 9)
- A tipping point may be at hand. What many people are recommending is consistent, which is exciting but also a great challenge. (Chapter 9)

Finally, McCabe drew attention to what she identified as a fundamental issue with prevention. "Public policy tends to pay attention to problems—and to crisis, even more so. This is not a good match for children's development. It is much more effective to pay attention to healthy development early on and . . . preventing problems for kids who are at risk. That is really what [the forum] is all about."

ORGANIZATION OF THE WORKSHOP SUMMARY

After this introductory chapter, Chapter 2 summarizes the two keynote addresses at the workshop, which introduced the wide range of behavioral health problems seen in children and adolescents and ways of overcoming those problems. Providing a framework for panel discussions, the keynotes introduced key concepts including adaptive systems, social determinates of health, life course health development, and community health works. Chapter 3 looks at the opportunities, threats, and potential for innovation created by funding provisions under the ACA and health care reform more broadly.

Chapter 4 is one of three chapters that look at experiences in implementing innovations that affect behavioral health—in this chapter, at the state and local levels. Chapter 5 considers intermediary groups that can advance a two-generation approach, such as community health centers, school-based health centers, and home visiting programs.

Chapters 6 and 7 return to the implementation of innovations, in primary care (Chapter 6) and in other settings, including child welfare, early childhood education, and schools (Chapter 7). Chapter 8 reviews meta-analyses of research on children's behavioral health in two particular

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areas—the integration of behavioral health services into primary care, and parental involvement in their children's health.

Finally, Chapter 9 summarizes the reflections of a panel of policy makers and of other workshop participants, revisiting the major topics of the workshop and exploring possible future directions for the Forum on Promoting Children's Cognitive, Affective, and Behavioral Health.

REFERENCES

IOM (Institute of Medicine) and NRC (National Research Council). 2014a. *Strategies for scaling effective family-focused preventive interventions to promote children's cognitive, affective, and behavioral health: Workshop summary*. Washington, DC: The National Academies Press.

IOM and NRC. 2014b. *Harvesting the scientific investment in prevention science to promote children's cognitive, affective, and behavioral health: Workshop summary*. Washington, DC: The National Academies Press.

IOM and NRC. 2015. *Innovations in design and utilization of measurement systems to promote children's cognitive, affective, and behavioral health: Workshop summary*. Washington, DC: The National Academies Press.

NRC and IOM. 2009. *Preventing mental, emotional, and behavioral disorders among young people: Progress and possibilities*. Washington, DC: The National Academies Press.

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2

Responding to the Challenge

The workshop featured two keynote addresses that laid out the broad challenges and opportunities for improving the behavioral health of young people created by passage of the ACA. The first presented some of the troubling measures of behavioral health issues in the United States and provided a framework for fundamental changes in the health care system that could ameliorate these problems. The second keynote presentation described some of the ongoing institutional, economic, and cultural shifts that are contributing to and could accelerate change in the health care system.

AN EPIDEMIC OF MENTAL, BEHAVIORAL, AND DEVELOPMENTAL PROBLEMS

Mental, behavioral, and developmental problems are at epidemic levels among children in the United States (Perou et al., 2013), observed Neal Halfon, director of the University of California, Los Angeles (UCLA), Center for Healthier Children, Families, and Communities and professor at UCLA's David Geffen School of Medicine, the Fielding School of Public Health, and the School of Public Affairs, in his keynote address at the workshop. Nearly three-quarters of the cumulative prevalence of mental health problems, including substance abuse, anorexia nervosa, major depressive disorder, bipolar disorder, schizophrenia, and bulimia nervosa, have their onset before age 25 (see Figure 2-1). Among adolescents, 22 percent have mental health problems with impairment (Halfon et al., 2014c). The front-loaded attributable risk to society is "huge," Halfon said.

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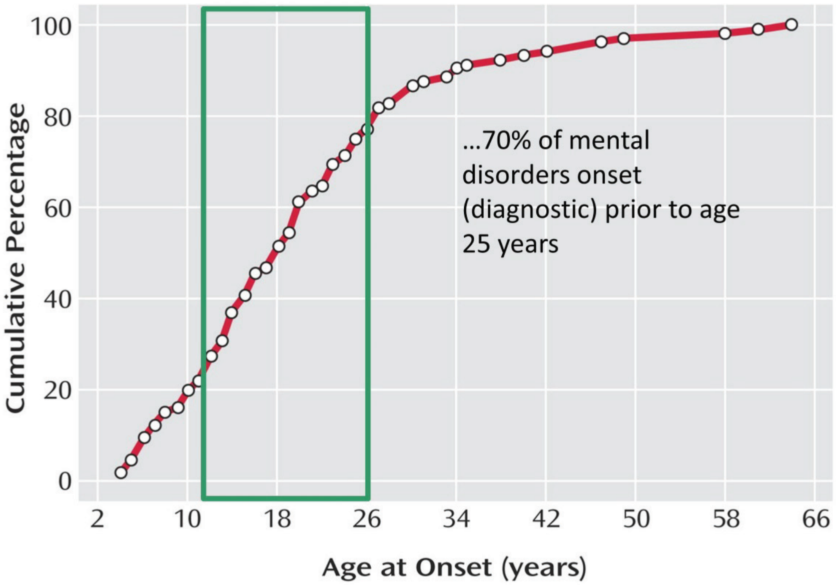

FIGURE 2-1 Mental disorder diagnosis by age.
SOURCE: Halfon, 2015. Data from Kessler et al., 2007.

Of the developed nations, the United States ranks among the lowest in terms of the material well-being, health, safety, and education of its children—with some of the highest levels of risky behaviors, and among the poorest housing and environmental conditions (UNICEF Office of Research, 2013). A growing number of children have multiple conditions, such as asthma, obesity, and attention deficit hyperactivity disorder (ADHD). Childhood disability nearly quadrupled in the 5 decades after 1960 (see Figure 2-2). In the 1960s, the poster child for disability was a girl with crutches who had polio, said Halfon. Today it is a boy with autism. "This steadily increasing trend in childhood disability is staring us right in the face, yet we are not doing much to change it."

According to definitions established by the Maternal and Child Health Bureau, 4 to 6 percent of children have severe disabilities and 14 to 18 percent have special health care needs (Brault, 2012). But 30 to 40 percent have mental, behavioral, or learning problems or are at risk for such problems and require more typical pediatric care, said Halfon, because they will need additional screening, assessments, and evaluation. The remainder of children could be considered "good enough," but even that designation is inadequate. "We actually want to know the percentage of children who

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are thriving, yet at this point we only measure which children have some kind of problem."

Halfon said that over the course of 1 year, one in five children and adolescents is seen as experiencing the signs and symptoms of a disorder listed in the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition (*DSM-IV*), with 15 to 22 percent seen as experiencing significant impairment (Halfon et al., 2014c; Merikangas et al., 2010). About 5 to 7 percent of young people—about 4 million altogether—experience extreme functional impairment. Yet in any given year, only about 20 percent of these are reported as receiving mental health services (NIH, 2007).

A developmental mismatch has emerged that is characterized by accelerated biological development, accelerated and unstable social development, unprotected and unsupported development for many adolescents, segregated development separate from parents and families, and technology- and market-dominated development, according to Halfon. The transition from childhood to adulthood has changed dramatically. It starts earlier and ends later, supportive scaffolding is lacking, and children's emotional regulation and adaptation are suffering, Halfon noted. The potential for healthy development can be rapidly lost early in life, with factors such as adversity having dramatic effects on development. Adversity comes in many

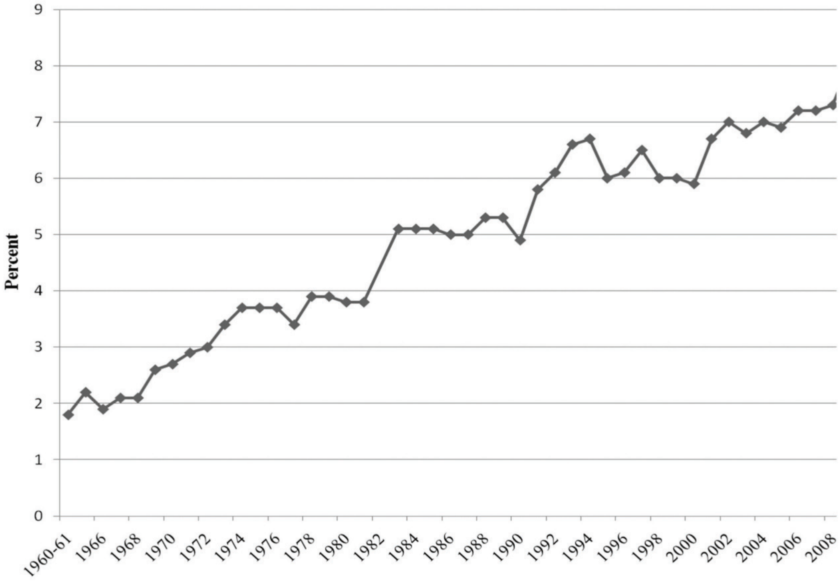

FIGURE 2-2 Childhood disability rate since 1960.
SOURCE: Halfon, 2015. Adapted from Halfon et al., 2012.

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forms, including economic, social, environmental, familial, and behavioral adversity. About 45 percent of children have one adverse childhood experience, and 22 percent have two or more, with a steep social gradient in the distribution of such experiences (Bethell et al., 2014; Sacks et al., 2014). More than 40 percent of children live in low-income families, and more than 40 percent live in families with one parent, and such families are more likely than other families to have children who do not thrive. Rising rates of mental, behavioral, and developmental problems are a reflection of these growing levels of adversity, Halfon said.

Insufficient time, income, and services leave families with few resources for child rearing today, Halfon noted. Families are less stable, secure, and supported and have greater long-term uncertainty, both in terms of their own future and in terms of global affairs. Inequality has increased, with a steepening social gradient meaning that the ability to rise from one socioeconomic status level to the next is becoming harder (Kearney and Levine, 2015; Sawhill, 2015), which is "very frustrating and debilitating," said Halfon. With dwindled supportive scaffolding and massive social changes under way—such as technology increasingly playing a role in the social development of children and adolescents—a growing mismatch has emerged between what is needed for healthy development and the complex modern context.

At the same time, the child health system is characterized by fragmented service delivery, difficulty accessing services, large inequities, low and uneven quality, models of care that are outmoded and do not match current needs, limited local responsibility, and enormous resource constraints, said Halfon. The overall result is a gap between current practice and the ideal child development trajectory. "It is an economic opportunity gap, . . . a human capital opportunity gap, a human potential opportunity gap, and this needs to be pushed onto the political agenda."

CHANGING THE OPERATING SYSTEM

"How do we take the health system and make it perform better?" asked Halfon. "I am going to argue that we need to change the operating system from one focused on diagnosing and treating chronic diseases to one focused on optimizing population health." To do this we have to redirect health resources, said Halfon. Today, resources tend to flow to the end of life span, with a focus on biomedical issues (Halfon et al., 2014a). "We have a big challenge here," he added.

Much can be done to improve the screening, diagnosis, and treatment of mental, behavioral, and developmental disorders in high-risk populations. Moving upstream and changing the median risk for children, rather

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than just the marginal risk, is a fundamentally different way of approaching the problem.

However, the health care system is historically not well positioned to make this change. Health care historically has focused from the "neck down" rather than on what Halfon dubbed the "*entals*"—*mental*, *developmental*, and *dental* health. Strategies focused on only the marginal risk, which Halfon dubbed the "fix it" mentality, can be helpful, but real change will require more transformative changes. The ACA provides some tools for change, such as improved screening and bundled payments, but more fundamental changes are needed, he said (Halfon et al., 2014b). "We need a transformative analysis and approach."

Halfon identified four kinds of change strategies. One is to fix the broken parts and pieces in a system, "and we have lots of broken parts in our health and health care system." Another is to make incremental changes through evidence-based improvements in services and care, and most health care improvements fall into this category, such as new patient engagement and screening tools. A third strategy is to transition to a new way of doing things through innovations that drive improvements. This requires bigger changes, nudges, and jolts that make the system perform in a new and different way. And the fourth strategy is to undergo a transformation through a paradigm shift. This requires a change in the operating system, noted Halfon.

The ACA is stimulating turbulent disruptions and creating the potential for substantial system improvement and innovation, Halfon observed. It has created a rush to develop accountable care organizations (ACOs), unleash market forces, and bring about significant delivery system changes. It also has created growing pressure for different types of payment reform.

The act has had many positive outcomes for children, including expansion of parent health insurance, no lifetime caps, no discrimination based on preexisting condition, better access to preventive care, and bundled payments. However, the act also has produced negatives. The regionalization of care has been breaking down as the market takes over health care, said Halfon. Children's health services have been squeezed, with many community health centers taking care of more "dual eligibles" who qualify for both Medicare and Medicaid. Children's hospitals are facing challenges, and children's benefit packages typically are inadequate. Children represent such a small proportion of overall health care expenditures that they tend not to receive sufficient attention (Cheng et al., 2014a,b). Investments in children produce benefits over long time horizons, while competitive health markets are narrowly focused on short-term high-cost patients. Dealing with mental, behavioral, and developmental issues calls for cross-sector approaches, but such approaches are difficult to fund. "We have very simple business and payment models that are not aligned with producing value for

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kids, families, or our society," said Halfon. "There is a value equation that needs to be redefined in terms of what we are doing for kids."

TOWARD HEALTH CARE 3.0

Halfon identified three distinct models of health care (Halfon et al., 2014b). In the first, which Halfon dubbed health care 1.0, medicine was based on acute care, infectious diseases, and the biomedical model. Gradually this model was modified to recognize the influence of social environments, behaviors, and other factors. This process converted a simple, mechanistic, and linear model to one that Halfon called the health care 2.0 model. It is complex, dynamic, and focused more on development, prevention, and treatment of chronic diseases from a biopsychosocial standpoint.

In recent decades, this model has again been transformed to health care 3.0 as a result of new scientific breakthroughs focused on epigenetics and the developmental origins of health and disease. For example, toxic stress can influence the midbrain in terms of attachment and the prefrontal cortex in terms of executive function, leading to health and behavioral problems (Hertzman, 2012). "The people who have disabilities with mental and behavioral issues in their twenties, thirties, and forties are the people who are going to have heart disease, diabetes, and chronic disease in their fifties and sixties" (Audrey, 1988; Felitti et al., 1998) As another example, children on welfare, by their third birthday, hear on average 30 million fewer words and have less than half the cumulative vocabulary of the children of college-educated parents (Hart and Risley, 1995). Socioeconomic status is even correlated with the amount of gray matter in children's brains (Hanson et al., 2013).

Halfon referred to this new model as the life course health development synthesis (see Figure 2-3). "This is a new and different kind of model, and we need to be pushing this forward." For public policy, this health care 3.0 model (Halfon et al., 2014b) demonstrates the need to reduce risk factors and increase protective factors to achieve a healthy developmental trajectory (see Figure 2-4). "People in health, education, family support, police officers—they all understand this," Halfon said. "We have to make this brain drain that's happening in the first 5 years of life be unacceptable in this country."

Today, U.S. health care is only at about version 1.5 using this metaphor, Halfon said, and the ACA is designed to bring medicine up to only about version 2.0. "We have to have a broader vision," he said. "We need to think about what the logic for a 3.0 system is, how we think about the development of health, and how we optimize health. There is a different logic model that we [need to] use if we are going to move in this direction."

Breaking down the silos in the current system will require a system that

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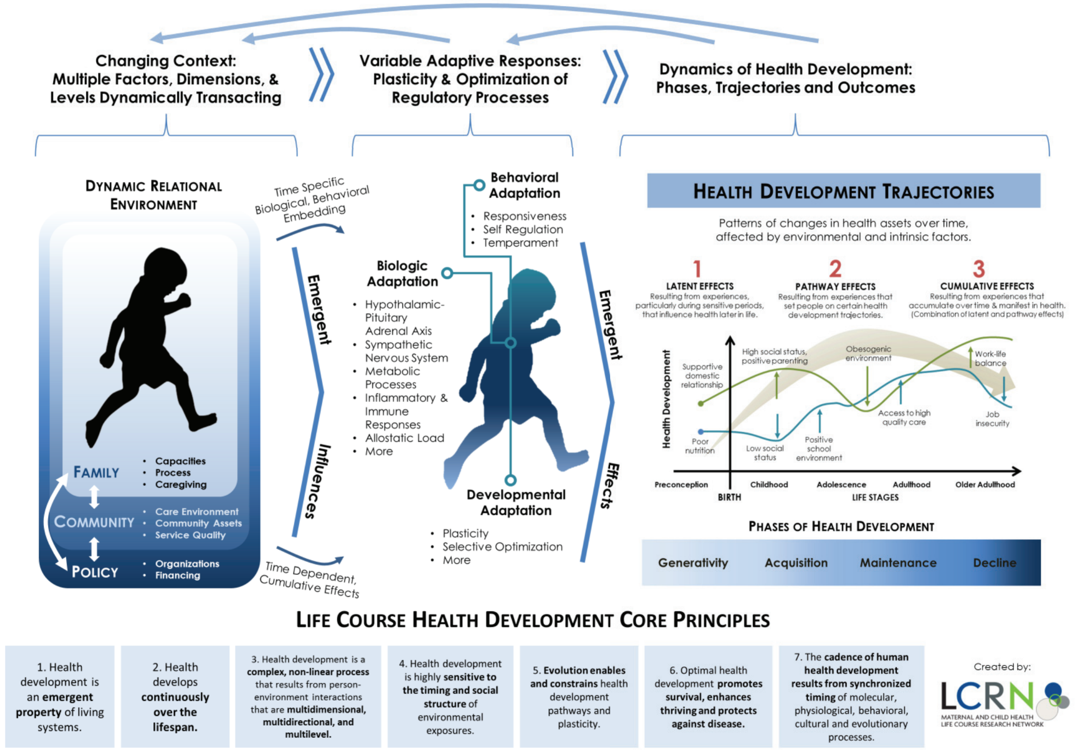

FIGURE 2-3 The life course health development synthesis. The perspective relates changing contexts and adaptive responses to the dynamics of health development.
SOURCE: Halfon, 2015. From Life Course Research Network (LCRN), 2014.

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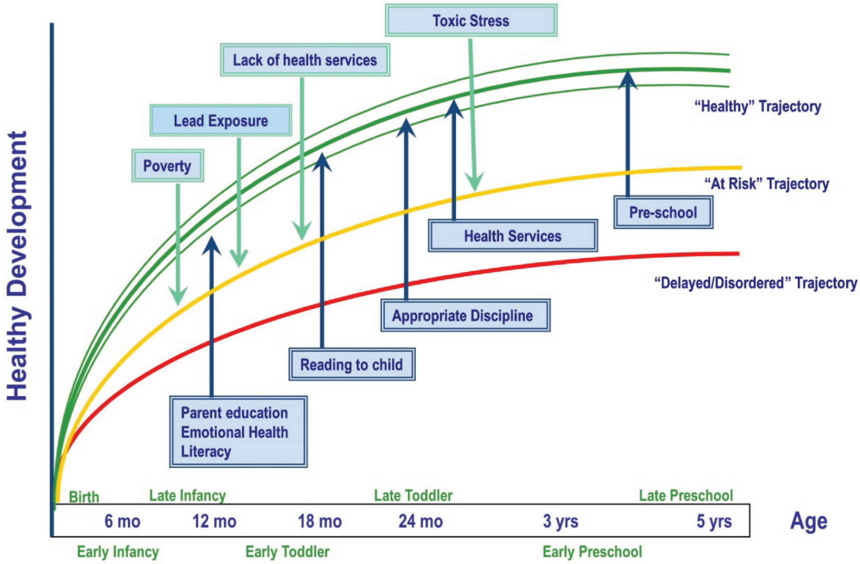

FIGURE 2-4 Risk and protective factors for healthy developmental trajectory.
SOURCE: Halfon, 2015. Adapted from Halfon et al., 2014a.

has been redesigned to be horizontally and vertically integrated, Halfon said. For example, a redesign to achieve a higher health trajectory might combine nurse–family partnerships, Early Head Start, child care resources and referrals, home-visiting networks, and parenting support. Such a system would require connecting pediatric offices to a much broader array of services and interventions. For example, instead of pediatric screens that result in 4 to 6 percent of children with disabilities being sent to the regional center, developmental health screens could be available in a variety of settings to identify the 30 to 40 percent of children who are at developmental risk. "The reason we cannot currently screen is there is no place to send them," said Halfon. "We can come up with the best screening protocols in the world, but if there is no place to send them and we cannot send them anywhere, no one is going to do it."

Measuring developmental trajectories is another major challenge that Halfon identified. The dawning era of big data creates many new possibilities. For example, measures of school readiness in Los Angeles are identifying the percentage of children who are vulnerable with respect to social competence and the percentage of mothers who are depressed, neighborhood by neighborhood. Such data can be used to fashion data dashboards, and local policy makers can use this information to assess policy priorities

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and neighborhood needs in order to enact polices that reduce vulnerabilities in children and families.[1]

CHANGING THE POLITICAL AGENDA

"We need to commit ourselves to a 2025 vision of transforming our children's health system," Halfon said. "We need to make the catastrophic and unnecessary loss of human potential be something that our politicians cannot run away from. We can't be talking about incremental changes anymore. We need a child health development national network."

