Robert Wood Johnson Foundation

"The brain changes that happen in teens are designed to pull us forward, to inspire us, to pull us into the future with great joy and idealism and energy."

Diana Divecha, PhD
Developmental Psychologist

"Wellness involves choice and voice—individual choices and systemic choices, and awareness to know that you have voice and how to strengthen your voice."

Howard Stevenson, PhD
University of Pennsylvania

"Adolescents are these very wonderful people at a very creative time. But they are also going through a period of transition and they need particular supports to help them navigate."

Steven Adelsheim, MD
Stanford University School of Medicine

Adolescent Wellness:
Current Perspectives and Future Opportunities in Research, Policy, and Practice

July 2018

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Executive Summary

The Robert Wood Johnson Foundation (RWJF) has long invested in programs that focus on adolescents. These programs have provided valuable insights about the challenges and opportunities involved in improving outcomes for adolescents at high risk or already in trouble. The Foundation also recognizes that the promotion of wellness for all adolescents, through taking a strength-based approach with systems and communities, is a critical building block in the Culture of Health.

This report is designed to assist the adolescent field in that effort as it considers strategies for:

- Undertaking *research* to move the field of adolescent wellness forward;

- Translating research into *policy and practice changes; and*

- *Launching and promoting* efforts that will shape the narrative of adolescent wellness.

About This Report

This report offers a synthesis of perspectives, ideas, and commentary about adolescent wellness from 25 thought leaders in the field (suggested by RWJF staff and other interviewees or found through research), interviewed between May and July 2016. They include researchers, advocates, funders, policymakers, practitioners, and RWJF program officers. The interviews addressed: critical issues in adolescent wellness; gaps in research; translation of research to policy and practice; and opportunities for learning and action. See the Annotated List of Those Interviewed at the end of the report for information on each interviewee.

The authors would like to thank all of the interviewees who generously contributed their time, expertise, and reflections to this report, and to RWJF staff Tracy Costigan, Molly McKaughan, and Kristin Schubert who provided guidance and support throughout.

—Mary B. Geisz and Mary Nakashian, Consultants to RWJF

Adolescent Wellness and the Influence of Context

Wellness is not simply the absence of problems. Wellness involves thriving, having voice, and being self-aware and self-accepting. Experts in adolescence view behaviors that probe and question the status-quo as healthy efforts to create a better world.

While interviewees stress the importance of a holistic approach to adolescent development and wellness that is applicable to just about every young person, they note that some environments make it harder for young people to succeed:

- **Poverty**. The constellation of "lacks"—of adequate housing, good health care, good schools, etc.—that characterize a life lived in poverty undermines wellness. But not all children growing up in poverty experience negative outcomes and the question is: How can we best mitigate the effects of poverty and nurture the development of adolescents?

- **Past and current trauma.** Youth who have experienced adversity and trauma will likely find the path through adolescence to be more difficult than those whose lives have been freer of such experiences.

- **Racism, sexism, homophobia, xenophobia, and other discrimination.** Institutional biases that marginalize individuals and groups affect how adults treat adolescents and can play out in a crisis of identity resulting from the disregarding of one's day-to-day reality.

- **Excessive pressure to excel.** An environment characterized by extreme pressure to succeed or to outdo everyone else—often, but not exclusively, occurring in affluent communities—can have negative effects such as high levels of stress or alcohol and drug use.

- **Social media, the internet, and instant information**. Social media and the internet permeate the adolescent world, bringing both exciting possibilities for engagement and serious concerns about negative comparisons with others and effects on risk-taking and on physical, social, and emotional wellness. The impact of pornography on developing sexuality is further cause for concern.

- **Systems that can lift up or undermine.** A developing adolescent will interact with a range of systems designed by adults to provide some type of guidance, service, care, and/or control—systems that constitute a substantial portion of their day-to-day lives. We took a closer look at one such system, juvenile justice. A Look at Juvenile Justice is located in the Appendix.

Adolescence: The Research Perspective

Advances in neuroscience have demonstrated that the adolescent brain is more malleable than previously thought. Yet, the connections between neuroscience and behavior are subtle and not always fully understood. Interviewees identified several gaps in research. In particular:

- **Failure to integrate research findings into programs**. Applying and scaling research findings in real-world settings is a challenge.

- **An over-emphasis on fixing problems and removing risks.** More emphasis should be put on understanding and developing interventions to foster protective factors, strengths, and resilience, and above all, on helping adolescents thrive.

- **Failure to capture the lived experience.** Research often fails to adequately capture the lived experience of minority adolescents and of marginalized kids who have been deeply and adversely affected by the contextual reality of their lives.