Changing the political agenda will require audacity, he continued. The scale and scope of the problem argue for a major national effort, with a new narrative, leadership, measures, and approaches. Halfon said that people with whom he discusses this issue in the financial world are aware that underinvestments in children are not sustainable. "I think we can do it. I am more optimistic than pessimistic. But we have to have the vision and the leadership to do that, and we have to hold our politicians accountable."

Halfon and a group of colleagues have proposed elevating the Maternal and Child Health Bureau to a much more prominent position and linking it to the Federal Reserve to move a child development agenda forward (Halfon et al., 2014c). "We need to get not just 10 communities but 1,000 communities over the next 10 years to transform their children's health systems and make those kinds of innovations." New apps for pediatric care, child health trusts, community-accountable child health development systems, and an early life course infrastructure are among the innovations that could help transform pediatric health care. A research agenda and new measurement and sensing systems could mate population health systems and clinical systems.

Halfon and his colleagues have been working on a Child Health System Transformation Initiative (CHSTI) that is designed to leverage the implementation of the ACA to transform the child health system and rapidly establish a systematic process for monitoring, analyzing, and responding to emerging threats and opportunities. The challenge is to move beyond incremental strategies and solutions and to treat the issue as a complex adaptive systems problem, one that requires the contributions of systems and implementation scientists, not just pediatricians and child psychiatrists and psychologists. Similarly, Halfon's Transforming Early Childhood Community Systems (TECCS) initiative is seeking to bring together not just the health community and the early childhood community but police, housing, economic development, and others. "It's about linking a whole-child,

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[1] Additional information can be found at: http://www.healthychild.ucla.edu/wp-content/uploads/2015/05/Pasadena-ECD-Policy.compressed.pdf (accessed July 31, 2015).

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whole-family focus to a whole-city, whole-community approach." These kind of community-wide collective impact strategies have been deployed to address the current obesity epidemic with some success, said Halfon, adding that similar types of cross-sector community-wide strategies will also work for improving the lives of young children. For example, when the development of children is mapped neighborhood by neighborhood and matched with housing data, people involved in the housing sector begin to understand that early childhood outcomes reflect the vitality of their neighborhood. Halfon also noted that when child development data are mapped against police data, law enforcement can see that the two are linked and begin to think more about how upstream policing may be an effective crime prevention strategy.

In response to an analogy drawn by a workshop participant between the current situation and early public health campaigns to provide clean water and sanitation to communities and households, Halfon pointed to four factors that were critical to the success of those early campaigns. One is that they had a solid scientific basis—the germ theory of disease and data showing that exposures to risk yield bad outcomes. Second, they had good measures, such as infant mortality and deaths that could quantify impacts. Third, universal approaches were taken that crossed racial, ethnic, and class lines. Fourth, they had local accountability. All four characteristics will continue to be important in child health development. "We need to be thinking about different strategies that are about all kids, not just about poor kids."

LEADING A CULTURAL CHANGE

Beyond any specific act of legislation or court case, a cultural change is going on, said Jeff Levi, executive director of the Trust for America's Health, in the second keynote address of the workshop. The health system has begun to think beyond the immediate physical health needs of individuals. Prevention is increasingly—though not yet sufficiently—being recognized and supported. The social determinants of health have become part of the health discussion. The health system is talking less about the health of individuals or collection of individuals and more about the health of communities.

One measure of this change is the creation of new structures that acknowledge many contributions to health and allow the braiding and blending of resources and programs to meet the needs of individuals, despite the silos in which systems have worked in the past. For example, Levi chairs the Advisory Group on Prevention, Health Promotion, and Integrative and Public Health, which advises the National Prevention Council. This council includes 20 federal agencies and offices, including agencies like the Department of Defense, the Department of Housing and Urban Development, the

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Department of Transportation, the Environmental Protection Agency, and the Department of Homeland Security. "All have different perspectives and different lenses on what contributes to health, but all [are] being told that prevention is now part of their job."

Population health means many different things to many different people. To Levi, the concept implies that "no one can do it alone." Thus, a health clinic cannot achieve its goals unless the activities of the clinic are linked to and address the conditions that occur outside the clinic. Reducing the big cost drivers in health, such as diabetes and heart disease, requires a safe, healthy, and supportive community environment, he said. This requires encompassing behavioral health issues as well as the traditional chronic physical conditions. It also requires moving beyond targeted interventions for those who are at greater risk to universal interventions that make the community healthier for everyone, Levi said.

Levi expressed the opinion that, given the importance of social determinants on health outcomes, both the public health and the health care system have to be re-envisioned to create a comprehensive approach to health. The public health system is organized much like the health care system—"disease by disease, silo by silo"—and rarely do we think across those silos and across communities and invest in creating healthier communities in a systematic way." A number of levers in the ACA provide an opportunity to do this re-envisioning. Financial incentives are emphasizing outcomes over volume. Partnerships with a broader range of providers and broader range of services are taking shape. New systems of care delivery are creating a range of opportunities. However, these structural changes are happening faster than the payment changes. Experiments are not necessarily being sustained over time, with the result that incentives for long-term change are not in place.

Large-scale change requires figuring out the financial incentives, Levi observed. One question is whether a shift from volume to value is sufficient, because perceptions of value differ. The timeframe over which value occurs for children is longer than for adults, but shareholders want to see short-term returns on their investments. Another question involves whether a decrease of illness or an increase of well-being, including mental health, is valued? And if it is the latter, how can an increased sense of well-being be ascribed a financial value? Finally, do the providers of health include only licensed professionals or members of the community who can influence health?

PREVENTION IN THE AFFORDABLE CARE ACT

Some of the less visible levers in the ACA center on prevention, Levi noted. For example, the Prevention and Public Health Fund is a billion

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dollar mandatory funding stream that is available every year to support prevention and public health programs, including community-based prevention programs. This fund and other resources have let communities know that they now can access the resources to come together and build coalitions with multiple players, multiple constituencies, and multiple stakeholders.

The new community benefit requirements for nonprofit hospitals require that they give back to their communities in other ways, now that more people are insured. In addition, a new vision of the workforce, including community health workers, is part of the ACA.

A report from the National Prevention Council, cleared by all the members of the council, laid out a very expansive vision for the goals, strategic directions, and priorities of a National Prevention Strategy, Levi noted. The strategy rests on four major goals: healthy and safe community environments, clinical and community preventive services, elimination of health disparities, and empowered people. Building on these directions, it lays out seven priorities: reproductive and sexual health, mental and emotional well-being, active living, healthy eating, preventing drug abuse and excessive alcohol use, tobacco-free living, and injury- and violence-free living.

Many potential advances in prevention require the formation of partnerships, Levi observed. Education and health constitute the easiest case to be made about the co-benefits of working together. For example, the advisory group that Levi chairs spawned a separate group called the National Collaborative on Education and Health, which has been looking at how schools and the health system can come together. One focus of the collaborative's work has been the issue of chronic absenteeism. Children who miss more than 10 percent of school, especially in the early years, are less likely to graduate from high school. Early interventions to address such problems as chronic disease, lack of access to health or dental care, poor transportation, trauma, and no safe path to school can make a difference for these children. "From the perspective of the National Prevention Strategy, this is wonderful, because it brings in five or six federal agencies" that can work together to reduce the problem, he said. It is also a perfect example, he added, of how both health issues and the social determinants of health need to be addressed for children to perform better. "This is just one example of thinking differently about who needs to be at the table."

Another example Levi described is the Section 1115 waiver that Hennepin County in Minnesota received to create a social ACO model that seamlessly integrates social services and health care services. "If you show up in the health care system and you have a problem with stable housing, you can get linked to the social services that the county provides. If you show up on the social services side and you have a health care need that needs to be addressed, you can get that referral, because the data systems and referral systems are well integrated." An integrator organization

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called Hennepin Health is bringing the county hospital, the county community health center, and the county-run social services agencies together and asking what else is missing. With a capitated rate from the Centers for Medicare & Medicaid Services (CMS), it can take expected savings and invest in new programs, such as an outpatient oral health clinic and a sobering center. "They've been able to capture savings, they've been able to reinvest, and they've been able to show that providing this broad range of services can be helpful both on the health side and on the social services side." CMS is now interested in testing this approach in more complex political structures.

Finally, Levi mentioned the Truman Medical Center in Kansas City, which invited a bank to open a branch in the hospital so that low-wage employees would not have to use check-cashing services. The branch served not only the low-wage employees but also the neighborhood, which desperately needed banking services.

Successful experiments tend to have several common elements, said Levi. They have visionary leadership. They have some sort of integrator that can bring multiple funding streams to the table and braid if not blend them. They have a good data system across the system. And they have start-up funds. A big unknown, he acknowledged, is whether they have sustainable long-term financial models.

The stakeholders on this issue are numerous and diverse, Levi pointed out in response to a question. The United States has thousands of public health departments and several times that many school districts. Given that diversity, the best approach sometimes is simply to identify best practices and work with people at the local level to implement those practices. For example, the United Way can work with their chapters, whose priorities include education, health, and poverty, "so there is a perfect confluence there, and can this be replicated at the local level."

He also pointed out, in response to another question, that particular communities are making great progress in integrating the actions of stakeholders. In these settings, innovations developed within sectors are being linked with other sectors to move forward. Financing structures are an important factor in this process, he said, because of the simultaneous difficulties and potential of cross-sector financing. "We need to be thinking about very different kinds of fiscal structures." For example, if changes reduce costs, the savings should be available to sustain the interventions over time, but "it is not clear that we have figured that out."

Many organizations are recognizing that health is a part of their core mission, said Levi, whether the Federal Reserve providing oversight of community reinvestment requirements, the Internal Revenue Service being more stringent around community benefit oversight for hospitals, or the Chamber of Commerce catalyzing community-based prevention efforts. This does not

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reflect a health-in-all-policies approach, Levi said. "These people are coming to the table recognizing that to achieve their mission of improving, for example, the economic climate in a community, they have to think about health, and therefore they need to partner."

Public health has always seen itself as fixing problems, Levi concluded. But in the future, public health will serve more as a chief health strategist for creating partnerships. This role will help it acquire the resources it needs to bring partners to the table. Public health can identify the problems, gather the data, and illuminate the choices to be made, "and then bring those coalitions together to make them happen."

The conversation about prevention can become paralyzing if it calls for, first, eliminating poverty and racism, Levi acknowledged. But, as with the conversation around climate change, there are things people can do to help mitigate and adapt to a massive problem. "How these questions are going to be resolved is still up in the air, but there are a lot of resources, and a lot of exciting things are happening."

REFERENCES

Audrey, M. 1988. Psychiatric disorder in a sample of the general population with and without chronic medical conditions. *American Journal of Psychiatry* 145:976-998.

Bethell, C. D., P. Newacheck, E. Hawes, and N. Halfon. 2014. Adverse childhood experiences: assessing the impact on health and school engagement and the mitigating role of resilience. *Health Affairs* 33(12):2106-2115.

Brault, M. W. 2012. Americans with disabilities: 2010. *Current Population Reports*. U.S. Census Bureau.

Cheng, T. L., P. H. Wise, and N. Halfon. 2014a. Promise and perils of the Affordable Care Act for children. *JAMA* 311(17):1733-1734.

Cheng, T. L., P. H. Wise, and N. Halfon. 2014b. Quality health care for children and the Affordable Care Act: A voltage drop checklist. *Pediatrics* 134(4):794-802.

Felitti, V. J., R. F. Anda, D. Nordenberg, D. F. Williamson, A. M. Spitz, V. Edwards, M. P. Koss, and J. S. Marks. 1998. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine* 14(4):245-258.

Halfon, N. 2015. *Optimizing the Behavioral Health of All Children: Implications for Policy and Systems Change*. Presented at IOM and NRC Workshop on Opportunities to Promote Children's Behavioral Health: Health Care Reform and Beyond, Washington, DC.

Halfon, N., A. Houtrow, K. Larson, and P. W. Newarcheck. 2012. The changing landscape of disability in childhood. *Future Child* 22(1):13-42.

Halfon, N., K. Larson, M. Lu, E. Tullis, and S. Russ. 2014a. Lifecourse Health Development: Past, Present and Future. *Maternal and Child Health Journal* 18:344-365.

Halfon, N., P. Long, D. I. Chang, J. Hester, M. Inkelas, and A. Rodgers. 2014b. Applying a 3.0 transformation framework to guide large-scale health system reform. *Health Affairs (Millwood)* 33(11):2003-2011.

Halfon, N., P. H. Wise, and C. B. Forrest. 2014c. The changing nature of children's health development: new challenges require major policy solutions. *Health Affairs (Millwood)* 33(12):2116-2124.

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Hanson, J. L., N. Hair, D. G. Shen, F. Shi, J. H. Gilmore, B. L. Wolfe, and S. D. Pollak. 2013. Family poverty affects the rate of human infant brain growth. *PLoS ONE* 8(12):e80954.

Hart, B., and T. Risley. 1995. *Meaningful differences in the everyday experience of young American children*. Baltimore, MD: Paul H. Brookes Publishing.

Hertzman, C. 2012. Putting the concept of biological embedding in historical perspective. *Proceedings of the National Academy of Sciences of the United States of America* 109(Suppl 2):17160-17167.

Kearney, M. S., and P. B. Levine. 2015. Economic despair: The vicious circle of inequality and social mobility [Internet]. May 29, 2015. The Brookings Institution. http://www.brookings.edu/blogs/social-mobility-memos/posts/2015/05/29-despair-great-gatsby-curve-kearney-levine (accessed July 31, 2015).

Kessler, R. C., G. P. Amminger, S. Aguilar-Gaxiola, J. Alonso, S. Lee, and T. B. Ustun. 2007. Age of onset of mental disorders: A review of recent literature. *Current Opinion in Psychiatry* 20(4):359-364.

Life Course Research Network. 2014. "The Life Course Health Development Model." Web. November 1, 2014. http://www.lcrn.net/life-course-health-development-diagram (accessed September 29, 2015).

Merikangas, K. R., H. Jian-ping, M. Burstein, S. A. Swanson, S. Avenevoli, L. Cui, C. Benjet, K. Georgiades, and J. Swendsen. 2010. Lifetime Prevalence of Mental Disorders in U.S. Adolescents: Results from the National Comorbidity Survey Replication-Adolescent Supplement (NCS-A). *Journal of the American Academy of Child & Adolescent Psychiatry* 49(10):980-989.

NIH (National Institutes of Health). 2007. *Biological Sciences Curriculum Study. Information about Mental Illness and the Brain*. NIH Curriculum Supplement Series [Internet]. Bethesda (MD): National Institutes of Health (US). http://www.ncbi.nlm.nih.gov/books/NBK20369 (accessed July 31, 2015).

Perou, R., R. H. Bitsko, S. J. Blumberg, P. Pastor, R. M. Ghandour, J. C. Gfroerer, S. L. Hedden, A. E. Crosby, S. N. Visser, L. A. Schieve, S. E. Parks, J. E. Hall, D. Brody, C. M. Simile, W. W. Thompson, J. Baio, S. Avenevoli, M. D. Kogan, and L. N. Huang. 2013. Mental Health Surveillance Among Children—United States, 2005–2011. *Morbidity and Mortality Weekly Report* 62(Suppl):1-35.

Sacks, V., P. Murphey, and K. Moore. 2014 (July). Adverse childhood experiences: National and state level prevalence. *Child Trends* Publication #2014-28.

Sawhill, I. V. 2015. Inequality and social mobility: Be afraid [Internet]. May 27, 2015. The Brookings Institution. http://www.brookings.edu/blogs/social-mobility-memos/posts/2015/05/27-inequality-great-gatsby-curve-sawhill (accessed July 31, 2015).

UNICEF Office of Research. 2013. Child well-being in rich countries: A comparative overview. *Innocenti Report Card 11*. Florence, Italy: UNICEF Office of Research.

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3

Funding: Opportunities, Threats, and Potential for Innovation

The first panel of the workshop looked at funding issues as a way of exploring the broader issues of health care reform. Funding provisions can serve either to isolate or to coordinate and integrate separate programs, many panelists noted. Program coordination and integration can in turn incorporate mental health care and prevention into such settings as pediatric practices, community health centers, and schools.

INTEGRATING SERVICES AT THE STATE LEVEL

Medicaid, together with the Children's Health Insurance Program (CHIP), covers one in three children nationwide. It is a joint federal and state program, and states have significant flexibility to operate the program with federal approval. As a result, the health services delivered and the populations covered differ among states. Similarly, effective innovations differ among states in the context of health care delivery systems, marketplaces, and populations served.

The populations served by Medicaid tend to have a higher prevalence of some behavioral health conditions, such as ADHD, noted Lindsey Browning, a policy analyst with the National Association of Medicaid Directors, which represents the Medicaid directors of all 50 states, the District of Columbia, and U.S. territories. Medicaid also covers children with complex needs, such as children in foster care, former foster care children, and children with disabilities. Though less than 10 percent of children in Medicaid have behavioral health needs, they account for 38 percent of

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Medicaid spending on children. "There is a real opportunity to drive value and to improve quality for this population of kids," Browning said.

Medicaid directors across the country have been looking for ways to enhance value and promote delivery and payment reform in Medicaid, and behavioral health has been a focus because of the needs of the Medicaid population. According to the National Association of Medicaid Directors' annual operations survey, all responding states (47) were involved in some kind of reform, nearly three-quarters of these directors are pursuing or implementing four or more reforms at once, and more than three-quarters of these states are focusing directly on behavioral health needs.

The ACA and new funding opportunities have accelerated these efforts, Browning said. For example, enhanced funding for health homes has benefited the population with behavioral health needs, she explained. As another example, Section 1115 waivers are supporting provider-level transformation, and increased funding for information technology systems is fostering interoperability and exchange of information. Such steps are a "key to driving integration and promoting coordination of care for kids," Browning said.

Strategies for integration take place at three levels, Browning continued. The first is at the agency level, where integration builds linkages across systems of care that affect children. These linkages involve "not just Medicaid but child welfare, juvenile justice, the education system, and others."

The second level of integration involves payments. States are finding new ways to link services that traditionally have been separate, where, for example, people had one insurance card for mental health needs and another insurance card for physical health needs.

The third level of integration involves health care providers. Integration can build linkages between providers to coordinate care and even integrate them into the same setting.

The fourth level of integration involves early intervention efforts for children. For some members of the population with behavioral health needs, Medicaid could end up covering them for the rest of their lives, Browning said. Early intervention creates an opportunity to improve quality, reduce costs, and, in some cases, keep people from needing the program indefinitely.

Prevention also faces challenges at the state level, Browning noted. Medicaid typically works under 1- or 2-year budget cycles, which produces pressure to reduce costs and save money in the short term. Also, legislators, providers, other stakeholders, and current beneficiaries who are focused on shaping the program for the population it currently serves can limit the ability to look upstream for value. Finally, a greater emphasis on prevention raises the question of who saves for prevention activities. "Medicaid is

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accountable for its expenditures and its savings, but if the savings are going to, say, the education system or another agency, it is difficult to account for that." Aligned leadership, including at the governor's office, may be one way to help address this, said Browning.

PROMOTING INTEGRATION THROUGH THE INSURANCE SYSTEM

Mark Friedlander, chief medical officer for behavioral health for commercial plans at Aetna, noted that three-quarters of his job involves self-insured plan sponsors. Aetna is paid an administrative fee for these services, but his customers are mainly large corporations. These corporations are interested in value for money, paying for cost-effective services, and making a difference. Behavioral health is often viewed as an afterthought, Friedlander observed, but it is often a comorbidity of conditions that are significant cost drivers. The ACA is producing changes, so the question is how to leverage those changes to improve behavioral health.

The greatest opportunities on the commercial side are related to transforming the way that behavioral health services are delivered, said Friedlander, particularly at the practitioner level. To date, little has been done to evaluate the quality of services that are provided. In part, this is because private payers cannot tell the difference between the star providers and the duds. As he put it, "The claim comes in, and it looks exactly the same." If a patient sees an outpatient provider for three sessions and then stops, has the patient been cured, or is the provider so bad that the patient has given up? "Our claims system cannot tell the difference."

The ACA has put practitioners on notice that accountability is important. "Our efforts are aimed at reinforcing that message and identifying how to measure quality, how to reward and incentivize providers to deliver quality, and how to make sure that the services delivered are the appropriate services in the right quantities." In many cases, providers want to do more of what they are comfortable doing. They prefer to operate in their own comfort zones rather than meet a patient's most prominent needs. "That, too, provides a challenge for us in steering folks to the right resources for the right reasons."

Another opportunity on the commercial side is to push behavioral health practitioners to go beyond their own silos. In recent decades, managed care organizations have helped to widen the division between medical and behavioral health. "We have the opportunity, through claims and through financial incentives, to push the behavioral health practitioners closer to the medical providers, particularly in primary care settings," said Friedlander. Incentives can encourage behavioral health practitioners to work with primary care practices to assess and deliver brief services, such

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as when child psychiatrists provide telephonic consultations to pediatricians. "It is slow going. There is a significant level of resistance, but that is the approach that we are taking at this stage. It may seem like baby steps compared to the system transformation that is needed, but that is where we have started."

BEHAVIORAL HEALTH IN THE HEALTH CENTER PROGRAM

The Health Center Program under the Health Resources and Services Administration's (HRSA's) Bureau of Primary Health Care funds about 1,300 grantees across the nation that provide health care services to 1 in 15 citizens. As Olivia Shockey, the expansion division director under the bureau's Office of Policy and Program Development, noted, the program targets the neediest, most underserved, and most vulnerable populations throughout the United States and in its territories.

As part of the ACA, the program has had the opportunity to offer funding for behavioral health integration to many of its grantees. Its grantees, which operate about 9,000 access points or health center sites across the nation, must provide referral to behavioral health care services, and about three-quarters provide more direct access to mental health and substance abuse services, not just referrals. Grants to more than 430 of the health centers supplement what they are already doing for behavioral health care and drive integrated services by bringing more providers onsite and through increased use of screening and brief interventions with patients, including youths. As a result of this behavioral health integration funding, which requires the addition of at least one new on-site provider and movement along the spectrum toward integrated care, the program expects the number of people receiving behavioral health services to increase.

The behavioral care initiatives are part of an array of opportunities created by the ACA allowing increased community-directed comprehensive primary health care services, which are the core of the Health Center Program, said Shockey. Grantees have been able to help more than 9 million people enroll in affordable health insurance coverage, which has been a great opportunity to advance health within the community. About 30 percent of all the health center patients are under the age of 18, with the bulk of those 12 and under.[1]

Funding under the ACA also has supported 43 Health Center–controlled networks to work with grantees to enhance their use of health information technology to drive care. Quality improvement awards to the health centers

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[1] HRSA Uniform Data System, available at: http://bphc.hrsa.gov/datareporting/index.html (accessed July 30, 2015).

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have incentivized the use of electronic health records and the tracking and reporting of data, providing a better sense of performance.

INNOVATIONS THAT CAN PROMOTE INTEGRATION

Ellen-Marie Whelan, senior advisor at the Innovation Center of the Centers for Medicare & Medicaid Services (CMS) and acting chief population health officer for the CMS Center for Medicaid and CHIP Services, pointed to the growing trend of paying for value-based care, which "is where opportunities and threats clearly are as we look forward." The Innovation Center has been funding many Medicare-driven, adult-focused programs, such as ACOs, bundled payments, and medical homes, but the organization has "started to evolve," said Whelan. For example, it has been funding the Strong Start program to support prenatal care and decrease prematurity. Its large Partnerships for Patients program has been seeking to decrease hospital-acquired conditions, 1 of its 26 hospital engagement networks encompasses children's hospitals, and it has been examining models created by practitioners to see if policies from CMS create barriers to those models.

CMS's health care innovation awardees include pediatric providers, and it has sought to increase that number in round two of the health care innovation awards. Of the 17 states involved in state innovation models, 11 include activities in pediatrics, and many of these are looking at behavioral health. Furthermore, because the funding under state innovation models goes to governors' offices, there is an opportunity for blended funding streams.

According to Whelan, the change from fee-for-service to paying for accountability is the biggest opportunity of the ACA. Fee-for-service inhibited integrated care, whereas integrated care involves many different team members, including parents and schools. Integrated care also helps address the problem, raised by a workshop participant, of pediatricians having too many things to do during a typical office visit. As the health care system moves away from a reliance on the fee-for-service model, teams rather than individuals will have both authority and accountability for care.

This change does beg the question of how to define accountability, she said, especially for measures that are outside the control of providers. Many approved measures are for healthy children, whereas a robust set of measures does not yet exist for children with behavioral health issues. Also, moving away from a fee-for-service system means moving away from claims data toward measuring interactions to demonstrate improved care. Some of these interactions are outside of the traditional medical system and include such measures as school readiness, school attendance, or housing

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stability. What does accountability mean in the context of these measures, Whelan asked. This is a challenge in looking to see who is getting paid for doing what, what the outcomes are, and who is producing positive results.

Another issue that arose in discussion involves what should count as strong evidence. The models being pursued at the Innovation Center need an evidence base, Whelan said, but does that base consist only of randomized controlled trials, or are other forms of evidence acceptable? "What will the benchmark be?"

THE INTEGRATION OF BEHAVIORAL HEALTH AND PRIMARY CARE

A prominent topic of discussion among the panel and workshop participants involved the integration of physical and mental health. As McCabe pointed out, "The mind is not separated from the body, and yet, so many times at the state level, at the community level, at the practice level, it is."

Browning observed that models of integration differ from state to state. What works in a Medicaid program with managed care is not going to work in a rural or frontier state with fee-for-service Medicaid. Even health homes, which are currently a prominent model to coordinate care, including care for behavioral health conditions, can look very different from place to place. In some, behavioral health providers are the locus of control, while in others control resides more with primary care providers.

A second model is managed care in which payments are integrated, Browning continued. Under a carve-out approach, behavioral health organizations and managed care organizations are accountable to coordinate services across health plans. Under a carve-in approach, one managed care organization delivers services for the population, providing for their complex needs and working to fulfill the coordination role.

A third model, which is more similar to the carve-in approach, involves the use of specialty plans. For example, a behavioral health plan could deliver all the services for people with significant and persistent mental illnesses. "This is a newer model, but I think it is interesting to see how that will work," Browning said.

In all these approaches, states build mechanisms into the contract to hold health plans accountable for integrating services and evaluate the plans to make sure they are prepared to meet the needs of beneficiaries. For example, payment models such as retroactive payment bundles can hold providers accountable for integrating across care settings. This model can benchmark a provider's performance on quality and cost and provides gain sharing or risk sharing based on comparisons with average performance.

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"Payment models are starting to develop," Browning said. "There are opportunities here, and we will see a variety of approaches that meet the particulars of a state's Medicaid program."

Freidlander pointed out that though things have changed, with separately managed behavioral health organizations, there sometimes exists among medical providers and behavioral health providers "That old mindset still remains in the provider community—that there is a risk that if a behavioral health diagnosis makes it onto a pediatrician's claim, it is going to get rejected by the system, by the payer. That is not the case anymore, but I think that the urban myth still remains and makes things complicated, particularly if there is a carve-out environment." He also pointed out that medical providers with additional training—in behavioral or developmental pediatrics, for example—may not be able to gain extra pay for that additional credential because general pediatricians are expected to be able to screen and provide basic services.

Friedlander noted that Aetna has started to connect behavioral health practitioners with large primary care practices. Unfortunately, success depends very much on the compatibility and behavior of those involved, he added. "We have seen some primary care practices resist intrusion into their space because it may tie up a revenue-generating consulting room. We have also seen behavioral health practitioners use the opportunity to offer services rent free but then provide interventions other than quick evaluations."

Friedlander described another example of integrating behavioral health in other care settings in Aetna's work to involve behavioral health practitioners in pain clinics, because many patients in these clinics not only have an underlying medical condition but also have dependence on controlled substances, underlying behavioral health conditions, or other issues that make their cases complicated and expensive.

To demonstrate the scale of undergoing efforts involving intergraded care, Shockey noted that in 2013 the health centers provided more than one million people with behavioral health care within the health centers themselves. An alternative to this form of integrated care is to provide grants for behavioral health providers, funded by the Substance Abuse and Mental Health Services Administration (SAMHSA), to have relationships with colocated or nearby primary care providers who receive grants from the Health Center Program.

As Whelan said, under the ACA, the Innovation Center can scale and spread successful models that improve outcomes and control costs. But, echoing Friedlander's comment, she added that many of the existing models are driven by behavior. The federal government could help by providing or promoting the development and use of standards so that different models can themselves be integrated while retaining a measure of flexibility.

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A final issue raised during the discussion of integration involves regulations for confidentiality and the sharing of records. Browning pointed out that regulations are strict around the sharing of data on treatment of substance use disorders, and states frequently cite these regulations as a major barrier to integration. The federal government is considering changes in these regulations, and the Medicaid directors support the sharing of all health information to enable integrated care.

METRICS AND MEASUREMENTS THAT CAN PROMOTE INTEGRATION

A second major focus of discussion during the panel was the creation and use of metrics and measurements that can promote integration. As Friedlander observed, "What does not get measured does not change," but getting practitioners to make such measurements can be difficult. For example, coding is available as an incentive to track screening, but few practitioners have taken advantage of the opportunity.

Measures also need to make sense, Friedlander added. Things like screening and brief interventions for alcohol and drug use make a lot of sense. But the data showed that a significant percentage of the claims submitted for screening and brief interventions came from anesthesiologists. Prior to a surgical procedure, the anesthesiologist does an evaluation of the patient to assess their risks, and many were adding screening and brief interventions for alcohol use to their assessments. However, less than 1 percent of the people who were screened had subsequent claims for drug or alcohol treatment. Aetna would like the behavioral health community to do more screening to generate data and refine the measures that exist, he said.

Browning emphasized the quality of measures. High-quality measures should be able to look across populations to see if integration is taking place. Another opportunity is for alignment of high-quality measures of behavioral health integration across programs, which enhances the feasibility for providers, states, and health plans in reporting and collecting measures.

Shockey pointed out that in 2014 the National Quality Forum questionnaire, a behavioral health clinical performance measure focused on depression screening and treatment, was added to the health centers, and was one of many required clinical and financial performance measures.[2] However, many other things could be measured. "We need to look at what needs to be added," she said in response to a question about measures for youth behavioral health, noting that the new depression measure is for patients 12 and older.

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[2] Additional information on the National Quality Forum measures can be found at: https://www.qualityforum.org/Home.aspx (accessed July 30, 2015).

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One risk is that measures can create incentives or disincentives for different interventions. For example, the Health Center Program has one measure of depression for adolescents 12 and up and a child health measure related to receiving appropriate immunizations by age 3, which leaves a gap for other children. "There are some areas that we might be able to improve or add measures as we look at children's behavioral health," Shockey said.

Whelan pointed to work being done on the development of measures by the National Institutes of Health (NIH), such as the Patient Reported Outcomes Measurement Information System (PROMIS), and other agencies of the Department of Health and Human Services. The PROMIS measures, for example, are patient-centered, Web-based, and free.[3]

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[3] Additional information on PROMIS can be found at: http://www.nihpromis.org (accessed July 30, 2015).

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Implementing Innovations at the State and Local Levels

The second panel provided a perspective on some of the work happening in states and localities to advance children's behavioral health. In cities, counties, and states across the country, health care reform has accelerated the movement to provide greater coverage of behavioral health and prevention, speakers on the panel noted. An increasing number of stakeholders, including businesses, are recognizing the many benefits of better behavioral health and are contributing to efforts to improve behavioral health.

INTEGRATED INTERVENTIONS IN OREGON

Oregon has created coordinated care organizations in individual counties or groups of counties that act as health insurers for people on the Oregon Health Plan. About 26 percent of the state's population, or around one million people, are covered by the plan.

These coordinated care organizations have sought to improve the integration of primary care and behavioral health, and they have resources to do so, said Anthony Biglan, senior scientist at Oregon Research Institute and author of the recent book *The Nurture Effect: How the Science of Human Behavior Can Improve Our Lives and the World* (New Harbinger, 2015). For example, in Lane County, a coordinated care organization with which the Oregon Research Institute works is funding both prevention efforts in communities and efforts to integrate behavioral health and primary care. This work reflects an increasingly shared understanding of what children need to develop, which is grounds for optimism, said Biglan.

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In addition, Oregon created an Early Learning Council to look at all the things needed for young children to develop successfully. Through legislative action, this morphed into the Early Learning Division in the state Department of Education, which is funding county-level hubs to support the development of young children. Hubs are required to focus on three goals: (1) ensuring that all children are socially and academically ready to learn by the time they reach kindergarten; (2) that families are stable and attached; and (3) that services are coordinated and efficient. "It is not simply a matter of the health care system doing a better job but of having a community-wide effort to improve development for young children from the prenatal period through at least age 5," said Biglan. Measures of the social and cognitive readiness of children for kindergarten, which is only about 50 percent in high-poverty neighborhoods in his county, provide an incentive to reduce the number, he added.

Virtually every young child in a poor family in Oregon now has health coverage. An increasing number also have a medical home, Biglan said. The next question is whether they are getting the developmental screenings they should be. Though the state is getting better at these, considerable challenges remain. One of the most important challenges is ensuring that every young child who has a medical home is being screened for developmental readiness and is getting the services of appropriate behavioral health or developmental specialists when screening indicates that they are needed, said Biglan. He noted that the coordinated care organizations and hubs are collaborating to make this happen and that the most difficult part is getting behavioral health effectively integrated with primary care. "We are trying to develop a system in which we can ensure that the screening take place, that services are delivered, and that those services are effective. This is a sort of infrastructure that is evolving, and I think it is very impressive."

Biglan emphasized that a growing body of literature supports the idea that preventive interventions promote pro-social behavior. Today, the science exists to ensure that virtually every young person arrives at adulthood with the skills, interests, and health habits needed to live a productive life in caring relationships with other people, he said.

He also pointed to the tobacco control movement as a possible model to emulate. "The beauty of the tobacco control movement was that we had a specific behavior, we could measure it in populations, and we could tell whether or not it was going down." Health care reform is attempting to deal with many more outcomes than simply tobacco use, such as depression, antisocial behavior, and academic failure, with the goal of affecting all of them in the population of young people, said Biglan, noting that the evidence points to the central role of family and school environments in the development of these seemingly disparate problems. He noted that concentrating on making these environments more nurturing can prevent diverse

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problems. "We are not set up to do that to a very great extent, but I think that that is where we need to go."

BEHAVIORAL HEALTH INITIATIVES IN MASSACHUSETTS

The Cambridge Health Alliance is the last freestanding public safety net entity in Massachusetts, with 15 ambulatory health centers, 2 community hospitals, 4 school-based clinics, and a variety of other types of presence in the community. In the past few years, the alliance has made a major effort to integrate mental health services in the primary care setting, but virtually all this effort has gone toward adults, not toward children and families.

Recently, the state Medicaid program has been rolling out a primary care payment reform that is forging much stronger connections between primary care and mental health providers, noted Gregory Hagan, chief of pediatrics at the Cambridge Health Alliance and clinical instructor in pediatrics at Massachusetts General Hospital and Harvard Medical School. Building on the ACA, the state Medicaid program is putting into effect over the next 3 years an ambitious plan to shift all Medicaid patients to a fully owned risk model. Initially, people are able to sign up for limited amounts of risk, but over time it will become fully capitated, and mental and developmental health care are included in many aspects of the plan. Though not as comprehensive as it should, said Hagan, "It is a very good start."

Challenges have included a lack of data about expenses, which made it difficult to set rates, particularly for behavioral health. In addition, mental health was not necessarily part of the shared risk. Organizations in Massachusetts such as the Cambridge Health Alliance are well positioned to manage the behavioral health risk as well as the medical risk, "but we politely declined so far because we just don't know that the numbers will support it," said Hagan. "It is a work in progress."

Hagan also has been involved in an effort with the Massachusetts Quality Demonstration Grant under the Children's Health Insurance Program Reauthorization Act to determine which measures validated in the literature are most useful in real practice settings. As part of that initiative, a large collaborative effort was undertaken to implement medical home principles in 17 very diverse practices across Massachusetts, including private practices, neighborhood centers, and health centers. The measures being used are generally process measures, not outcomes, and many of the measures are composite measures of well child care; still, nested in those measures are data related to child behavioral health development.

Finally, in Hagan's own practice, he has been working on a project funded by Blue Cross/Blue Shield Foundation of Massachusetts to develop a working model of collaborative practice. A child psychiatrist and a child psychiatry fellow spend two afternoons per week at the practice and are

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fully integrated into the team. "We are very excited about how the model is working and have had some good results to share," he said.

COMBINING PRIMARY CARE AND BEHAVIORAL HEALTH IN OHIO

Kelly Kelleher, a pediatrician at the Nationwide Children's Hospital, described the pediatric ACO called Partners for Kids. Partners for Kids is a fully capitated physician hospital organization of approximately 800 clinicians, primary care physicians, and specialists. Based at Nationwide Children's Hospital in Columbus, Ohio, it serves 332,000 Medicaid children in Ohio and a growing number of commercial customers in an accountable care format.

Taking on full capitation risk for a population across a large region has produced three lessons, Kelleher said. Previously, almost none of the agencies admitting children for psychiatric problems, the school-based clinics, and the individual mental health providers knew what the others were doing. "Just putting providers in touch with each other altered the readmission rates for child behavioral health problems," said Kelleher, in addition to changing the number of referral pathways and linking people better with care. "Provider integration is going to be essential," he said. "Mom and pop shops for mental health are over. We should be clear about that to all of our training programs, to all of our universities, and to everybody who thinks they can still hang out a shingle by themselves."

Second, data and metrics have become driving forces. "When you start to look at data, you suddenly find where the emergencies are and where you should focus your priorities." For example, school data revealed that the largest high school near the hospital where Kelleher works had 6,500 days of children absent in the previous school year because of juvenile justice involvement, which Kelleher termed a "mental health crisis." The metrics demanded by organizations such as the National Committee for Quality Assurance and the state Medicaid agency are at the claims level and need to be gathered, he said, but data are also needed from schools, foster care, juvenile justice, and other systems that involve children and families, as are data on unemployment, school readiness, high school graduation, teen pregnancy, and other characteristics outside of the traditional health domain.

Finally, prevention has become a priority. "When one-third of your pharmacy costs are devoted to behavioral health drugs and that is the fastest-growing area, when the highest readmission rate of all your major conditions is behavioral health, when behavioral health concerns are number one on all your community doctors' lists, you suddenly say, we had better pay attention to this. And you realize you can't hire enough psychia-

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trists, enough psychiatric nurse practitioners, and enough specialists to do this, so there is a real commitment now to prevention programs."

Partners for Kids has adopted several specific programs because of their combination of cost savings and effectiveness. The Good Behavior Game is extremely popular in schools because it reduces disciplinary problems in the classroom and also results in fewer behavioral health referrals from the schools. Adolescent programs involve technology to improve dissemination to rural areas. Pilot programs have connected individuals both to professionals and to online support programs.

According to Kelleher, the ACA "changed the language for non-traditional providers." People in business are now talking about population health and prevention services in the community with real dollars attached. The Center for Medicare & Medicaid Innovation (CMMI) has appointed a new Director of Population Health, and Ohio leaders are asking whether a population health director is needed. In addition, the state leadership is talking about a children's council and integrating services for children. Children with disabilities, children under Medicaid, and foster care children are all parts of the discussion, "and juvenile justice is likely next."

The kinds of changes being discussed require both accountability for outcomes and flexibility in how funds are spent locally, said Kelleher. The right provider, the right payer, and the right partner will differ from one locale to another, and all the payers need to be onboard, so that a single set of incentives exists. "If the commercial insurers are lined up, then it all becomes uniform. It becomes a singular pediatric wellness network rather than 25 different insurance plans."

The good intentions of policy makers and politicians to make child well-being a priority are not enough, Kelleher argued. Business opportunities need to be identified and pursued, he said. "They are very challenging, but they are there." For example, Partners for Kids has been careful to measure cost savings. "If we do not measure our savings, then we cannot show how to make the business argument for these programs going forward."

INTEGRATING PSYCHOLOGISTS WITH MEDICAL TEAMS IN CINCINNATI

When Lori Stark, division director of behavioral medicine and clinical psychology at Cincinnati Children's Hospital Medical Center, was hired in 1998, there were four psychologists at Cincinnati Children's. Today there are more than 70, many of whom are providing services for children with chronic illnesses.

A change in 2002 enabled psychologists to bill for medical diagnoses where health and behavior concerns were either the result of or impinging on an illness. This change transformed the way for psychologists to

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integrate with medical teams, Stark observed. They no longer had to get advance authorization, which saved them considerable time and costs. Also, they were free to colocate and integrate fully with medical teams. Today, psychologists are part of the medical teams for children with cystic fibrosis, headache, pain, oncology, epilepsy transplant services, and other illnesses. For example, they may work on lifestyle changes to be more adherent to treatment, or they may work on the nuances of a condition and behavior from the first clinical visit.

Children with chronic disease are at higher risk for depression and anxiety, Stark explained, so psychologists can screen patients and give advice to parents in the same visit. Also, the health and behavior codes allow billing in 15-minute increments rather than the 45 minutes in mental health codes. "It may be that we can give parents some advice right there on how to handle a burgeoning anxiety disorder that they can take home and do and not need any further services or follow-up until they come back for their routine medical subspecialty visit."

When psychologists encounter children who need more services, they can meet in the clinic. In this way, children can avoid stigma while coming to the psychologist's office for more frequent follow-ups if needed.

This is a good model for prevention and early intervention, said Stark, where providers are colocated and see all children as they come in. For example, ADHD is a prevalent and sometimes overwhelming behavioral health concern in pediatricians' offices. For about a decade, the ADHD Collaborative has been pulling together psychiatrists, psychologists, neurologists, pediatricians, parents, and others to develop and implement the best approach to the problem. Rather than building a new clinic, providers partnered with pediatricians to integrate the evidence-based guidelines from the American Academy of Pediatrics into their practices. The hospital also recruited a researcher to build an ADHD portal that facilitated communication allowing sharing of information across physician, parents and teachers—which the hospital describes as an evidence-based, comprehensive, and easy-to-use tool for improving the quality of ADHD care—and a randomized clinical trial was under way at the time of the workshop to look at child outcomes as a result of changes in pediatric practice.