- **Insufficient interest in funding research about adolescents.** Interest among funders does not meet the needs of the field. Funding tends to support large controlled trials over ethnographies, and certain groups or issues receive especially scant attention.

- **Limited collaboration among researchers and limited understanding of how to create effective collaborations.** There is a need for deeper and longer-term collaborative efforts among researchers with different perspectives, between researchers and non-researchers, and across sectors.

Adolescence: The Policy Perspective

Interviewees share a belief that policies regarding adolescents leave much to be desired:

- **Inadequate attention to adolescents among policymakers.** Far more policy attention is paid to young children and older adults than to adolescents.

- **Little policy recognition of wellness.** As with research, policies are problem-focused, not wellness-focused, setting a low bar for success.

- **Diverse views of the role of government**. Some interviewees call for broad national leadership and commitment. Others believe that state governments have stronger levers to drive change. Communities are often overlooked as drivers of policy.

- **The exclusion of adolescents themselves from shaping policy.** It is easy to overlook the contributions that adolescents can make and their desire to be heard.

- **Limited use of research in developing policy.** Research does not routinely inform policy. Yet integrating evidence into policy is possible, as shown in juvenile justice.

Adolescence: The Practice Perspective

Evidence-based programs do not have broad reach and gaps in programs and services remain:

- **Inadequate focus on implementing and scaling practice.** Not enough attention is paid to the challenges of on-the-ground implementation or to implementation science.

- **Running with practice in advance of the evidence.** In the absence of accessible and feasible implementation models, practitioners are developing interventions and running with them. Concepts that have gained momentum and visibility include: "grit," positive youth development, mindfulness, and mobile technology.

- **Limited consideration of culture and context.** Although cultural and environmental contexts have enormous influence over how interventions play out in adolescents' lives, programs often fail to recognize the strengths inherent in cultures and may even misinterpret strengths as problems to be fixed.

Opportunities for Learning and Action

The field of adolescent wellness is ripe with opportunities for further learning and for taking action on what is already known. Key areas of opportunity emerged across the interviews:

- **The field of adolescent wellness needs trusted champions able to make a long-term commitment to moving the field forward.** Champions might drive a movement and messaging campaign to re-frame how adolescents are perceived, or take public action to communicate that now is the time to invest in promoting the wellness of adolescents.

- **Sustained, focused, and well-structured discussions among researchers, policymakers, practitioners, and adolescents themselves are needed to promote learning and to advance this work.** Worthy discussion topics include the balance between broad and targeted interventions and scaling effective practices and policies.

- **Avenues for knowledge sharing and learning throughout the wider adolescent health field should be developed and explored.** Activities to promote learning include the creation of an online learning network, timely dissemination of evidence, and strategies to inform multiple audiences about advances in the field and the cost effectiveness of early intervention.

- **Adolescents themselves, and the on-the-ground programs that serve them, are important and often overlooked sources of learning and inspiration.** Learning can be

maximized by bringing adolescent voices to the field in meaningful ways, and by drawing on the knowledge and expertise of local programs.

- **Research can advance learning by focusing studies on issues about which less is known or on which consensus is lacking.** Examples include studies that will contribute knowledge to the field, address the environments within which adolescents live, and bring attention to the strengths and needs of adolescents who have been overlooked or underserved.

Adolescent Wellness: Current Perspectives and Future Opportunities in Research, Policy, and Practice

Introduction

> *"Adolescence is a time of igniting passions--- and a time when youth are trying to figure out who they are and can pivot quickly in new directions. Even kids who have struggled under a lot of adversity can become inspired, and with some support can take off in a positive direction (at the same time they are also vulnerable to risks for downward spirals in their lives). It is an exciting time to do some innovative things in this area." —Ronald E. Dahl, University of California, Berkeley*

Most adults have little trouble recalling their adolescent years. This is when we began testing the limits of parental control; started dating and developing our sexual identities; entered and completed high school; earned our driver licenses; got jobs; and explored our political, religious, and social values.

The June 2016 report "Our Future: A Lancet Commission on Adolescent Health and Wellbeing"[1] notes "Adolescence is characterised by dynamic brain development in which the interaction with the social environment shapes the capabilities an individual takes forward into adult life..."

> *"Investments in adolescent health and wellbeing bring benefits today, for decades to come, and for the next generation." —Lancet Commission on Adolescent Health and Wellbeing*

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[1] Patton, GC et al. "Our Future: A Lancet Commission on Adolescent Health and Wellbeing." *The Lancet*, 387, 10036:2423-2478, June 11, 2016. Available online.