In the area of community prevention, a program called Moving Beyond Depression has been targeting maternal depression in first-time mothers and has been attracting interest from other states that want to integrate these services into primary care.[1] In general, the ACA has created a much stronger commitment among organizations to their communities, said Stark.

Stark indicated that they have also started incorporating the collection

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[1] Additional information about the Moving Beyond Depression Program can be found at: http://www.movingbeyonddepression.org (accessed September 29, 2015).

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of clinical outcomes into routine care, and these outcomes have to be meaningful to the clinicians and to the patients. Otherwise, they amount to just data collection, said Stark. For example, with pediatric pain, psychologists said that the most meaningful metric was functionality—going to school, being social, and so on. As a result the Functional Disability Index was chosen as the outcome measure. "We collect data at every patient visit, and we share the data with our families. We actually show them the screen in Epic and say, 'This is how we will know when you are getting better.' It takes the mystery out of treatment." This approach has shortened lengths of treatment because everyone is directed toward the same goal. It also has demonstrated that improvements in functioning can precede pain reduction.

BARRIERS AT THE STATE AND LOCAL LEVELS

All of the panelists talked about barriers that exist to implementing innovative programs at the state and local level.

Biglan called attention to the larger context, such as children in the juvenile justice or foster care systems. As they age out of these systems, they can find themselves on the streets without health insurance, family support, or other help. In general, poorer people face many stressors that contribute to behavioral and health problems, he said. "The larger context for that is a level of economic inequality and child poverty that is unparalleled among developed nations."

Hagan pointed out that, even in a fairly liberal state like Massachusetts, services still are directed disproportionately to the needs of the adults and not toward children and adolescents, though some progress has been made. For example, the Massachusetts chapter of the American Academy of Pediatrics initiated a Summit on Early Childhood several years ago that brought in stakeholders from many disciplines. A follow-up to that summit involved the chairman of the Boston Federal Reserve, the governor, and the heads of several tech firms. People like this "understand the need for kids coming out of schools who have competencies in the STEM areas—science, technology, engineering, and mathematics. If you focus on that in your advocacy, that is where you can begin to get traction" with people who can move the policy agenda in a state, Hagan said.

Kelleher recommended holding both public and private meetings to "find the soft spot" of everyone with an influence on policy. "Almost all of them [leaders] have a personal story, and almost all of them have something they really care about." For example, business leaders have problems that greater attention to child development can help solve. The same applies to state superintendents of schools, state prison boards, and many other people. "They each have a soft spot, and we have to find it, and we have to apply pressure in a positive way."

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Finally, Stark noted that just because policies are in place does not mean they will be implemented. For example, hospitals do not necessarily use the health and behavior codes because they are afraid they will not get paid. "Not only do we need the policies but we need the leadership and the vision within our own organizations to push for implementing those policies."

Health care 3.0 requires breaking down barriers, said Hagan, "and the only way we are going to do that is if we are fully integrated with these community organizations." However, Kelleher also pointed out that community organizations are numerous and can disagree with each other in fundamental ways. For example, in many neighborhoods, long-term homeowners dominate the civic associations, and they tend not to include families with young children. As Stark said, bringing people together can require "creating a common vision that stakeholders share."

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Intermediary Groups for Two-Generation Approaches

One of the panels consisted of representatives of organizations that work with both children and their parents or caregivers on behavioral health issues. This two-generation approach can improve the lives of children and adolescents directly and through improvements in their parents' health, the panelists noted. However, they added, a two-generation approach requires even greater coordination of programs and policies that may have been designed to serve different populations.

COMMUNITY INITIATIVES FOR VULNERABLE CHILDREN

The National Institute for Children's Health Quality[1] is a national nonprofit organization located in Boston that is focused on large-scale initiatives to improve the health of socially, emotionally, or medically vulnerable children. It began in 1999 with a mission of improving health care quality and over time has expanded into the realms of public health, community health, and family engagement.

Shika Anand, pediatric director at the Whittier Street Health Center in Roxbury, Massachusetts, described several initiatives as examples of the kind of work the institute supports. The 100 Million Healthier Lives campaign, which is being run out of the Institute for Healthcare Improvement, is a multi-community and whole-of-community approach to promoting health, with health defined very broadly. It is focused on promoting social

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[1] Additional information on the National Institute for Children's Health Quality can be found at: http://www.nichq.org (accessed July 30, 2015).

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and emotional development, creating access to behavioral health services and community supports, and building the capacity of the health care system to address these issues.

Another initiative is focused on infant mortality in all 50 states and 6 U.S. territories. This effort involves screening for and addressing behavioral health issues and substance use in women of childbearing age as a way to prevent infant mortality and poor outcomes in infants.

Finally, the National Institute for Children's Health Quality is partnering with the Einhorn Family Charitable Trust and other funders to promote socioemotional development in early childhood. "We need primary care to be connected to all the different agencies in the community," said Anand. This initiative is focusing not just on the 30 to 40 percent of children who have impairments or who are at risk, but on the others who are "good enough," as Halfon put it in his keynote address (see Chapter 2). "We don't really believe that the good enough is good enough," said Anand. For example, a group of experts were convened to identify nurturing behaviors that can easily be identified within the context of primary care where pediatricians or other providers can give positive reinforcement in the exam rooms of clinics.

The ACA provides many opportunities to better integrate physical and mental health, Anand pointed out, through better access to care coordination and patient navigation, better funding streams for those activities, and a new emphasis on prevention and early childhood development. But Anand also emphasized the need to focus on the people with the greatest needs and not just on those who show up at clinics. "The kids I'm most worried about are the kids who don't go to school, and don't go to clinic, and don't go anywhere else. We still haven't figured out how to find them."

INTEGRATED CARE IN EAST TENNESSEE

Cherokee Health Systems is a comprehensive community health care organization based in east Tennessee that provides integrated primary care and behavioral health services. It has more than 20 clinics in 14 counties in which it provides integrated primary care, behavioral health, and substance abuse services to more than 60,000 patients. "We see people cradle to grave, so we don't just see children and parents; we see cousins and grandparents and great-great-grandparents," said Parinda Khatri, chief clinical officer for Cherokee Health Systems.

The organization brings in psychologists, social workers, care coordinators, community health workers, integrated psychiatrists, and others. "We're all on the same team," said Khatri. "We want to do everything we can at the point of primary care." Cherokee Health Systems also has school-based health clinics and provides telehealth into about 25 schools

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in the mountains of east Tennessee. “Wherever there’s a need, we’re going to go.”

The goal of the team is to “address issues at a subclinical level before they turn into a diagnosis,” she said. For example, developmental psychologists who are trained specifically in autism spectrum disorders can provide more intensive evaluation when a primary care screen is positive.

The organization also targets high-risk populations. For example, it has a partnership with the Department of Children’s Services (DCS) and the foster care system in Tennessee to provide optimal care coordination for children who are in or at risk for DCS custody. In its prenatal clinics, it provides services to vulnerable populations to reduce the risk of neonatal abstinence syndrome, which in east Tennessee “has become a tsunami,” said Khatri. Every woman sees a psychologist, has a case manager, and receives help with housing, transportation, food, and parenting. “Our goal is for them to be able to take their babies home. Most of them typically would not be able to do that.”

Khatri also briefly mentioned the Collaborative Family Healthcare Association (CFHA),[2] which brings together stakeholders around integrated behavioral health and primary care, and holds a conference every year on collaborative care. The word *family* is included in the name specifically because the organization wants to change the health care landscape by focusing on the family. “CFHA is 25 years old, and now everyone is talking about it. Before it was just considered these very small fringe people on one side of the room.”

Finally, the Patient-Centered Primary Care Collaborative (PCPCC)[3] is a coalition of individuals and organizations with the goal of not letting primary care get lost in ACOs. “ACOs can be great, but they’re huge entities,” she said. “How do you keep that focus on the medical neighborhood and patient-centered care?”

Khatri briefly discussed the differences in negotiating with payers before and after the ACA. The biggest opportunity as a provider organization, and also for CFHA and PCPCC, is moving beyond fee for service and having flexibility in payment. With this flexibility, providers and other stakeholders have the ability to link payment with outcomes. One challenge is that payers are still focused on their most expensive cases, such as older people with three or more chronic health conditions. Such patients are heavy users of the emergency room and are repeatedly in the hospital, which consumes health care resources. Payers are less interested in covering

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[2] Additional information on the Collaborative Family Healthcare Association can be found at: http://www.cfha.net (accessed July 30, 2015).

[3] Additional information on the Patient-Centered Primary Care Collaborative can be found at: https://www.pcpcc.org (accessed July 30, 2015).

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psychologists and case managers in schools, for example, because the high users contribute to their medical loss ratio. "If we want to see long-term change, we're going to have to intervene much earlier, when these kids are on the trajectory." Khatri recently saw an 8-year-old girl who weighed 240 pounds, but the insurance company would not pay for her to be in an obesity program. "They said, 'She has to get diabetes first.' This is not the way we want to do it."

INTEGRATED CARE IN SCHOOL-BASED HEALTH CENTERS

Both schools and community health organizations could do a better job if they could intersect on behalf of children and adolescents, particularly children and adolescents who have suffered great inequities in the health care systems in communities, said John Schlitt, president of the School-Based Health Alliance. Referring to the 2,400 school-based health centers in the United States, he issued his own audacity challenge: "What if we thought differently about what medicine is and brought a team of providers together, integrated the notion of primary care, public health, oral care, and health education and nutrition, and brought that team together and brought that force into the school to help disadvantaged children?"

Schlitt referred to school-based health centers as "the progenitors of health care transformation." They have been doing integrated care in schools for decades, he said. In doing so, they help students succeed academically and graduate from school, which Schlitt called "one of the single greatest things that we can do." They represent partnerships, a manifestation of community health working in and through the schools to deliver high-quality, prevention-oriented care and attending to academic success in the classroom for all children.

A school-based health center is a two-generational model because delivering pediatric care to children in elementary school means communicating with parents or guardians. Some schools work directly with parents, many of whom trust the school because their children are there every day, and feel it is the only societal institution they feel safe going to for services. For adolescents in particular, schools provide a context difficult to achieve in community-based settings where there is some stigma attached to going to community mental health clinics.

Schlitt said that his organization has always emphasized that the need for a safety net will not go away, no matter how much insurance coverage is provided for children and families. "They are still going to need systems of care that will see them." But efforts to include school-based health centers as essential community providers in the ACA did not succeed, nor have efforts succeeded to get an ongoing authorization for funding for school-based health centers from the federal government. Instead, Congress

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earmarked $200 million in mandatory money from the ACA for the capital construction of school-based health centers across the country over a period of about 3 years. Though money for construction was helpful, the federal government provided no money for the programs to operate.

In some cases, school-based health centers are being considered as eligible for funding as patient-centered medical homes, which is a positive development. But setting the bar too high for patient-centered medical homes risks losing many good providers. Schlitt also pointed out that the change horizon remains too short for school-based health centers. For example, the initial CMS Innovation Grant award applications required that grantees demonstrate cost savings to the system within 3 months. "School-based health centers were going to have a hard time making a case for that."

Miami and Orlando both have innovation awards that are focused on integration of school-based health care in their transformation work, and progress is being made elsewhere involving school-based health centers in the broader system, but it is happening in a minority of communities. "We are not thinking downstream about these upstream providers," Schlitt said. In general, effective payment mechanisms for upstream providers under a global budget with high-cost needs remain unclear.

An issue that arose in the discussion following Schlitt's talk involved the use of school information systems, which are relevant to health by including information on behavior, academic achievement, cognitive achievement, absenteeism, and even whether students take algebra, which is an indication of whether they will attend college. Schlitt observed that school-based health centers are today largely disconnected from health systems, without a strong data interface with larger systems of care. Though both health and education privacy laws have hindered the exchange of information, communities are being smarter about that today and are figuring out a way to integrate—such as through the use of consent forms. For example, Miami is aggregating education data and health system data in a way that both systems are able to figure out where they are doing well and where they are not doing well and reallocate resources. "It can be done, and it is being done, again on a small scale."

POLICIES TO PROMOTE A TWO-GENERATION APPROACH

The National Academy for State Health Policy (NASHP) is an independent academy of state health policy makers, including representatives from Medicaid, children's health insurance programs, state insurance exchanges, state mental health agencies, and public health agencies. NASHP helps to identify, promote, and provide technical assistance around policy and program levers for change, with a further goal of spreading best practices

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across the country and providing technical assistance to its members and others.

Behavioral health is a major priority for state health policy makers, said Karen VanLandeghem, senior program director at NASHP. Nationally and in states, much of the work to transform health care delivery systems, including efforts to improve behavioral health outcomes, access to services, and reduce health care costs, have focused on adults, but reforms also have an effect on children and families, and "We think that will happen even more."

VanLandeghem focused her comments on four areas. An important opportunity for a two-generation approach to behavioral health is the "triple aim" of health care reform: improving patients' care experience, improving the health of populations, and reducing the per capita cost of health care. States and the federal government have been pursuing this triple aim through reforms and investments such as patient-centered medical homes, ACOs, and multi-payer payment reforms—all areas that present important opportunities for promoting and improving children's mental health, noted VanLandeghem.

The Maternal, Infant, and Early Childhood Home Visiting program[4] also provides an opportunity for a two-generation approach, but so far it is only reaching a tiny percentage of the women who need home visits. NASHP is monitoring the health homes option as a way to take a two-generation approach, and many states have looked to that provision to focus on behavioral health, including among children.

A third area is the opportunity for states to expand Medicaid for those under 138 percent of the federal poverty level. Not all states are taking up that option, but the effect of adult coverage on children's coverage is clear. "If adults have coverage, research shows that their children will be more likely to have coverage," said VanLandeghem.

Finally, the ACA mandated mental health coverage for adults and children, but many important questions concerning this coverage remain unknown. For example, what does mental health coverage look like in insurance exchanges? At the time of the workshop, NASHP was doing some work to look at behavioral health coverage in the small group insurance marketplace, but the results of that work were not yet available.

BUSINESS SUPPORT FOR BEHAVIORAL HEALTH INTERVENTIONS

ReadyNation represents the demand side of the supply–demand equation for healthy development, said Sara Watson, the organization's director.

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[4] Additional information about the Maternal, Infant, and Early Childhood Home Visiting program is available at: http://mchb.hrsa.gov/programs/homevisiting (accessed July 30, 2015).

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It is a national business membership organization of more than 1,000 executives, from *Fortune 500* CEOs to current and former small business owners. It encourages its members to reach out to policy makers and say they care about the workforce of the present and the workforce of the future, and that the best way to promote the workforce of the future is to invest in children and provide them with a good start in life. It is part of an organization that has four other related groups that each mobilizes a different type of high-level unexpected messenger. The first is Fight Crime, Invest in Kids, which consists of 5,000 law enforcement leaders, including police chiefs, sheriffs, district attorneys, and attorneys general, who believe "The best way to reduce crime is not to build more prisons but to invest in kids."

The second is Mission Readiness, which consists of about 500 retired admirals and generals who believe "To have a safe and secure country, we need to start early to grow kids who can qualify to serve in the military and serve in any other careers." Currently about 70 percent of young adults between the ages of 17 and 24 cannot qualify to be an army private, often for health-related reasons, said Watson, according to data developed by the Department of Defense and popularized by Mission Readiness.

Shepherding the Next Generation mobilizes conservative evangelical religious leaders to advocate for public funding for investments in children, as do the elite coaches and athletes who are part of Champions for America's Future.

Watson's request at the workshop was

> We need your data. When a business leader meets with a member of Congress or signs an op-ed, that leader needs to know that the steps he or she is advocating translate into benefits that will result in healthy, productive adults. The more you can relate what you're treating and seeing in young people to later outcomes, [including] workplace behaviors, the easier it is for me to get the former CEO of Procter & Gamble or the current Chairman of General Motors—two people who belong to our group—to say to their legislators, We should invest in getting children off to a good start.

Watson also emphasized the importance of CHIP, which was being considered in Congress at the time of the workshop. It is one of a number of programs that have a relationship with the workforce, she said, by keeping employers' costs down, both direct costs and costs related to absenteeism and workplace problems. She emphasized the need for building support among all of these people who have a vested interest in better health outcomes, whether inside or outside the health care system.

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WORKFORCE NEEDS

An issue addressed by this panel and at other points in the workshop involved the preparation of a workforce that take advantage of the opportunities created by the ACA. In response to a question, Khatri said,

> We need all hands on deck. . . . We need to train the existing workforce, we need new people, we need new people going into existing disciplines. . . . Probably we will have all kinds of variations of different workers. We have to go through systems like schools, teachers, and churches. We have to use every resource available to us.

Anand said the strongest programs employ community organizers who are able to change not just the health of children but the health of the community by focusing on food access, home visiting where children are exposed to asthma triggers in the home, organizing with tenants around the quality of housing, and safe routes to school. "You need somebody like that working in partnership across a prevention workforce to achieve all those kinds of goals."

Another workshop participant pointed out that the distribution of the workforce historically has been at least as big of a problem as the size of the workforce. Mechanisms are still lacking to ensure that people skilled at team care are located in the places where they are needed.

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6

Implementing Innovations in Primary Care

As was observed by several workshop participants, primary care is a universal access point for health care. When families seek care for their infants, children, or adolescents, an opportunity occurs for medical home-based interventions intending a trajectory for lifelong health.

One panel at the workshop looked specifically at the primary care setting. Models for care touched on by the panelists include preventive services obtained at regularly scheduled well-health supervision visits, connecting mental health practitioners with pediatricians remotely or in colocated practices, seeing parents as well as children in the same practices or health centers, and using information technology to help integrate care for children, adolescents, and their families.

A PRIMARY CARE PROGRAM IN THE BRONX

Montefiore is the largest health care system in the Bronx and a pioneer ACO. Ten years ago it started an integrated early childhood two-generation mental health initiative under the Healthy Steps program, with an effort to identify families at risk during the prenatal period. Interviews with women who are pregnant or within 5 years of giving birth focus on trauma, toxic stress, and the parent–child relationship and attachment, all within primary care pediatrics. Parents have their own clinicians within the program, so parents and children can receive care at the same time.

From these mandated visits in the early years has emerged a fully lifespan integrated behavioral health system in the primary care network, with 21 practice sites across the Bronx seeing about 300,000 patients overall each

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year, said Rahil Briggs, associate professor of clinical pediatrics at Albert Einstein College of Medicine, director of Healthy Steps at Montefiore, and director of pediatric behavioral health services at Montefiore Medical Group. Every newborn visit has trauma screening followed by annual screening in the first year of life for both parents and children. Universal screening for mental health is a part of every well visit. For adolescents, the program has developed short-term modules for depression, anxiety, attention, conduct, and trauma and is working on modules on obesity and substance use and misuse.

Workforce development is a challenge, said Briggs, with her biggest challenge being to find qualified psychiatrists and psychologists, despite being in New York City. "If I hire a bunch of child psychologists, social workers, and child psychiatrists who are used to working in an outpatient mental health clinic and ask them to do short-term population-based health care for a clinic with 10,000 kids, it's not going to happen." Briggs noted that she has just 1 child psychiatrist for every 20,000 children in the system. They are colocated and integrated into the biggest sites and consult to the smaller sites. They have monthly collaborative office rounds where they train pediatricians, starting with what is ADHD and progressing to the psychopharmacology of treatment.

Another issue is the need to move away from fee-for-service approaches. New York State is a carve-out state, which has been very challenging for integrated behavioral health, Briggs said. Providers have long lists of phone numbers to call for preauthorizations, and major payers in the state can have different behavioral health carve-outs. Within a fee-for-service framework, the concept of medical necessity becomes problematic. "Is medical necessity enough to be the infant child of a mother with postpartum depression? . . . I would argue that it is, but it's not where we are right now."

Finally, Briggs pointed out that if prevention works, children will not receive a diagnosis, "and nobody is paying for that still" as we operate in a payment system based on diagnosis. Another challenge is to do more peer support and group-based interventions around parenting in primary care settings.

PREVENTION USING THE BRIGHT FUTURES GUIDELINES

The Bright Futures Guidelines, currently published by the American Academy of Pediatrics, dates to the early 1990s, with a vision of health supervision in the context of family and community. Goals of Bright Futures include enhancing the delivery of well-child care to infants, children, and adolescents with a focus on lifelong health, consistent with the attitude

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toward health envisioned in the ACA. Bright Futures seeks to translate that vision into work that can be done in pediatric and family medicine practices.

The soon to be published fourth edition of *The Bright Futures Guidelines* features increased emphasis on the social determinants of health and life course health, observed Joseph F. Hagan, Jr., a clinical professor in pediatrics at the University of Vermont College of Medicine and Vermont Children's Hospital. The ACA designates Bright Futures as the standard of care for preventive services from birth to 21 years of age. Hagan said that the ACA requires that insurance carriers reimburse for services called for in Bright Futures, thus its contributors and editors have set a high standard for evidence for what is recommended for practice. Historically many primary care preventive services did not have evidence for effectiveness because they had not been studied, he pointed out. Now new study and evidence is being applied to preventive services recommendations.

Hagan noted that some clinicians push back on some of the guidance offered by Bright Futures by saying they already have too much to do and cannot provide services that are not reimbursed. They ask why they should screen for something if they perceive they have nothing to offer to address what they might find. Hagan added that clinicians note chronic difficulty finding consultants for children and adolescents, especially for mental health services. The ACA seeks to remedy these concerns, Hagan explains, and Bright Futures suggests a system of care that is community based to enhance services.

ACCESSING MENTAL HEALTH EXPERTISE IN MASSACHUSETTS

The Massachusetts Child Psychiatry Access Project (MCPAP) is a program that connects pediatricians and child psychologists with primary care to improve children's access to mental health care, said Barry Sarvet, medical director for the project, chief of child and adolescent psychiatry at Baystate Medical Center, and clinical professor at Tufts University School of Medicine. A statewide project that is about a decade old, MCPAP is for all pediatricians and children regardless of payer and is publically funded. Teams staffed with child psychiatrists operate a hotline that is open to pediatricians in a catchment area. Almost all of the pediatricians in the state are affiliated with the teams, which allows them to use the hotline, and they can call whenever they have any kind of question related to mental health and talk with a child psychiatrist. The psychiatrist can provide advice, answer questions, see the patient for an expedited psychiatric evaluation, and work with a care coordinator on the team to try to find services that the child needs:

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> It's a preceptorship model of primary care provider education, in which a resident comes out of the exam room to present the case to a clinical preceptor and ask questions. With MCPAP, this conversation occurs through a dedicated hotline, and the child psychiatry consultant is also available, when necessary, to follow-up with a face-to-face evaluation, resulting in more detailed recommendations to the pediatrician.

MCPAP is focused on secondary and tertiary prevention, but it also recognizes maternal depression to be a critical area for primary prevention and has spun off a program to address this issue as well. In addition, the project provides educational programs.

About 30 child psychiatrists in Massachusetts have been involved with the project, with six teams located in academic medical centers covering six regional areas. It is not a colocated model, Sarvet noted, which places some limits on what can be done. Many practices have integrated colocated therapists providing care coordination and engaging with families around mental health needs, with the MCPAP child psychiatrist providing additional consultation on the case. One goal is to reduce the unnecessary use of medication, so consultation questions regarding medication treatments often lead to discussion on the use of psychotherapy as preferable treatment plan, he added. "The purpose of MCPAP consultation is to improve knowledge of best practice guidelines for children's mental health, including a wide range of therapeutic interventions beyond medication treatment," Sarvet said.

The project is scalable, because it spreads a small workforce over a large population, tries to optimize the use of child psychiatrists to train other people to extend the resource further, and identifies children who need to be referred to specialists. It also has been successful in getting legislation approved to have insurance companies operating in Massachusetts provide support for the program. "The mechanism is the same as the mechanism for paying for immunizations, so we've become part of the public health infrastructure."

A challenge with the project is that it uses a "pull" rather than a "push" model, said Sarvet. Pediatricians have to call to get the service rather than the service automatically provided within their practices. Practices also need to have the motivation and internal workflows to follow the advice that is offered, Sarvet observed. "Beyond training and consultation, there is enormous need for process improvement efforts to help practices incorporate attention to mental health within their primary care workflows."

A large number of states are developing similar models, which is leading to a national network of child psychiatry access programs. However, each program is funded differently, Sarvet noted, and more standardized funding streams would help promote these kinds of efforts.

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A MEDICAL INFORMATICS SYSTEM IN INDIANA

The Child Health Improvement through Computer Automation (CHICA) system is a clinical decision support system layered on top of an existing electronic medical record (EMR) system that has been developed over the past decade by Steve Downs, Jean and Jerry Bepko Professor of Pediatrics and vice chair for general pediatrics at Indiana University School of Medicine, and his colleagues. When a child comes into the clinic, CHICA downloads that patient's EMR, runs hundreds of rules, and selects 20 yes or no questions to ask that family. The questions are displayed on an electronic tablet that is given to parents as they come into the clinic. They answer the questions and return the tablet to the medical assistant or nurse when the child is brought back to be roomed. Their answers to those questions are added to the EMR system, another set of hundreds of rules is applied to the enriched data set, and six reminders are provided to the pediatrician. "It's not 12 reminders, and it's not 8 reminders, it's 6, because that's what they will tolerate getting in a busy primary care pediatric practice," said Downs. Each alert is associated with a checkbox with which physicians can document how they have responded to the alert.

The guidelines come primarily from the American Academy of Pediatrics, with contributions from the U.S. Preventive Services Task Force (USPSTF), the Centers for Disease Control and Prevention, and other organizations. The idea is to quickly ask high-sensitivity, low-specificity, or moderate-specificity surveillance questions in the waiting room and focus the physician's attention on important if not salient issues that need to be dealt with for that child. For instance, the system screens for maternal depression, domestic violence, autism, food and utility insecurity, symptoms of school failure, attention deficit hyperactivity management, and environmental tobacco smoke. Television watching, tuberculosis, immunization, and lead screenings are also conducted. In this way, the system not only improves the quality of care but captures data that are not captured in other systems.

CHICA does not create another information system, Downs said. Rather, it is layered on existing EMRs to add functionality. Furthermore, randomized controlled trials of the system have demonstrated improvements in the quality of care, he said.

Downs is working on what he calls CHICA for all. "We would like to make this a service that is available to anyone through their existing EMR systems." But enormous barriers exist, including developing the workforce for health care and for medical informatics, the expense of developing and connecting systems, and the existing rules around meaningful use, which have distracted from creative ways to use health information technology, he said.

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Implementing Innovations in Other Settings

Many of the professionals involved in children's behavioral health work in child welfare, foster care, juvenile justice, early childhood education, schools, and other settings. These settings traditionally have not been closely connected with mental health systems, observed several of the speakers on a panel on implementing innovations in disparate settings, but they offer many opportunities for treatment and prevention of behavioral health issues.

THE CHILD WELFARE SYSTEM

More than 3 million children required services or responses from the child welfare systems in the United States in 2013.[1] Most of the children in these systems are under 1 year of age or are preschoolers, with the numbers tapering off as they get older.

These systems are outside of traditional mental health services systems, noted Mark Chaffin, a psychologist and professor of public health at Georgia State University. There is no diagnosis, billing code, or Medicaid reimbursement. Foster care is often a gateway into traditional mental health service systems, but children in foster care represent less than 20 percent of those in child welfare. The other 80 percent are children who are served with their families and for whom child neglect, often recurrent neglect, is their dominant problem.

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[1] For additional information please see HHS, *Child Maltreatment* (2013), available at: http://www.acf.hhs.gov/sites/default/files/cb/cm2013.pdf (accessed July 30, 2015).

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These services are often delivered by paraprofessional home visitors, not by an agency or its employees. Agencies purchase these services from networks of community-based organizations. Using the metaphor Halfon introduced in his keynote talk (see Chapter 2), Chaffin said the child welfare system is absolutely a version 1.0 service. It is episodic, it is reactive, and children have to be reported and get into the system to get services. Once the services are done children are out on their own, and follow-up is minimal.

Yet the face of child welfare is changing, Chaffin said. It is starting to consider the kinds of developmental and chronic problems at the heart of the workshop. States are starting to implement evidence-based models that show substantial savings in child welfare, quality monitoring, and development of the workforce. Yet, for the most part, a mismatch still exists between the nature of the problem and the systems available to solve that problem.

Though the ACA does not offer much for children in child welfare systems, it does offer a great deal for their parents, said Chaffin, which can have a major effect on children. Child maltreatment does not occur in a vacuum. It occurs predominantly in a context of dire poverty. The odds of a family below the poverty line entering child welfare is more than 40 times that of a median income family. In the last trial in which he was involved, the median family income of the families served was $900 per month, Chaffin said. "Stop and think about what your life might be like on $900 a month, and if you had two or three kids."

Another risk factor is substance abuse. Thus, greater access to substance abuse services could powerfully influence the lives of children, Chaffin observed. In addition, access to services for parental depression is an opportunity under the ACA to improve the long-term development of children.

IMPLEMENTING EVIDENCE-BASED PROGRAMS

Bernadette Melnyk, associate vice president for health promotion, university chief wellness officer, and dean of the College of Nursing at Ohio State University, said that she has spent most of her career developing and testing interventions to improve mental health outcomes in children, teens, and their families and then figuring out how to get evidence-based interventions implemented. For example, multiple randomized controlled trials demonstrated that a program she helped develop for parents of premature babies decreased parental stress and improved child outcomes through 3 years of age. "But no one was implementing it until I showed it reduced length of stay in the NICU [neonatal intensive care unit], and then everybody started calling me and asking me to come and teach them how to implement it because of the cost savings."

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Melnyk also has developed the COPE (Creating Opportunities for Personal Empowerment) Program, a lifestyle intervention to help adolescents engage in healthy behaviors and improve their mental health. A randomized controlled trial, funded by the National Institute of Nursing Research, of 779 teenagers in 11 high schools who were taught by their teachers showed improvements not only in healthy lifestyle behaviors but in depression, alcohol use, body mass index, social skills, and academic performance (Melnyk et al., 2013). Almost 300 health care providers have been trained to deliver the seven cognitive-behavioral therapy based intervention sessions to depressed and anxious teens and children that are part of the 15-session COPE program, and they are being reimbursed for it in primary care, noted Melnyk.

The ACA is now calling for reimbursement to health care providers who follow the evidence-based recommendations for primary care screening and behavioral counseling by the USPSTF, said Melnyk. However, the number of evidence-based recommendations for children is relatively few because of insufficient evidence to guide practice recommendations in many areas of child health, she noted. This lack of evidence should drive federal research investments, Melnyk explained, given the heavy toll of children's mental health issues.

She also pointed to the need for providers to implement evidence-based interventions and practices that exist, even if they traditionally have done things in different ways.

HEAD START AS A MODEL OF INTEGRATION

Coincidentally, the workshop was held on the same day as celebrations to celebrate the 50th anniversary of the Head Start program. Kris Perry, executive director of the First Five Years Fund said Head Start is one of several programs for children that have been shown by research to produce such outcomes as higher lifetime earnings, better health, and less use of social programs such as special education or juvenile justice. By bringing educational and health services to both the child and the family, Head Start and other early childhood programs provide models for the integration of services. "We know that it prepares kids for school and life," Perry said, "but we are leaving literally millions of children out of the Head Start program because we're not funding it adequately."

Perry urged everyone in the health professions to think of early childhood as a period in which to deliver such services as nutrition, education, and immunization. "The early childhood educator is the perfect person to deliver that information to parents, whether they're a small family day care provider, a Head Start teacher, or part of the K–12 system."

Perry also advocated the prescription of reading. "I'm being overly

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simplistic because it's so obvious, but no one is doing this." As Halfon observed earlier in the workshop, children in poverty are exposed to 30 million fewer words by the time they turn 5, which is "absolutely the biggest contributor to the achievement gap, and one that really can't be resolved once they hit kindergarten. It needs to be addressed very early on." Exposure to language not only increases a child's brain growth but builds the attachment between the caregiver and child. Anyone who interacts with parents of young children could promote reading, and physicians and nurses are particularly influential messengers, according to polls. They are in "a unique and powerful position to influence how parents interact with their children around literacy and learning."

INTEGRATED PROGRAMS IN SCHOOLS

Olga Acosta Price, associate professor at the George Washington University's Milken Institute School of Public Health and director of the Center for Health and Health Care in Schools, turned to the subject of school-based health programs. Her center seeks to maximize child development and learning by looking at physical, oral, and behavioral health in its entirety. It is a resource and a policy center that supports the implementation of effective programs, practices, and policies, as well as being a broker and an intermediary for evidence-based practices and programs.

One of its major goals is to decrease the cultural divide between education and health. These systems have different drivers and different funding mechanisms, which can create tensions when the two systems are brought together, Price said. Schools are not just buildings with a captive audience of children. They can be sites for multilevel interventions focused not just on treatment but also on intervention and universal prevention. For example, schools can be partners in the development and use of surveillance and data systems that can track indicators of well-being, not just prevent negative outcomes. Schools also can be major providers of behavioral health and physical health care for adolescents through school-hired providers, school-based health centers, or partnerships with other community organizations.

A robust literature points to a significant link between positive school climates and students' attendance, engagement in school, and decreases in conduct problems, said Price. Many educators understand that health and educational performance are inextricably linked. They recognize that, for students to meet academic standards, they need healthy school environments that promote students' competencies and strengths.

Price also noted that schools need to be ready to educate all children, or gaps reappear, even if good early childhood programs succeed in reducing those initial gaps. The majority of programs funded under the Elementary and Secondary Education Act allow federal education dollars to be used for

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health prevention–related activities, so long as a case can be made that the use of those funds is connected to the aim of the federal program.

Price pointed to four other opportunities arising from health care reform. The Free Care rule is a regulation saying that Medicaid will not pay for services that are offered to the general public without charge. This created concern among school health providers who were restricted from billing for eligible services offered to eligible children. However, recent guidance from Medicaid clarified that the Free Care rule does not apply to school health services and reimbursement is allowed for covered services under approved state Medicaid plans. This was a "big win" for school-based health services, said Price. However, the issue is not completely resolved because it is not clear how states and school districts will implement the rule or how state Medicaid offices will respond.

A second opportunity is provided by changing regulations around the types of providers that can be reimbursed for preventive services. States now have greater discretion over nontraditional providers who conduct prevention in nonclinical settings, including schools. This opportunity has particular implications for communities of color and immigrant communities. For example, family liaisons or cultural brokers, who function as community health workers, can play a significant role in helping to navigate systems that can address a vulnerable family's needs.

ACOs are a valuable way of integrating services, Price said, though few such organizations are focused on children. Schools and school health providers can be a part of these developing entities if local communities are committed to supporting child health.

Finally, innovative and growing models of telehealth can bring primary and mental health care to shortage areas, whether rural or urban. However, payment models for such services are still underdeveloped, and much has yet to learned about implementation and best practices, Price noted.

INTEGRATING HEALTH INTO SCHOOLS

A major topic of discussion throughout the workshop was the potential to integrate health and behavioral services into the education system. Sheppard Kellam, professor emeritus at the Johns Hopkins Bloomberg School of Public Health, argued strongly for moving schools and education into health care and forging a unified a life course system based in political support from the community and larger levels. For example, schools are already collecting large amounts of data about their students that relate to such conditions as attention deficit and hyperactivity. However, some teachers see these conditions simply as students who are impossible to teach and disrupt the classroom. Teachers tend to get little or no training for how to deal with such students and often burn out as a result, said Kellam. An

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integrated system involving health, education, and other agencies as needed could generate and share information "for purposes of child development and teacher survival."

Kellam also pointed out that even though the ACA is giving more people entry to primary care, the children who are not being reached by the act are still registered in school. Joining the primary care site with the public health perspective can be done by including schooling in the structure of health care. This would maximize the integration of primary care with the community, including its social, political, and cultural characteristics.

One workshop participant pointed out that schools already make requirements of students related to their health, such as requiring immunizations or requiring hearing and vision screens. Screens for developmental issues or mental health concerns would be an extension of these policies.

Another advantage of the school setting is that many parents are not able to take their children to primary care clinics during the day when they are working, another workshop participant observed, so school-based programs can reach children where and when they are available.

A workshop participant pointed out that schools will be willing to share data only if they trust an outside partner, and so far many schools have refused to share their data. As Kellam observed, "Each district has their own personality, and it has been challenging."

Another participant made the observation that community data dashboards could include such things as whether schools are ready for children who are not ready for school. This would be a way of integrating multiple programs in schools, because those programs would need to exist within schools for the schools to serve all the needs of their students.

REFERENCE

Melnyk, B. M., D. Jacobson, S. Kelly, M. Belyea, G. Shaibi, L. Small, J. O'Haver, and F. F. Marsiglia. 2013. Promoting healthy lifestyles in high school adolescents: A randomized controlled trial. *American Journal of Preventive Medicine* 45(4):407-415.

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The Research Landscape for Primary Care and Children's Behavioral Health

One of the panels looked at aspects of the research agenda—in particular, at interventions that can be used in primary care and at issues involved in parenting. As the panelists observed, meta-analyses can survey a wide range of studies and determine which programs exhibit the most evidence of effectiveness, and continued research could both improve existing programs and point the way toward more effective programs.

RESEARCH ON INTEGRATED SERVICES

As noted throughout the workshop, behavioral health problems among children and adolescents are common in primary care. These patients also are heavy users of primary care—for example, children who keep coming back with stomachaches and headaches.

Effective treatment for behavioral health problems is essential for reducing suffering and dysfunction, as well as premature death, said Joan Asarnow, professor of psychiatry and biobehavioral sciences at the UCLA David Geffen School of Medicine. Suicide, which is generally considered a complication of untreated, undertreated, or ineffectively treated behavioral health problems, is a leading cause of death for adolescents, the second-leading cause of death for adolescents and young adults, and the third-leading cause of death among 10- to 14-year-olds. Rates of self-inflicted injury are particularly high in girls, compared to boys, and hit a peak in adolescence. We need to intervene in childhood and adolescence. If we intervene in adulthood, we can help some people, but we are going to miss kids at an earlier stage in their lives when we might have been able to catch

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them early and prevent later years of suffering and dysfunction." Results of a systematic review and meta-analysis were presented.

In a systematic meta-analysis, Asarnow and her colleagues searched for randomized controlled trials in English, peer-reviewed journals published between January 1960 and June 2014 that compared integrated behavioral health services in primary care versus treatment as usual (Asarnow et al., 2015). Integrated care was defined as behavioral health care provided through primary care services. The sample encompassed largely adolescents and children, though some transitional ages up to age 21 were included. The search identified 31 studies with a total of more than 13,000 participants. Nineteen of the trials looked at mental health treatments, four looked at substance use treatments, nine considered preventive interventions, three looked at mental health prevention, and six covered substance use prevention.

This meta-analysis found that integrating behavioral health care with primary medical care makes a significant difference, though the effect is small overall and the trials exhibited significant heterogeneity. Treatment trials have a small to medium effect, while prevention trials have a weaker effect.

Even among the prevention trials, some had a significant effect. For example, the Pbert trial on smoking cessation, which used the "5A model"—ask, advise, assess, assist, and arrange, delivered by the primary care provider, followed by one visit and four telephone calls by peer counselors—had a strong effect (Pbert et al., 2008). Mental health trials had a significant effect, with a weaker effect for substance use trials.

With regard to the models used, collaborative care had a larger effect than studies using other models. Four of the five collaborative care trials had significant effects in their meta-analysis, and the one that did not had a very strong comparison group. Trials that enhanced the primary care provider as a resource were more effective than colocated care interventions, which resonated with Asarnow. The bottom line, said Asarnow, is "integrated primary medical and behavioral health care provides at least part of the solution for addressing the behavioral health needs of children." The effects are small to medium, so there is room for improvement. "But the probability is 66 percent that a randomly selected kid would have a better outcome after receiving integrated care than a randomly selected kid after usual care. This is good news."

The large variation in studies calls for looking at the most promising models for integration. As an example of a promising model, Asarnow cited the Youth Partners in Care program, in which children were screened for depression symptoms, with referrals to a care manager. The care manager contacted and briefed the primary care provider on the patient's needs and how to approach the patient. Patients received a booklet called "Stress and

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Your Mood," which talked about stress, the kinds of problems related to stress, depression, and ways of helping with depression. The care manager helped the patients and families pick the kinds of treatments they wanted. The care manager then briefed the primary care provider so he or she could come up with a shared treatment plan and consider whether specialty mental health consultation was required, which was something that physicians often felt they needed. "We don't want kids to die because somebody has missed something," said Asarnow. "Working with depression, the thing you realize is that it is a potentially fatal disease."

Other models include colocated care, technology-enhanced care, behavioral health consultation, and coordinated care. "We need to understand what models are best," said Asarnow, while recognizing that effectiveness may vary by setting.

This and other studies have uncovered several challenges in the treatment of behavioral health issues in primary care, Asarnow reported. Primary care providers often feel ill prepared, requiring training, consultation, the use of resource materials, or other possible solutions. Resources for collaborative care are often inadequate, requiring better referral networks and information systems to support linkage. Finally, quality-of-care problems are common, particularly inadequate follow-up. Rigorous evaluation and a continuous quality improvement process are needed to improve care in practice settings, said Asarnow, and tracking outcomes is probably the most critical thing to do to make evidence-based decisions in clinical care.

Co-location improves access enormously, said Asarnow, partly because it lessens the stigma and burden of going to a separate location to see a mental health provider or care manager. Also, many health-related behaviors or disorders are episodic, which requires a good monitoring system to detect a disorder like depression or a suicidal episode.

Next steps include getting effective integrated care models into routine practice in real-world settings. Rigorous scientific evaluation can inform practice, with a continuous quality-improvement loop. Also, costs are critical, said Asarnow. "If we don't understand the costs of our services and integrating care, we probably won't have it implemented."

RESEARCH ON PARENTAL INVOLVEMENT

"Involvement of parents is critical for children's health, possibly even more so for behavioral health," said John Landsverk, a research scientist at the Oregon Social Learning Center. Whether dealing with children or adolescents, parents are almost always involved. In particular, Landsverk works with very high-risk youth, which often means that issues with competencies in parenting are involved.