[2] Steinberg L. *Age of Opportunity: Lessons from the New Science of Adolescence*. New York:

Advances in neuroscience and prevention research, the increasing length of adolescence—with education into the mid-twenties and later marriage and parenthood—and the explosion of technology and social media offer new opportunities to harness the energy and passion of adolescents. These advances provide tools for parents, teachers, policymakers, and institutions to encourage and support adolescents to build healthy and happy futures for themselves and to forge a better world for all of us now and for the next generations.

Yet, these advances are accompanied by significant challenges and threats for many adolescents. Neighborhood violence, income inequality, structural racism, and intrusive and offensive messaging through social media are just a few of the obstacles in their path to adulthood. As a result, too many adolescents are not thriving. American high school students lag behind teens in many other developed nations on measures of achievement, and they exhibit high rates of obesity, unwanted pregnancy, sexually transmitted diseases, illicit drug use, and other negative behaviors and outcomes.[2]

A new approach is needed. Too often, when adolescents start engaging in risky behavior, adults and institutions focus on damage control rather than on nurturing and reinforcing adolescents' natural drive to propel themselves, and the world, forward. It is important to use all the tools available and to engage all comers to take up the mantle of adolescent wellness.

"The goal can't be just to avoid disaster—that shouldn't be enough. I don't know a single parent who would say that is a reasonable goal for what she or he wants for their teenagers." —Laurence Steinberg, Temple University

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[2] Steinberg L. *Age of Opportunity: Lessons from the New Science of Adolescence*. New York: Houghton Mifflin Harcourt, 2014.

Adolescence and Adolescents: An Overview

Adolescence is a unique period of life, covering a range of years and several developmental stages. Often, researchers, policymakers, and practitioners interested in adolescents focus too much on simply preventing bad outcomes and not enough on promoting social and intellectual growth and exploration.

This section sets the stage for the report by providing a quick snapshot of adolescence and adolescents in the United States today. We offer a definition of adolescence along with information about adolescents' socioeconomic status, their race and ethnicity, and where they live. We posit that efforts to improve outcomes for adolescents should focus on their overall wellness and well-being, rather than on merely helping them get through a difficult stage of life, and we offer perspectives on what adolescent wellness looks like.

Definition of Adolescence

Different organizations define adolescence in varying ways. In this report we use the World Health Organization definition of adolescence: "Those people between 10 and 19 years old."[3]

This age range is, of course, quite wide, with the developmental status and experiences of 10- and 11-year olds in late elementary and early middle school being vastly different from those of 18- and 19-year old young adults in college, the military, or the working world. Accordingly, adolescence can be roughly divided into three developmental stages: early (10 to 14), middle (15 to 17), and late (18 to19). Some definitions extend late adolescence into the early, or even mid, twenties.

Adolescent Demographics

There were almost 42 million adolescents between the ages of 10 and 19 in the United States in 2014, according to the U.S. Department of Health and Human Services Office of Adolescent Health.[4] Some statistics:

- Just over half (51%) are **male** and 49 percent are **female**.

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[3] World Health Organization website, 2016.

[4] Data in this section, unless otherwise noted, come from the U.S. Department of Health and Human Services Office of Adolescent Health, "*The Changing Face of America's Adolescents*," drawing from the Current Population Survey, 2014 and 2015.

- Half are **ages 10-14** and half are **ages 15-19**.

- Almost one in five (18%) adolescents lived **below the federal poverty line in 2014.**

- Adolescents in 2014 reflected the **racial and ethnic diversity** that characterizes the United States today:

  o White: 54.1 percent

  o Hispanic: 22.8 percent

  o Black: 14.0 percent

  o Asian: 4.7 percent

  o Multi-racial: 3.4 percent

  o American Indian Alaska Native: 0.9 percent

  o Hawaiian and Other Pacific Islander: 0.2 percent

- About a quarter (26%) **live within a city**, while 14 percent live in a **non-metropolitan area**. The rest live within a metropolitan area, but **not in the main city**.[5]

- Almost two-thirds (64%) **live with both parents,** while 30 percent **live with one parent** and 6 percent **live with neither parent.**[6]

Adolescent Wellness Described

Wellness is not simply the absence of problems. Adolescents who are well may not be problem-free, and adolescents who are not well may not demonstrate observable problems. Wellness involves thriving, having voice, and being self-aware and self-accepting.

- Wellness is "the degree to which adolescents use their voices to tell stories about what's going on in their lives that includes their lens, coping approaches, and any positive or negative feelings they have," says **Howard Stevenson**, **PhD**, **MA**, Constance E. Clayton professor of urban education and professor of Africana studies at the University of Pennsylvania.

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[5] Place of residence data are from the Bureau of Labor Statistics and the Census Bureau: "March 2013 estimates of Current Population Survey," cited in the *Adolescent Health: Think, Act, Grow 2016 Playbook*.