The elements of "what it takes" for effective parenting have been well

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researched over the past 35 years, Landsverk said. Parenting skills have been measured and changed in multiple studies, although elements differ across contexts, such as child developmental level, poverty, settings, and the demands of specific stressful situations. But there are common features that produce positive outcomes and can be taught, including

- Nurturance and reinforcement
- Emotion regulation
- Supervision, control, and discipline
- Supporting behaviors that promote effective adaptation to developmentally relevant demands (both academic and social)
- Discouraging behaviors that hinder positive adaptation, such as aggression, self-harm, association with deviant peers, and drug use

The range of positive outcomes that effective parenting can have is impressive, Landsverk said, including

- Sustained attention, improved executive function, and regular sleep
- Increased language and higher vocabulary
- Social skills and school readiness
- Less externalizing behavior
- Safer home environments
- Less abuse and neglect
- Less involvement in juvenile justice
- Less incarceration and hospitalization
- Higher grade point average and better mathematics and reading achievement
- Reduced peer aggression and association with delinquent peers
- Fewer mental health symptoms
- Less drug and alcohol use

Structured reviews have been proposed as a method for assisting the translational process, moving from discovery and testing to dissemination and implementation (Glasgow et al., 2012). Questions to be asked in a structured review include What studies met the criteria for inclusion and exclusion, and what were their salient characteristics? How were the studies carried out? What challenges were encountered in the studies? Was technology used in the intervention and/or evaluation?

Searching through the literature from 1995 to 2014, Landsverk and his colleagues identified two categories of studies: one with a full integration of behavioral health screening and services on a primary care platform, and another characterized by referrals for behavioral health from primary care

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settings. The study covered family medicine and adolescent medicine, not just pediatrics, from ages 0 to 18.

The review resulted in several interesting findings, Landsverk reported. Major evidence-based treatments are being tested in primary care settings, though often in an abbreviated form and adapted to a particular setting, but they are producing promising results. Few examples exist of models in full primary care settings that use screens, behavioral health treatments, and primary care personnel. Also, no evidence was seen of cost measurement in randomized controlled trials, and there was little focus on implementation other than feasibility.

Some multisite studies and cluster-randomized designs could have been used for greater implementation research done on top of effectiveness trials, though there was some focus on variation at the site level. Also, Landsverk pointed to the potential benefits of hybrid designs (with both effectiveness and implementation aims) and anticipatory implementation measurement in efficacy/effectiveness designs.

The number and variety of parenting programs constitute both good news and bad news, said Landsverk. Some sort of decision-support tool could help primary care practices and associations to choose among interventions, perhaps based on severity level. Many kinds of disorders will need to be referred out, especially for care. Also, as Asarnow also pointed out, costs need to be considered from the start; otherwise, some interventions will be difficult to use. Many parenting interventions are done in group settings, and technology could reduce the costs of such interventions enormously, Landsverk said.

Next steps in the structure review include adding *implementation* and *dissemination* to the search terms and looking at parent as well as child outcomes. Addition issues include cost measurement and considerations for both preimplementation and implementation studies, what kinds of implementation studies are feasible, and what partnership will be needed to carry out more informative studies.

REFERENCES

Asarnow, J. R., M. Rozenman, J. Wiblin, and L. Zeltzer. 2015. Integrated Medical-Behavioral Care vs Usual Primary Care for Child and Adolescent Behavioral Health: A meta-analysis. *JAMA Pediatrics* 169(10):929-937.

Glasgow, R. E., C. Vinson, D. Chambers, M. J. Khoury, R. M. Kaplan, and C. Hunter. 2012. National Institutes of Health approaches to dissemination and implementation science: Current and future directions. *American Journal of Public Health* 102(7):1274-1281.

Pbert, L., A. J. Flint, K. E. Fletcher, M. H. Young, S. Druker, and J. R. DiFranza. 2008. Effect of a pediatric practice-based smoking prevention and cessation intervention for adolescents: A randomized, controlled trial. *Pediatrics* 121(4):738-747.

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Looking Forward: Reflections for Public Policy

In the final panel of the workshop, representatives of a diverse set of stakeholders considered the broader issues associated with making progress on children's behavioral health in the context of ongoing health care reform. In doing so, they revisited many of the messages of the workshop listed by Mary Ann McCabe in her review of the workshop discussions (see Chapter 1). They discussed life course trajectories and ways of changing those trajectories, the importance of family interventions, research needs, and the framing of messages, among other workshop issues.

In addition to the reflections of panelists and other workshop participants, this final chapter of the workshop summary includes observations made by participants that attended three breakout groups on the second day of the workshop. The groups discussed moving evidence-based parenting programs into primary settings, coordinating a research and services agenda, and possible future directions for the Forum on Promoting Children's Cognitive, Affective, and Behavioral Health.

ESTABLISHING A HEALTHY TRAJECTORY

David Shern represented the National Association of State Mental Health Program Directors, which has been trying to bring a strong prevention focus to the evolving role of state mental health authorities. He also was former president of Mental Health America, known formerly as the National Mental Health Association, which was founded more than a century ago as the Committee on Mental Hygiene to try to emulate the public hygiene movement that at the time was revolutionizing health.

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As Shern pointed out, "If you look at the indicators of the health of the human capital in this country, we have some profound areas of concern." The United States incarcerates more people, spends more money on health care, has the highest rates of mental illness, and has among the lowest academic achievement levels of nations that belong to the Organisation for Economic Co-operation and Development (OECD). "We should be very, very concerned about those issues," he said. But emerging science shows that the antecedents for many of these problems involve healthy child behavioral-health development, he continued. Genetic vulnerability interacting with exposure to toxic stress and trauma causes changes to our neurological, immunological, and endocrine systems that becomes biologically embedded and establishes a life course trajectory that evidences itself in behavioral health issues or challenges, which then can produce academic challenges, decreased socioeconomic status, and a cycle of poverty, noted Shern.

Existing data strongly support interventions that can make a difference, said Shern. "What we've been trying to do is to tell that story more effectively, to advertise that what we know can make a difference in altering those trajectories." But much more work needs to be done in conveying this message to the public, Shern added. "Part of our work . . . is to try to tell that story more effectively and move the political will that is going to be necessary to implement what we see as the next major era in public health."

One part of the story concerns the overall societal benefits of interventions, Shern observed. The Washington State Institute on Public Policy, which was created by the Washington State legislature to advise legislators on their portfolio of state investments, is one example of an organization that has been doing rigorous peer-reviewed work to monetize the costs and benefits of a wide range of prevention and treatment interventions. The Pew Charitable Trusts and MacArthur Foundation are trying to replicate this capacity in other states. "Advocates have a role in continuing to publicize the fact that we have strong evidence from randomized clinical trials about the cost-effectiveness of these interventions from a societal perspective," said Shern. "This is not only the right thing to do. It is, in fact, the smart thing to do."

Shern noted that Mental Health America, after working hard on including mental health benefits in the ACA, will continue to advocate at the federal level for every opportunity that it can identify to expand prevention programming. In addition, its state chapters cover about 90 percent of the U.S. population, and they will continue to work on the implementation of mental health parity legislation. Access to equitable care for mental health and addiction treatment is still not guaranteed in many places, and Medicaid expansion under the ACA remains critically important, he noted. "Universal coverage starts to change everything in terms of the overall incentives to keep populations healthy." Health insurance mechanisms can be used differently in such a context, he added—for example, for universal primary prevention intervention. "That gets beyond the medical necessity criteria for insurance payments, which has made reimbursement for prevention programs impossible."

OPPORTUNITIES FOR PROMOTING BEHAVIORAL HEALTH

Wilson Compton, deputy director of the National Institute on Drug Abuse (NIDA) at the NIH, pointed to the dramatic changes that are under way because of health care reforms—and not just the ACA but also the Mental Health Parity Law of 1996, the restructuring of Medicare payments, state and local initiatives, and other actions. He identified two broad concepts in his remarks. The first is the simultaneous emphasis on primary care in the integration of mental health services and on payment reforms. "After all, that is going to be a major driver—making sure the clinicians actually get paid a living wage for providing some of these services that are part of behavioral health." The second is systems-level change. The shift to population-based payment for services is a very different paradigm than has existed in the past, he observed. For example, it creates the option of promoting good behaviors through community care organizations rather than responding to the consequences of bad behaviors. Insurers and others could come to see this in their long-term business interests, either because it improves health care in an efficient manner or provides cost offsets.

Compton said that NIH needs to provide a consistent focus on systems-level research, which in the case of NIDA means integrating drug abuse prevention and intervention services within health care reforms. He also emphasized the need to retool some of the community-based or school-based interventions geared toward families so they can be implemented in medical settings. At the same time, services and implementation research needs to be included in those efforts, he said, so that this whole-family approach can be refined.

Compton also said that he was intrigued by the theme of changing social norms through a variety of approaches, whether behavioral economics or marketing campaigns. "An awful lot of what is provided is based on the public demanding it," he said. "Finding ways to create the demand from the other side is something that we would love to learn how to measure better and how to use research to learn how to drive that."

THE ROLES OF FAMILIES

Delving into the roles of families, Julianne Beckett, who is co-chair of the Family Partnership Network with the American Academy of Pedi-

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atrics and recently retired from the University of Iowa, briefly described the Family-to-Family Health Information Centers that now exist in every state and the District of Columbia. These information centers are managed by families and work closely with professionals around the needs of all families, including those with children who have special health care needs.[1]

Beckett also has been active in health care reform. For example, she described the 14 regional clinics that were created in Iowa and are administered out of the University of Iowa. The health home program through Medicaid is currently running through those regional clinics. In the clinics, nurse practitioners trained in behavioral health can combine behavioral health and medical care within communities. Also, the boards that guide the clinics are made up of community members.

In the new health home project, the first person with whom a parent talks when calling the clinic is a parent of a child with special health care needs, and usually with emotional and behavioral issues as well. "It is very nice for a family to feel like they're talking to another family to begin with," said Beckett. The state also uses telehealth, said Beckett, because there are a limited number of psychiatrists in the state, and many of them are retired. From the university, a psychiatrist can interact with a child, a family, and a nurse practitioner to come up with a plan for the family to respond to the issues at hand.

TRANSLATIONAL RESEARCH AND PRIMARY CARE INNOVATIONS

Jorielle Brown, director of the Division of Systems Development in the Center for Substance Abuse Prevention at SAMHSA, said that promoting behavioral health has brought people together who were not talking before. Prevention is at the cross-section of primary care, mental health, and substance abuse, she said, and "We need to take the opportunity to capitalize on the focus on prevention."

SAMHSA has two key areas in which it can move forward, Brown said. One is to partner with entities that can help translate research into practice. It has worked in the past with researchers who have been implementing prevention in the field so the work can be evaluated, assessed, and, if appropriate, taken to scale. For example, the work of the Center for Prevention Implementation Methodology at the Northwestern University Feinberg School of Medicine, which focuses on drug abuse and sexual behavior, could be replicated in other topic areas or extended to younger

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[1] Additional information about the Family-to-Family Health Information Centers can be found at: http://www.mchb.hrsa.gov/programs/familytofamily (accessed July 30, 2015).

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children. Another example, she said, is the work of the Strategic Prevention Framework, which has been looking at how states can reduce harmful behaviors such as underage drinking and prescription drug abuse. "We have to be able to look at how the research is able to make an impact and how the services that are being done will make an impact."

Brown also emphasized the importance of innovation around primary prevention in the health care setting. As an example, she cited the national campaign "Talk, They Hear You," which is targeted at the parents and caregivers of youth ages 9 to 15 to help them have a conversation about underage drinking. "Many parents are fearful—they don't understand, or don't think to, or don't know what to say to their [children] about underage drinking," she said. Partnerships with primary care provider organizations led to public service announcements in more than 30,000 doctors' offices. "Having these types of resources available is key."

PAYMENT REFORMS AND WORKFORCE DEVELOPMENT

Terry Stancin, professor of pediatrics, psychiatry, and psychological sciences at Case Western Reserve, director of the Child and Adolescent Psychiatry and Psychology Department, vice chair for research in psychiatry at MetroHealth Medical Center, and president of the Society for Developmental and Behavioral Pediatrics, which is an interdisciplinary organization that has worked on and supported team-based, interprofessional services for children, focused first on issues of payment reform. Health care providers need to get paid for the services that everyone wants done, she observed, including behavioral health interventions. At the same time, introducing behavioral health professionals into a primary care setting can change the skill level and the attitudes of the providers who are there.

Stancin also directed her remarks to workforce development. More people need to be recruited into developmental and behavioral pediatrics, child psychology, and other fields and trained appropriately to do the work that is needed, she said. Training new doctors is expensive, and the ability to do that in many medical settings has become increasingly difficult. Less time and financial support are available for training, and grants to support training are more difficult to get. In addition, a more diverse workforce is needed to serve a diversifying population, Stancin noted.

FRAMING AND DELIVERING MESSAGES

In the discussions that followed the final panel—and in all three of the breakout groups held during the workshop—a major topic was how best to develop and disseminate messages that can influence public perceptions, strengthen political will, and encourage action.

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William Beardslee, chairman emeritus at the Department of Psychiatry at Boston Children's Hospital and Gardner/Monks Professor of Child Psychiatry at Harvard Medical School, called attention to the need to rethink how to frame the issue. "We need to be clear about what we have to say," he said. "We need to be succinct." For example, the work of the FrameWorks Institute has been helpful in framing messages about the importance of early childhood development.

Hendricks Brown, professor in the Departments of Psychiatry, Behavioral Sciences, and Preventive Medicine at Northwestern University, pointed to a group that was missing from the workshop and from many other policy discussions: parents. Their voices need to be heard, he said.

Felisia Bowen, assistant professor and director of the Center for Urban Youth at Rutgers College of Nursing, emphasized the need to not "keep preaching to the choir." The information being discussed at the conference needs to reach the people who can use it, she said. For example, can information about parenting be placed into magazines like *Cosmopolitan* or *Sports Illustrated* or into television shows like *Oprah* or *Dr. Phil*? "There are different ways to frame our messages to get other people to read them and to understand them," she said.

David Hawkins, the Social Work Endowed Professor of Prevention at the University of Washington School of Social Work, forwarded the idea of tracking what people look up on the Internet, which provides an indication of people's interests and concerns. Creating a norm that people want to know about parenting and can receive such information from their health care provider could drive beneficial actions, he said.

Hawkins and several other workshop participants also emphasized the strength of the message that the community of researchers and practitioners can convey. Solid evidence now exists to show that interventions can have not only health effects but economic and social effects. As Shern observed, "These are like behavioral health vaccines. . . . It should be our expectation that every child has an opportunity to participate in one of these evidence-based programs, and they will have lifelong effects." This could help change societal norms to create a demand for preventive services.

The conversation in one of the breakout groups touched on delivering messages to people wherever they are—for example, minority communities, faith-based communities, and online. This breakout group also noted that large corporations are already providing these kinds of messages. For example, Procter & Gamble provides Pampers to people, but the company also conveys messages about children's health. Television commercials and public service announcements could instruct parents to ask their doctors about parenting. These and other such steps could increase the demand and uptake for parenting information, which in turn could change the practices of health care providers. In this way, the narrative could change

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from illness to prevention to health promotion to positive development for young people.

One way to signal the importance of the issues would be to create a federal Office of Children's Health, a workshop participant suggested. Another workshop participant, Ron Manderscheid, Executive Director of the National Association of County Behavioral Health & Developmental Disability Directors, suggested to incorporate the vision of prevention and behavioral health into the framework for *Healthy People 2030*, which is now in the planning stages.

HEALTH CARE SETTINGS

Another prominent issue in the discussion was the variety of settings in which behavioral health care can be delivered. Primary care can encompass many different settings, several panelists observed. For example, public health and maternal health are part of the primary care system, but they are not necessarily integrated into that system. Furthermore, many children do not have primary care, or they show up at a primary care clinic only when they have a problem. For example, many adolescents are in primary care because they want birth control.

An issue raised by Hawkins was the extent to which services are provided in community settings, such as around drop-off or pickup times from preschools or schools. Another option that could be more thoroughly explored is "one-stop shopping" primary care clinics. "You can make compelling arguments on both sides," said Hawkins. Research is needed to determine which approaches work best in different contexts, he added.

Integrated services can change the settings in which services are delivered. An example cited by Stancin would be if employers were to take some of their employment policies around health behaviors and extend these policies to parenting practices. José Szapocznik, professor in the Department of Public Health Services at the University of Miami, also warned against the dangers of dilution: "Often we think that if we have enough antibiotics for 10 people and we spread them across 100 people, everyone will get a little bit of benefit, and in fact they don't. This is a misconception in our field. Sometimes it's preferable to address a smaller number of people and do a great job with them, and to do the program the way it was tested."

McCabe pointed to the parallels between different types of integration. The processes of integrating behavioral health into health care, health care into communities, and social services into the social and behavioral determinants of health have many similarities, she said. Similarly, integrating service and research agendas, different professional groups, and other stakeholder groups makes it possible for all to work together.

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RESEARCH NEEDS

Several research needs were mentioned in the final discussion and at other times during the workshop. Beardslee cited the need to know which people are not currently being reached. For example, which mothers and children are not being reached by a program on maternal and child health or infant mortality? This question relates directly to larger questions of population health, implementation, and dissemination, he noted, and will be an important future topic for the forum.

Research on the benefits and costs of interventions could be extremely valuable, several participants observed. For example, if the USPSTF were to determine that prevention programs have a sufficient base of evidence, they would become part of health care at no cost, said McCabe. Also, if the Congressional Budget Office were to score savings and not just costs for preventive actions, prevention could occur on a much larger scale. "That is an obvious opportunity. There is a lot of work being done to try to partner with researchers and policy makers to try to make that strategic." Similarly, getting this work into comparative effectiveness research at the Patient-Centered Outcomes Research Institute and elsewhere could help build the research base for prevention.

Valuable models exist that combine service and research, including programs under the Maternal, Infant, and Early Childhood Home Visiting program; the Administration for Children and Families; NIDA; and SAMHSA. Research and evaluation overlap but also differ, Brown pointed out, and both are needed. Sometimes policy makers provide funding for a program and want the program to start quickly, which can make it difficult to plan a research or evaluation component. But such a component can be developed within 1 year or 2, particularly if rollout or hybrid designs are adopted for the research or evaluation. The IOM could play a valuable role in convening groups that could plan these steps in advance of a program's implementation, thus allowing new evidence to be generated by program and policy innovations.

A participant suggested looking not only at the prevalence of behavioral health problems but at the prevalence of families that are sufficiently nurturing. Such measures, which would take research to develop, would focus attention on improving that number, whether at the local, state, or national levels.

Brown noted that the field does not now use knowledge from behavioral economics much. "This is a big untapped area that would be able to help us." In addition, technology may offer ways to reach people in some communities who are not being reached in other ways. It is "a system-level issue," he said, and each piece needs to be considered as a complementary part of the overall system.

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Cost-effectiveness data are still lacking for some of the new and innovative models being implemented, such as health homes under Medicaid, several participants observed. Another set of issues raised by multiple participants involves partnerships: What contributes to good partnerships? How do they emerge? How do partnerships with families emerge? How do parent-to-parent programs work? How can partnerships between behavioral health providers and primary care or family medicine providers be forged? How can larger community coalitions be created?

Workshop participants discussed the lack of minority researchers in the field. Compton, for example, said that this lack has been a major theme across NIH, and that NIDA has been particularly attentive to the issue, with a recent council review and a series of recommendations on the diversity of the scientific workforce. Attrition of minority researchers is particularly noticeable from graduate school to the postdoctoral level and from the postdoctoral level to the faculty level, he said, so NIDA is focusing its attention at these transitions, helping with such things as grant writing and career development. McCabe pointed out that professional associations also are working hard on this issue with federal agencies.

BLAME AND RESPONSIBILITY

An intriguing conversation centered on the dangers of ascribing blame to parents for behavioral problems that arise in a much broader context. As Shern pointed out, focusing on the vulnerability of children to toxic experiences has the potential to reintroduce the discredited idea that parents are solely responsible for the behavioral health problems of their children. A number of people have been studying the supports and environments that parents need for their children to reach their full potential. “We are going to have to frame this well,” he said. “It is important to think about the larger social context and about a strengths-based approach to supporting people so they can maximally benefit, rather than trying to find someone to blame.”

MAKING THINGS HAPPEN

Finally, McCabe addressed the urgency of the situation. Policy opportunities happen all the time, she observed, which requires moving quickly to take advantage of circumstances. At the same time, transformational change is needed along with incremental change, she added. Framing is important to both kinds of progress, because the convictions of the public will produce both incremental and transformational change.

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A major issue for the forum is "how to make some things happen in a timely way," McCabe noted. "Where do we best put our energy and resources? How do we establish work to encourage the most effective partnerships between research and service and bring about change as rapidly as we can?"

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Appendix A

Workshop Statement of Task

FUNDING OPPORTUNITIES FOR EVIDENCE-BASED PREVENTION AND INTERVENTIONS TO PROMOTE CHILDREN'S COGNITIVE, AFFECTIVE, AND BEHAVIORAL HEALTH: A WORKSHOP

Statement of Task: An ad hoc committee will plan an interactive public workshop featuring presentations on funding avenues for evidence-based prevention and intervention programs and services to promote children's cognitive, affective, and behavioral health. The committee will identify specific topics to be covered at the workshop, select and invite speakers and other participants, and moderate the discussions. An individually authored brief summary and an individually authored full-length summary of the workshop presentations and discussions will be prepared by a designated rapporteur in accordance with institutional guidelines.

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Appendix B

Workshop Agenda

Opportunities to Promote Children's Behavioral Health: Health Care Reform and Beyond

April 1–2, 2015

The National Academies Keck Center
500 Fifth Street, NW
Washington, DC 20001

The Affordable Care Act has stimulated attention to health promotion, prevention, and access to evidence-based care. These principles could not be more important than during childhood, when the foundation is laid for lifelong health and well-being. This workshop will explore how health care reform, broadly considered, can provide opportunities and support innovations to promote children's behavioral health and sustain them over time. Funding streams, intermediary organizations, and innovative programs and services will be considered. The workshop format is designed to stimulate discussion among experts, forum members, and the workshop audience, and to enhance the likelihood of collaborations going forward.

AGENDA

Day 1: Wednesday, April 1, 2015

8:45 a.m. **Welcome and Overview of Workshop Goals and Agenda**
Mary Ann McCabe, Ph.D., ABPP, Society for Child and Family Policy and Practice, Society of Pediatric Psychology

9:00 a.m. **Opening Keynote**
Neal Halfon, M.D., M.P.H., University of California, Los Angeles

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9:45 a.m. **Panel 1: Funding: Opportunities and Threats, Potential for Innovation**
Moderator: Vera Frances Tait, M.D., American Academy of Pediatrics
Lindsey Browning, M.P.P., National Association of Medicaid Directors
Mark Friedlander, M.D., M.B.A., Aetna Behavioral Health
Olivia Shockey, Health Resources and Services Administration
Ellen-Marie Whelan, Ph.D., Centers for Medicare & Medicaid Services

10:45 a.m. **BREAK**

11:00 a.m. **Panel 2: Implementing Innovations: Boots on the Ground (State/Local Level)**
Moderator: Pat Shea, M.S.W., M.A., National Association of State Mental Health Program Directors
Anthony Biglan, Ph.D., Oregon Research Institute
Gregory Hagan, M.D., FAAP, Cambridge Health Alliance
Kelly J. Kelleher, M.D., Nationwide Children's Hospital
Lori J. Stark, Ph.D., ABPP, Cincinnati Children's Hospital Medical Center

12:00 p.m. **LUNCH**

1:00 p.m. **Afternoon Keynote**
Jeffrey Levi, Ph.D., Trust for America's Health

1:45 p.m. **Panel 3: Intermediary Groups: Services and Programs for Two-Generation Approach**
Moderator: Belinda E. Sims, Ph.D., National Institute on Drug Abuse
Shikha Anand, M.D., M.P.H., National Institute for Children's Health Quality Cherokee Health Systems; Collaborative Family Healthcare Association; Patient-Centered Primary Care Collaborative
John Schlitt, M.S.W., School-Based Health Alliance
Karen VanLandeghem, M.P.H., National Academy for State Health Policy
Sara D. Watson, Ph.D., ReadyNation

2:45 p.m. **BREAK**

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3:00 p.m. **Panel 4: Implementing Innovations: Boots on the Ground (Primary Care)**
Moderator: Thomas F. Boat, M.D., Cincinnati Children's Hospital Medical Center
Rahil D. Briggs, Psy.D., Albert Einstein College of Medicine/Montefiore Health System
Stephen M. Downs, M.D., M.S., Indiana University School of Medicine
Joseph F. Hagan, M.D., FAAP, American Academy of Pediatrics
Barry Sarvet, M.D., Baystate Health and Tufts School of Medicine

3:45 p.m. **Panel 5: Implementing Innovations: Boots on the Ground (Other Settings)**
Moderator: José Szapocznik, Ph.D., University of Miami Miller School of Medicine
Mark J. Chaffin, Ph.D., Georgia State University
Bernadette Melnyk, Ph.D., RN, CPNP/PMHNP, FNAP, FAAN, Ohio State University
Kris Perry, LCSW, First Five Years Fund
Olga Acosta Price, Ph.D., George Washington University

4:30 p.m. **Recap/Closing Remarks**
Mary Ann McCabe, Ph.D., ABPP, Society for Child and Family Policy and Practice, Society of Pediatric Psychology

Day 2: Thursday, April 2, 2015

8:45 a.m. **Welcome and Reflections from Day 1**
Mary Ann McCabe, Ph.D., ABPP, Society for Child and Family Policy and Practice, Society of Pediatric Psychology

9:00 a.m. **The Research Landscape for Primary Care and Children's Behavioral Health**
Introduction: C. Hendricks Brown, Ph.D., Northwestern University
Joan R. Asarnow, Ph.D., University of California, Los Angeles
John Landsverk, Ph.D., Oregon Social Learning Center

10:00 a.m. **BREAK**

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10:10 a.m. **Small Group Discussions: Near-Term, Mid-Term, and Long-Term Plans, Products, and Outcomes**

Key Priorities for the Forum and Collaborators
Moderator: William R. Beardslee, M.D., Harvard Medical School and Children's Hospital-Boston

Coordinating a Research and Service Agenda
Moderator: C. Hendricks Brown, Ph.D., Northwestern University

Advancing Evidence-Based Parenting Programs in Primary Care Settings
Moderators: Costella D. Green, M.H.S., Substance Abuse and Mental Health Services Administration, and J. David Hawkins, Ph.D., University of Washington

11:10 a.m. **BREAK**

11:20 a.m. **Report Back from Small Group Discussions**

11:45 a.m. **Panel 6: Looking Forward: Reflections for Public Policy**
Moderator: Mary Ann McCabe, Ph.D., ABPP, Society for Child and Family Policy and Practice, Society of Pediatric Psychology
Julianne Beckett, Family Voices
Wilson Compton, M.D., National Institute on Drug Abuse, National Institutes of Health
Frances M. Harding, Substance Abuse and Mental Health Services Administration
David Shern, Ph.D., National Association of State Mental Health Program Directors, Johns Hopkins Bloomberg School of Public Health, and Mental Health America
Terry Stancin, Ph.D., ABPP, Society for Developmental and Behavioral Pediatrics, Case Western Reserve University, and MetroHealth Medical Center

12:45 p.m. **Closing Remarks**
Mary Ann McCabe, Ph.D., ABPP, Society for Child and Family Policy and Practice, Society of Pediatric Psychology

1:00 p.m. **Adjourn Workshop**

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Workshop Planning Committee

Mary Ann McCabe, Ph.D. (*Chair*), Society for Child and Family Policy Practice, Society of Pediatric Psychology, George Washington University, George Mason University
Thomas F. Boat, M.D., Cincinnati Children's Hospital Medical Center
David A. Brent, M.D., M.S.Hyg., University of Pittsburgh
Wilma P. Cross, M.S., Office of Disease Prevention, National Institutes of Health
Costella Green, M.H.S., Substance Abuse and Mental Health Services Administration
J. David Hawkins, Ph.D., University of Washington
Kimberly E. Hoagwood, Ph.D., New York University
Laurel K. Leslie, M.D., M.P.H., Tufts University
Jennifer Ng'andu, Robert Wood Johnson Foundation
Ruth Perou, Ph.D., Centers for Disease Control and Prevention
Eve E. Reider, Ph.D., National Institute on Drug Abuse, National Institutes of Health
Gail F. Ritchie, M.S.W., Substance Abuse and Mental Health Services Administration
Pat Shea, M.S.W., M.A., National Association of State Mental Health Program Directors
Belinda E. Sims, Ph.D., National Institute on Drug Abuse, National Institutes of Health
José Szapocznik, Ph.D., University of Miami
Vera Francis "Fan" Tait, M.D., American Academy of Pediatrics

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Appendix C

Biographies of Workshop Speakers

Shikha Anand, M.D., M.P.H., is a pediatrician with expertise in community health and the patient-centered medical home. She has more than 10 years of experience championing children's health and creating innovative programs to integrate community supports with health care resources for underserved children to improve care for children with obesity, autism, asthma, behavioral health concerns, and special health care needs. She created the Healthy Weight Clinic, a community health model for multidisciplinary obesity care, and the Fruit and Vegetable Prescription Program, a national program to provide healthy food access for underserved families. She is a graduate of Union College, Albany Medical College, and Boston University School of Public Health. She completed her residency training at Yale New Haven Hospital and her fellowship in general academic pediatrics at Boston University School of Medicine. She is a community health center pediatrician, having served for 5 years as the Pediatric Director at the Whittier Street Health Center in Roxbury, Massachusetts. Since 2011, she has been providing care for vulnerable families at the Codman Square Health Center in Dorchester, Massachusetts. She serves on the Board of Directors of Healthcare Without Harm and Chairs the Advisory Board for Wholesome Wave's Fruit and Vegetable Prescription Program.

Joan Rosenbaum Asarnow, Ph.D., is Professor of Psychiatry and Biobehavioral Sciences at the University of California, Los Angeles (UCLA), David Geffen School of Medicine and a clinical psychologist. Dr. Asarnow served as President of the Society for Clinical Child and Adolescent Psychology/ American Psychological Association Division 53 during 2014 where she

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developed and continues to lead a national initiative focusing on optimizing the success of the transformation in the U.S. health care system through our science. Her current work focuses on interventions and service delivery strategies for improving health and mental health in youth, with an emphasis on suicide/suicide attempt prevention and depression. She has led efforts to disseminate evidence-based treatments for child and adolescent depression and suicide prevention, working across multiple service settings including primary care, emergency departments, mental health, and school settings. Dr. Asarnow has received grants from the National Institute of Mental Health, Centers for Disease Control and Prevention, Agency for Healthcare Research and Quality, American Foundation for Suicide Prevention, and the MacArthur Foundation. At the UCLA Semel Institute for Neuroscience and Human Behavior, Dr. Asarnow directs the Youth Stress and Mood Program, a depression and suicide prevention program.

Julianne Beckett worked at the University of Iowa for the past 34 years, retiring August 2014. During her tenure there, she worked for the Title V program, Child Health Specialty Clinics, the University Centers on Disability and Development, under a Substance Abuse and Mental Health Services Administration grant and for the National Center on Birth Defects and Developmental Disability at the Centers for Disease Control and Prevention. She is a cofounder of an organization called Family Voices, and currently serves as the co-chair of the FamilY Partnership Network with the American Academy of Pediatrics. Her daughter, Katie, was the first home and community-based services Medicaid waiver person and passed away in 2012 at age 34.

Anthony Biglan, Ph.D., is a Senior Scientist at Oregon Research Institute. His research over the past 30 years has helped to identify effective family, school, and community interventions to prevent the most common and costly problems of childhood and adolescence. Dr. Biglan is a former president of the Society for Prevention Research. He was a member of the Institute of Medicine Committee on Prevention, which released its report in 2009 documenting numerous evidence-based preventive interventions that can prevent multiple problems. His recent review of preventive interventions concluded that diverse psychological, behavioral, and health problems can be prevented through the promotion of nurturing families, schools, and communities. Dr. Biglan's book, *The Nurture Effect: How the Science of Human Behavior Can Improve Our Lives and Our World* (New Harbinger Publications), is a union of his experience and knowledge and experimental evidence emphasizing the importance of nurturing in raising happy children who become thriving and successful as adults.

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Rahil D. Briggs, Psy.D., is an Associate Professor of Clinical Pediatrics at Albert Einstein College of Medicine, Director of Healthy Steps at Montefiore, and the Director of Pediatric Behavioral Health Services at Montefiore Medical Group. Dr. Briggs joined Einstein and Montefiore in 2005 as the Director and founder of Healthy Steps at Montefiore. She was appointed Assistant Professor of Pediatrics in 2008, and expanded the Healthy Steps program to multiple sites within Montefiore Medical Group in 2009 and 2013. She was named the Director of Pediatric Behavioral Health Services at Montefiore in 2013 and asked to spearhead the formation of one of the most comprehensive integrated pediatric behavioral health systems in the nation. Her work concentrates on integration of mental health specialists within primary care pediatrics, with a focus on prevention, early childhood mental health and development, and parent–child relationships. She has received more than $4 million in funded grant support since 2006, and is currently working on a book regarding integrated early childhood mental health in primary care, to be published by Springer in 2016. Dr. Briggs completed her undergraduate work at Duke University (magna cum laude) and her doctoral work at New York University.

Jorielle Brown, Ph.D., is a clinical psychologist with more than 15 years of behavioral health experience in government, academia, and consultation services. Dr. Brown currently serves as Director of the Division of Systems Development in the Center for Substance Abuse Prevention at the Substance Abuse and Mental Health Services Administration (SAMHSA) in the Department of Health and Human Services. Lieutenant Brown was commissioned in the U.S. Public Health Service in February 2015. She has worked in various capacities in SAMHSA to include Special Assistant to the Administrator, Special Assistant to the Deputy Administrator, Acting Division Director, Branch Chief, and Public Health Advisor. Dr. Brown came to the SAMHSA in 2005 from Morgan State University where she conducted National Institutes of Health–funded research in the Center for Health Disparities Solutions and the Drug Abuse Research Program. She earned her bachelor degree in chemistry and went on to earn a masters and doctoral degree in clinical psychology with a specialization in children and adolescents at Howard University. Following postdoctoral training in Prevention Science at the Johns Hopkins Bloomberg School of Public Health, Dr. Brown served as assistant professor of psychology, research and statistical methods, and counseling methods at Johns Hopkins University and Howard University. Dr. Brown's research and clinical experience with diagnosing, treating, and testing individuals with mental health, substance abuse, and co-occurring disorders has allowed her to publish peer-reviewed articles, present at national conferences, and provide workshops on the top-

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ics of prevention, treatment and recovery from mental and substance use disorders. She has received numerous honors that include the Hubert H. Humphrey Award for Service to America, American Psychological Association's Dalmas Taylor Award, and the SAMHSA Administrator's Award.

Lindsey Browning, M.P.P., joined the National Association of Medicaid Directors (NAMD) in early 2014 as a policy analyst. In this role, Lindsey works with the team at NAMD to provide an information network among states on key issues for Medicaid programs and to represent the views of state Medicaid directors in the federal policy process. Her primary areas of focus include behavioral and physical health integration, managed care, and maternal and child health policy issues in Medicaid. Before coming to NAMD, she worked at the Children's Hospital Association, where she conducted research and analysis on children's health policy issues, including on state Medicaid and Children's Health Insurance Program policy trends. She began her career as a public policy intern for the American Foundation for Suicide Prevention. Lindsey received her Master of Public Policy degree from George Mason University in Fairfax, Virginia and graduated from McDaniel College in Westminster, Maryland, with a Bachelor of Arts in political science and international studies.

Mark Chaffin, Ph.D., is a psychologist and Professor of Public Health at Georgia State University. His recent work focused on methods for adapting, implementing, and scaling up evidence-based service models in systems serving families in the child welfare system, and testing their effectiveness for improving parenting, child safety and well-being outcomes.

Wilson M. Compton, M.D., M.P.E., is Deputy Director of the National Institute on Drug Abuse (NIDA) of the National Institutes of Health. NIDA supports most of the world's research on the health aspects of drug abuse and addiction related to preventing drug abuse, treating addiction and addressing the serious health consequences of drug abuse, including related HIV/AIDS and other health conditions. In his current role, Dr. Compton's responsibilities include providing scientific leadership in the development, implementation, and management of NIDA's research portfolio and working with the director to support and conduct research. Prior to his current appointment, Dr. Compton served as the director of NIDA's Division of Epidemiology, Services and Prevention Research from 2002 until 2013. In this leadership role, he oversaw the scientific direction of a complex public health research program of national and international scope addressing: (1) the extent and spread of drug abuse, (2) how to prevent drug abuse, and (3) how to implement drug abuse prevention and treatment services as effectively as possible. Of note, he led the development of a large-scale

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longitudinal population study with 45,995 study subjects ages 12 and older in the baseline sample to assess the impact of new tobacco regulations in the United States. This project is jointly sponsored by NIDA and the Food and Drug Administration (FDA) and includes prospective data collection, using both surveys and biological assessments of tobacco exposures, risk factors, and health outcomes. Before joining NIDA, Dr. Compton was Associate Professor of Psychiatry and Director of the Master in Psychiatric Epidemiology Program at Washington University in Saint Louis as well as Medical Director of Addiction Services at the Barnes-Jewish Hospital in Saint Louis. Dr. Compton received his undergraduate education from Amherst College. He attended medical school and completed his residency training in psychiatry at Washington University. During his career, Dr. Compton has achieved multiple scientific accomplishments: he was selected to serve as a member of the DSM-5 Revision Task Force; he is the author of more than 130 articles and chapters including widely cited papers drawing attention to the emerging prescription drug abuse problems in the United States; and he is an invited speaker at high-impact venues, including multiple presentations to federal judges in presentations sponsored by the Federal Judicial Center. These judicial presentations have focused on how the science of addiction may improve policy and practices related to addicts within the criminal justice system. Dr. Compton is a member of numerous professional organizations, including the Alpha Omega Alpha medical education honor society. Dr. Compton is the recipient of multiple awards: in 2008, he received the Senior Scholar Health Services Research Award from the American Psychiatric Association; in 2010, he received the Paul Hoch Award from the American Psychopathological Association; and in both 2012 and 2013, he was selected to receive the Leveraging Collaboration Award from FDA. In 2013, Dr. Compton received the prestigious Health and Human Services Secretary's Award for Meritorious Service.

Stephen M. Downs, M.D., M.S., is the Jean and Jerry Bepko Professor of Pediatrics and Vice Chair for General Pediatrics at Indiana University (IU) School of Medicine. He directs Children's Health Services Research and is the former director of the IU/Regenstrief Biomedical Informatics Research Training Program and the Indiana Health Services Research postdoctoral training program. He is a fellow in the American College of Medical Informatics. He received his M.D. and master's degree in medical informatics from Stanford University and completed an internship and residency in pediatrics at the University of North Carolina at Chapel Hill (UNC-CH). At UNC-CH he completed a health services research fellowship in the Robert Wood Johnson Foundation Clinical Scholars Program and was on the faculties of Pediatrics, Biomedical Engineering, and the School of Public Health.

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Mark Friedlander, M.D., M.B.A., joined Aetna in 2002 and has been Chief Medical Officer, Behavioral Health, since 2010, with responsibility for oversight of patient management processes; accreditation and quality management; clinical policy; and design, development, and implementation of behavioral health products and programs. He is involved with legislative responses; lobbying efforts; outreach to advocacy, professional, academic, and public stakeholders; and development of claims and clinical policies and communications with customers. Other Aetna responsibilities include Pharmacy and Therapeutics, Patient Safety, Medical Operations and Clinical Policy Committees; and tactical and strategic development of short- and long-term operating plans and business models for the Behavioral Health area. Dr. Friedlander has experience as a solo practitioner, and he was Acting Medical Director for the Child Guidance Resource Centers with responsibilities for evaluation and treatment of children and adolescents for special education placements, and became Medical Director for the outpatient department and adolescent inpatient unit at Friends Hospital in Philadelphia. Dr. Friedlander completed his training at the Medical College of Pennsylvania in Philadelphia, and is board certified in both Adult and Child/Adolescent Psychiatry. He is a recognized clinical leader in the field of Intellectual and Developmental Disabilities and Neuropsychiatry and has been recognized as a "Top Doc" in *Philadelphia Magazine*.

Greg Hagan, M.D., FAAP, is a general pediatrician in Cambridge, Massachusetts, and Chief of Pediatrics at the Cambridge Health Alliance. He is Clinical Instructor in Pediatrics at Massachusetts General Hospital and at Harvard Medical School. He is convinced that we must find new, more effective ways to meet the mental health needs of children and families in the context of general pediatrics practice and with particular emphasis on disparities and social determinants of general and behavioral health. He has served as Past-President of the Massachusetts Chapter of the American Academy of Pediatrics and as Faculty Co-Chair in CHIPRA (Children's Health Insurance Program Reauthorization Act of 2009), Massachusetts Pediatric Medical Home Learning Collaborative. Dr. Hagan is a member of the Massachusetts Children's Mental Health Task Force, and is on the Executive Committee of Massachusetts Child Health Quality Coalition. He is also Primary Care/Mental Health Integration Lead in a Delivery System Transformation Initiative Grant at Cambridge Health Alliance and a Co-Investigator on "Making Care Affordable, Preserving Access and Improving Value," A collaborative practice delivery system pilot, funded by the Blue Cross Blue Shield of Massachusetts Foundation, that aims to develop an active consultation, team-based model to improve care to high-cost children with mental health needs, as well as build workforce capacity through collaborative training of pediatric and child psychiatry trainees.

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Joseph F. Hagan, Jr., M.D., FAAP, is Clinical Professor in Pediatrics at the University of Vermont College of Medicine and Vermont Children's Hospital. He is coeditor of *The Bright Futures Guidelines, Third and Fourth Editions,* the standard of preventive care for the Affordable Care Act (ACA). Dr. Hagan served as American Academy of Pediatrics (AAP) Vermont Chapter Vice-President and President. He chaired the Committee on Psychosocial Aspects of Child and Family Health and is a regular reviewer for *Pediatrics*. Following the 2001 attacks, he chaired the Academy's Task Force on Terrorism. His commitment to the care of vulnerable children led Dr. Hagan to chair the Citizen's Advisory Board for the Vermont Department for Children and Families. He consults for the commissioner on complex child protection cases. An experienced advocate on community, state, and federal levels, Dr. Hagan served on the legislative committee that created Vermont's Family Court. He has testified on behalf of the AAP before U.S. Senate committees regarding the Special Supplemental Nutrition Program for Women, Infants, and Children and the ACA and often testifies before the Vermont Legislature. He has extensive media experience, has published extensively, presented nationally and internationally, and has received numerous awards recognizing his work. Dr. Hagan practices primary care pediatrics in Burlington, Vermont.

Neal Halfon, M.D., M.P.H., is director of the University of California, Los Angeles (UCLA), Center for Healthier Children, Families and Communities, and also directs the Child and Family Health Program in the UCLA Fielding School of Public Health, and the National Center for Infant and Early Childhood Health Policy. Dr. Halfon is professor of pediatrics in the David Geffen School of Medicine at UCLA; health policy and management in the UCLA Fielding School of Public Health; and public policy in the UCLA School of Public Affairs. He is also a consultant in the Health Program at RAND. In 2001 Dr. Halfon was named to the Board on Children, Youth, and Families of the National Research Council and the Institute of Medicine (IOM). He has served on numerous expert panels and advisory committees, including the IOM committee (1998–2000) commissioned by the Surgeon General to propose the leading health indicators for measuring the country's progress with the national *Healthy People 2010* agenda. Dr. Halfon recently served on the congressionally mandated Committee on Children's Health for the IOM to evaluate how children's health should be measured in the United States, for which he also contributed to the volume *Children's Health, the Nation's Wealth* (2004). In 1999 he co-chaired the Association for Health Services Research's agenda-setting conference Improving the Quality of Health Care for Children, which generated the research agenda that was included in the legislation reauthorizing the Agency for Healthcare Research and Quality in 2000. From 2002 to 2004,

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Dr. Halfon served as co-chair of the Health Services Working Group for the planned National Children's Study of the National Institute for Child Health and Human Development and Environmental Protection Agency. He also has served on the Pediatric Measurement Advisory Panel for the National Committee on Quality Assurance; Foundation for Accountability (1999–2002); Committee on Child Health Financing for the American Academy of Pediatrics (AAP) (1993–1998); and on expert panels for the National Commission on Children (1991); Maternal and Child Health Bureau's (MCHB's) Bright Futures project; Agency for Health Care Policy and Research Panel on Child Health Services Research; Bureau of Health Professions' Panel on Primary Care; and Carnegie Commission on Early Childhood. In 2006, Dr. Halfon was honored by the Ambulatory Pediatric Association (APA) with the APA Research Award. This award is given each year to one pediatrician who has helped to advance pediatric knowledge through excellence in research. Dr. Halfon's primary research interests include the provision of developmental services to young children, access to care for low-income children, and delivery of health services to children with special health care needs, with a particular interest in abused and neglected children in the foster care system. Beginning in 1998, Dr. Halfon constituted and led a collaborative team that included representatives from the AAP, National Center for Health Statistics, MCHB, and Centers for Disease Control and Prevention's National Immunization Program—to develop, design, launch, and analyze the 2000 National Survey of Children's Health. Dr. Halfon has also published the results of research on immunizations for inner-city children, the health care needs of children in foster care, trends in chronic illnesses for children, delivery of health care services for children with asthma, and investigations of new models of health service delivery for high-risk children. He coauthored and coedited *Child Rearing in America: Challenges Facing Parents with Young Children* with Kathryn Taaffe McLearn and Mark A. Shuster. Dr. Halfon's conceptual work attempts to define a developmentally focused model of health production across the life course and to understand the implications of life course health development for the delivery and financing of health care. His Life Course Health Development model has been used to inform new approaches to health promotion, disease prevention, and developmental optimization. Dr. Halfon has also served as a domestic policy and health care advisor to former Vice President Al Gore, providing guidance in 1998 and 1999 on the development of several new initiatives focused on family-centered community building.

Kelly Kelleher, M.D., is a pediatrician whose research interests focus on accessibility, effectiveness, and quality of health care services for children and their families, especially those affected by mental disorders, substance

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abuse, or violence. He has a long-standing interest in formal outcomes research for mental health and substance abuse services. Dr. Kelleher is director of the Center for Innovation in Pediatric Practice and vice president of Health Services Research at The Research Institute at Nationwide Children's Hospital. Dr. Kelleher is also Professor in the Department of Pediatrics of the Ohio State University College of Medicine and Public Health.

Parinda Khatri, Ph.D., is Chief Clinical Officer at Cherokee Health Systems (CHS), a comprehensive community health care organization that provides integrated primary care, behavioral health, and substance abuse services to more than 60,000 patients in 14 counties at 23 clinics in east Tennessee. CHS has been nationally recognized for its innovative model of integrated primary and behavioral health care by leading health care agencies and organizations, including the Substance Abuse and Mental Health Administration and the Agency for Healthcare and Research Quality (AHRQ). In 2007, CHS was awarded the Best Practices in 21st Century Primary Care Award from the Morehouse School of Medicine National Center for Primary Care for the "effective integration of mental health and primary care." Dr. Khatri leads Cherokee's integrated care implementation; provides leadership, oversight, and guidance on clinical services; and is extensively involved in consultation and training in integrated care. She directs a number of the organization's formal training programs and is also Cherokee's Principal Investigator on several research projects. She is involved in a number of national initiatives to support integration, healthcare workforce development, and health care for safety net populations. She is past-President of the Collaborative Family Health Association, and a member of AHRQ's National Integration Advisory Council.

John Landsverk, Ph.D., is a Research Scientist at the Oregon Social Learning Center (OSLC), Science Director of the OSLC Developments, Inc., and Founding Director of the Child and Adolescent Services Research Center. He also serves as Director of the Research Methods Core for the National Institute on Drug Abuse (NIDA)-funded Center for Translational Drug Abuse Prevention in Child Welfare at OSLC (PI Chamberlain), Associate Director for the NIMH-funded R25 Implementation Research Institute at Washington University (PI Proctor), and is a member of the executive committee for the NIDA-funded Center for Prevention Implementation Methods for Drug Abuse and Sex Risk Behavior at Northwestern University (PI Brown). His research studies focus on the intersection of child welfare and children's mental health with an emphasis on the implementation of evidence-based interventions in these service systems. Dr. Landsverk has received numerous research grants and contracts from the National Institute of Mental Health and other federal agencies, including three center

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grants, the most recent being the advanced center Implementation Methods Research Group focused on developing methods and strategies for implementing evidence-based interventions in child welfare and child mental health settings.

Jeffrey Levi, Ph.D., is Executive Director of the Trust for America's Health (TFAH), where he leads the organization's advocacy efforts on behalf of a modernized public health system. He oversees TFAH's work on a range of public health policy issues, including implementation of the public health provisions of the Affordable Care Act (ACA) and annual reports assessing the nation's public health preparedness, investment in public health infrastructure, and response to chronic diseases such as obesity. TFAH led the public health community's efforts to enact, and now defend, the prevention provisions of the ACA, including the Prevention and Public Health Fund and the new Community Transformation Grants. In January 2011, President Obama appointed Dr. Levi to serve as a member of the Advisory Group on Prevention, Health Promotion, and Integrative and Public Health, which he chairs. Dr. Levi is also Professor of Health Policy George Washington University's School of Public Health, where his research has focused on HIV/AIDS, Medicaid, and integrating public health with the health care delivery system. In the past, he has also served as an associate editor of the *American Journal of Public Health* and as Deputy Director of the White House Office of National AIDS Policy. Beginning in the early 1980s, he held various leadership positions in the lesbian, gay, bisexual, and transgender and HIV communities, helping to frame the early response to the HIV epidemic. Dr. Levi received a B.A. from Oberlin College, an M.A. from Cornell University, and a Ph.D. from George Washington University.

Bernadette Mazurek Melnyk, Ph.D., RN, CPNP/PMHNP, FAANP, FNAP, FAAN, is Associate Vice President for Health Promotion, University Chief Wellness Officer, Professor and Dean of the College of Nursing at Ohio State University (OSU), and professor of pediatrics and psychiatry at OSU's College of Medicine. She is a pediatric and psychiatric mental health nurse practitioner, and is a nationally and internationally recognized expert in evidence-based practice, intervention research, child and adolescent mental health, and health and wellness, and is a frequent keynote speaker at national/international conferences on these topics. Her record includes more than $19 million of sponsored funding from federal agencies as principal investigator. Dr. Melnyk is co-editor of 4 books and more than 250 publications, including *Evidence-based Practice in Nursing & Healthcare: A Guide to Best Practice* (3rd edition); *A Practical Guide to Child and Adolescent Mental Health Screening, Early Intervention, and Health Promotion* (2nd

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edition); and *Intervention Research: Designing, Conducting, Analyzing and Funding*, an *American Journal of Nursing* Book of the Year Award winner. Dr. Melnyk is an elected fellow of the National Academy of Medicine, the American Academy of Nursing, the National Academies of Practice, and the American Association of Nurse Practitioners. She served a 4-year term on the U.S. Preventive Services Task Force and is currently a member of National Quality Forum's Behavioral Health Steering Committee and National Institutes of Health's National Advisory Council for Nursing Research.

Kris Perry, LCSW, Executive Director of the First Five Years Fund, understands that America's future lies in the health and well-being of the country's youngest children. She has dedicated her career to bringing resources and support to parents, caregivers, and early learning workforce professionals to ensure children grow up healthy and ready to succeed in school and in life. Ms. Perry is a national thought leader on early childhood education, and has appeared in the *New York Times*, *POLITICO*, *New Republic*, *Salon*, *Congressional Quarterly* and many other news outlets across the country. Previously, Ms. Perry served as Executive Director of First 5 California, fostering their emergence as one of the most well-known and respected advocates for early childhood development on the state and national levels. Prior to that, Ms. Perry served as Executive Director of First 5 San Mateo County, where she implemented cutting-edge programs and led community design groups to develop countywide initiatives, including preschool for all and universal health care. Her dedication to children and their families began at the Alameda County Social Services Agency where she worked for more than 12 years in various capacities, including child abuse investigator, family preservation case manager, and program manager. Such leadership has led to state appointments, including co-chair of the California State Early Learning Advisory Council, which was established to position the state for millions of dollars in federal funding for early childhood education. In this and other roles, her work resulted in learning system changes to improve the quality of preschool and school readiness programs. In addition to her role as a national leader on early childhood education, she was the lead plaintiff in the *Perry vs. Hollingsworth* legal challenge to California's Proposition 8, the landmark marriage equality case argued in front of the U.S. Supreme Court by the bipartisan legal team of Ted Olson and David Boies. She received her Bachelor of Arts degree from the University of California, Santa Cruz, and a Master's in Social Work from San Francisco State University. She also completed the Stanford Graduate School of Business Executive Program for Nonprofit Leaders. Ms. Perry is a licensed clinical social worker and a board-certified diplomat who holds a postgraduate certificate as a service integration specialist.

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Olga Acosta Price, Ph.D., is Director of the Center for Health and Health Care in Schools and Associate Professor at the Milken Institute School of Public Health at the George Washington University. Her faculty appointment is in the Department of Prevention and Community Health. She comes to the Center with experience in managing school-based mental health programs in Washington, DC, where she was Director of the School Mental Health Program at the DC Department of Mental Health, an award-winning community-based program. Dr. Acosta Price managed the development, implementation, and evaluation of this program in 30 public schools for more than 5 years. Before coming to Washington, Dr. Acosta Price was associate director at the Center for School Mental Health Assistance and assistant professor at the University of Maryland School of Medicine in Baltimore. She has presented at local and national meetings on school-based mental health, program evaluation, and violence prevention and has written several articles and book chapters on these topics. Dr. Acosta Price graduated from Vassar College and received her master's degree and doctorate from the State University of New York at Buffalo.

Barry Sarvet, M.D., is the Chair of the Department of Psychiatry at Baystate Medical Center, Clinical Professor at Tufts University School of Medicine, and Medical Director for the Masschusetts Child Psychiatry Access Project (MCPAP). MCPAP is a public mental health program designed to enhance the capacity of pediatric primary care providers to address mental health needs of children in the primary care setting. The program, highly valued by pediatric practices, has been replicated in 28 states across the United States since its inception in 2004. He has helped to organize the National Network of Child Psychiatry Access Programs to support the dissemination of these services. He has published numerous papers and presented widely across the United States and abroad on the topic of integrated and collaborative child psychiatry practice. Dr. Sarvet was awarded the 2014 Simon Wile Leadership Award in Consultation Psychiatry by the American Academy of Child and Adolescent Psychiatry for his work to promote collaboration with primary care providers within the profession.

John Schlitt, M.S.W., is President of the School-Based Health Alliance. From 1997 to 2008, Mr. Schlitt served as the Alliance's first executive director, leading the organization's advocacy, education, and technical assistance efforts to strengthen and sustain school-based health centers and to build long-term financial support for the organization. In 2011 he rejoined the Alliance after exploring other public health interests. In 2014 he succeeded Linda Juszczak as president of the organization. Mr. Schlitt's 25-year career spans maternal, infant, and child health policy, practice, and advocacy arenas. He is a national authority on school-based health care financing, or-

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ganization, and delivery. Mr. Schlitt has worked as a clinical social worker with adolescents in psychiatric and community mental health settings and has authored several articles on school-based health care and teen pregnancy prevention. A native Floridian, Mr. Schlitt received his bachelor of science degree in psychology from the University of Florida and his master of social work degree from Florida State University.

David Shern, Ph.D., stepped down as President and CEO of Mental Health America (MHA), formerly the National Mental Health Association, the country's oldest and largest advocacy group addressing all aspects of mental health and mental illness, in 2014. Prior to joining MHA, he was dean of the Louis de la Parte Florida Mental Health Institute at the University of South Florida, one of the nation's largest research and training institutes in behavioral health. Shern also founded and directed the National Center for the Study of Issues in Public Mental Health—a National Institute of Mental Health-funded services research center—located in the New York State Office of Mental Health. In addition to advocacy and public education, his research has spanned a variety of mental health services research topics including epidemiological, service system organization, and financing issues largely focused on persons with severe mental illnesses. More recently he has worked on several projects related to prevention and promotion in behavioral health.

Olivia Shockey is the Expansion Division Director in the Office of Policy and Program Development for the Bureau of Primary Health Care within the Health Resources and Services Administration (HRSA). Within this role, Ms. Shockey is responsible for the development and issuance of grant and cooperative agreement funding opportunities for the Health Center Program, as well as application packages for Health Center Program look-alikes. The Health Center Program, which targets the nation's neediest populations and geographic areas, currently funds nearly 1,300 health centers that operate approximately 9,000 service delivery sites in every state, the District of Columbia, Puerto Rico, the Virgin Islands, and the Pacific Basin. In 2013, more than 21 million patients, including medically underserved and uninsured patients, received comprehensive, culturally competent, quality primary health care services through the Health Center Program grantees. In 2014, Ms. Shockey oversaw the awarding of more than $105 million in Behavioral Health Integration expansion funding to more than 430 Health Center Program grantees to enable the hiring of new behavioral health providers and expansion of integrated care. Prior to joining HRSA's Bureau of Primary Health Care, Ms. Shockey worked as a project officer in the Center for Substance Abuse Prevention within the Substance Abuse and Mental Health Services Administration. She joined

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the federal government with a master's degree in Counseling Psychology and several years of experience in nonprofit program administration and counseling, with a focus on youth substance use.

Terry Stancin, Ph.D., ABPP, is Professor of Pediatrics, Psychiatry and Psychological Sciences at Case Western Reserve University. Dr. Stancin serves as Director of Child and Adolescent Psychiatry and Psychology and Vice-Chair for Research in Psychiatry at MetroHealth Medical Center, and chairs the medical center's Committee on Appointments, Promotion and Tenure. She is a board-certified Clinical Child and Adolescent Psychologist and a national expert in pediatric mental health issues in primary care. She is actively involved in research pertaining to outcomes of pediatric traumatic brain injuries, having collaborated on federally funded multi-site investigations for more than 20 years. Dr. Stancin has authored more than 130 peer-reviewed scientific publications and book chapters. She serves on editorial boards of several scientific journals, is a leader in national pediatric and psychology organizations, and is the current President of the Society for Developmental and Behavioral Pediatrics. Dr. Stancin grew up in Akron, Ohio. She received her Ph.D. in clinical psychology from Kent State University and completed a clinical internship at Grady Memorial Hospital in Atlanta and postdoctoral training at MetroHealth where she has been since 1986.

Lori Stark, Ph.D., ABPP, is the Director of the Division of Behavioral Medicine and Clinical Psychology at Cincinnati Children's Hospital Medical Center, and Professor of Pediatrics at the University Of Cincinnati College of Medicine. She is currently an Associate Editor for the *Journal of Pediatric Psychology* and served as the President in 2008 and Past President in 2009 of the Society of Pediatric Psychology, Division 54, of the American Psychological Association. Dr. Stark's primary research interests are improving nutritional outcomes in children and have focused in the area of cystic fibrosis (CF) and preschool obesity. She has been continuously funded by the CF Foundation and National Institutes of Health (NIH) for her work on nutrition in CF and is currently funded by NIH to conduct pilot randomized clinical trials of clinic and home based behavioral interventions to reduce obesity in preschool children. As Division Director she has worked to have behavioral health services recognized and reimbursed by third-party payers in the Cincinnati region including recognition of health and behavior codes for behavioral services for children with chronic health care conditions such as CF, epilepsy, and pain conditions. She has also worked forming community and academic partnerships to increase capacity for behavioral health service for the common behavioral health condition of attention deficit hyperactivity disorder (ADHD).

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Karen VanLandeghem, M.P.H., is a senior program director at the National Academy of State Health Policy (NASHP) where she leads the organization's portfolio of work on child and family health, including children's mental health. She brings more than 25 years of experience in health policy, program development, and government relations. She has spent the majority of her career working at the national and state levels for health policy and education organizations and state government, bringing to her NASHP position expertise in child and family service delivery systems, behavioral health, public insurance coverage, and early childhood development. Prior to joining NASHP, Ms. VanLandeghem was a Senior Advisor at the Association of Maternal and Child Health Programs where she led efforts to build the organization's health reform portfolio. She has held previous positions with the Illinois Children's Mental Health Partnership, the Ounce of Prevention Fund, and consulted on several national initiatives including the Child Health Insurance Research Initiative. She is adjunct faculty at the University of Illinois at Chicago, School of Public Health. She has held leadership roles in the American Public Health Association's (APHA's) Maternal and Child Health Section and currently serves on the APHA Governing Council. Ms. VanLandeghem holds a B.S. in biology from Wayne State University and an M.P.H. from the University of Michigan.

Sara Watson, Ph.D., is the Director of ReadyNation, a business membership organization whose 1,100 members advocate for investments in children and youth in order to improve the economy and workforce. She recently launched an initiative to work with other countries to help them create their own business champions for children. Previously, she was Executive Vice President for National Partnerships at America's Promise Alliance. She also directed The Pew Charitable Trusts' 10-year national campaign to advance high-quality early education for all 3- and 4-year-olds. During that campaign, state spending on pre-kindergarten more than doubled. She also designed and launched two other Pew campaigns, to promote home visiting for at-risk families and to help states use cost-benefit data to inform policy. She has also worked for The Finance Project in Washington, DC, and the Family Policy Council in Olympia, Washington. She has a B.A. (magna cum laude) from Carleton College and Master of Public Policy and Ph.D. degrees from the Harvard Kennedy School.

Ellen-Marie Whelan, Ph.D., is the Chief Population Health Officer for the Centers for Medicare & Medicaid Services (CMS) Center for Medicaid and Children's Health Insurance Program (CHIP) Services (CMCS) providing clinical input and guidance for the health coverage for nearly 70 million people who are served by Medicaid and CHIP. She is also a Senior Advi-

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sor at the CMS Center for Medicare & Medicaid Innovation (CMMI), coordinating the pediatric portfolio across the Center. In both positions Dr. Whelan assists in the design, implementation, and testing of delivery system transformation and payment reform initiatives. Before CMS, Dr. Whelan was the Associate Director of Health Policy at the Center for American Progress (CAP). Her research, publications, and speaking engagements focused on the development and passage of the Patient Protection and Affordable Care Act, system delivery and payment reform, safety net providers, primary care, and health workforce policy. Prior to joining CAP, she was a health policy advisor in the U.S. Senate for 5 years—working for both Senate Democratic Leader Tom Daschle, as a Robert Wood Johnson Health Policy Fellow and as Staff Director for the Subcommittee on Aging to the U.S. Senate Committee on Health, Education, Labor and Pensions with Senator Barbara Mikulski. Before coming to Capitol Hill, Dr. Whelan was a health services researcher and faculty member at the University of Pennsylvania and Johns Hopkins University and practiced as nurse practitioner for more than a decade. She has worked in a variety of primary care settings and started an adolescent primary care clinic in West Philadelphia. Dr. Whelan holds a bachelor's degree from Georgetown University, a master's degree and a Ph.D. from the University of Pennsylvania and The Leonard Davis Institute of Health Economics, and completed a postdoctoral fellowship in primary care policy with Barbara Starfield, M.D., at the Johns Hopkins Bloomberg School of Public Health.

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