[6] Living arrangement data come from the "February 2013 U.S. Census Bureau Current Population Survey," as cited in the *Adolescent Health: Think, Act, Grow 2016 Playbook*.

- Three areas that indicate wellness, according to developmental psychologist **Diana Divecha, PhD**, are: a sense of self, engagement with the world, and at least a few satisfying relationships.

- **David Barth, JD**, director of youth opportunity and learning at the Ford Foundation, hopes for "young people having available to them as many choices as they can possibly have and having the ability to make good and healthy choices for themselves."

- The focus should be on overall wellness, "which is not symptom-based or problem-based," stresses **Suniya Luthar, PhD**, Foundation professor of psychology at Arizona State University, "but looks at the whole child or youth."

A Time of Hope and Promise

In contrast to prevailing societal views, experts are enthusiastic about the potential of adolescence as a time of creativity, exploration, and growth. They view behaviors that probe and question the status quo as healthy efforts to create a better world—efforts that should be guided and supported.

- For too long, adolescence has been depicted as "a dreary period of life during which kids are unmanageable and unhappy," says RWJF Interim Assistant Vice President - Program **Kristin B. Schubert, MPH**. Developmental psychologists, neuroscientists, and caring parents and service providers, however, remind us that this time is marked by tremendous physical, intellectual, and emotional growth; the forming of new relationships with adults and peers; and a sense of optimism about playing an important role in forging a better world. "No social movement has ever happened across the globe that wasn't fueled by the power of adolescents and young adults," Schubert notes.

- Temple University's **Laurence Steinberg**, PhD, Laura H. Carnell professor of psychology, notes that the adolescent brain is especially influenced by experience. It is a time of malleability, equivalent to the malleability of early years. Adolescence is the last period when the brain is this plastic. As the title of Steinberg's recent book[7] notes, it is truly an "age of opportunity."

- "To create a world of school communities where kids know that their emotions are welcomed and valued would be a great gift to all young people—and would help to shift the climate in these communities to promote overall well-being," according to **Robin Stern, PhD**, associate director of the Yale Center for Emotional Intelligence.

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[7] Steinberg L. *Age of Opportunity: Lessons from the New Science of Adolescence*. New York: Houghton Mifflin Harcourt, 2014.

Context Matters

Emerging neuroscience has provided important insights into the workings of the brain during the adolescent years—insights that apply to all people going through adolescence. At the same time, young people do not mature in a vacuum, and the contextual and environmental factors that surround them have profound influence on the opportunities available to them, the challenges they face, and the coping mechanisms they select.

In this section, experts address the importance of considering the adolescent development trajectory holistically, in an approach that is applicable across the full range of young people. But they also acknowledge the very real and significant role that context plays in the day-to-day experience and long-term outcomes for adolescents who face circumstances that are far from supportive of their successful maturation and ongoing well-being.

A Holistic Approach to Development and Wellness

The adolescent period is a time of exploration and change that is rich and exciting in its own right, while at the same time critical to developing a child into a productive and mature adult prepared to make his or her way in the larger world. The context in which an individual goes through adolescence can nurture and support—or impede or derail—the journey to a productive and happy adulthood.

The experts interviewed stressed the importance of taking a holistic approach to adolescent development and wellness. This approach focuses on supports that all adolescents need, and recognizes and promotes the protective factors that can make all the difference in the adolescent trajectory. Interviewees are well aware of the critical influence of contextual and environmental factors on a young person's potential, but believe that adolescent development and wellness must first be considered in a broad context that encompasses and supports all adolescents.

- "If we really understand the developmental science and we are broad and inclusive in terms of the complex interactions between that influence, learning and development, the model [of strategic science-informed interventions] should be relevant and inform unique windows of opportunity for positive change and if it isn't, then it is the wrong model," says **Ronald E. Dahl, MD**, professor, community health sciences, and director, Institute of Human Development, at University of California, Berkeley. "I don't want to see further fragmentation as to what is being done in the field of mental health, what is being done to understand healthy social development, and what is being done under the auspices of social and emotional learning in education settings. I don't want to fragment

into individual racial, socioeconomic, or sexual identity groups. We will gain more by thinking more broadly about our approach to development."

- **J. David Hawkins, PhD**, endowed professor of prevention emeritus and founding director of the Social Development Research Group at the University of Washington, agrees. "You have to do both [take a universal approach and include those at greatest risk]. If you reach those at highest risk *and* do universal prevention, you can improve the whole public health."

- **Kimber Bogard, PhD,** senior vice president of strategy and programs at the New York Academy of Medicine, believes that creating a context for wellness is both important and feasible. "There are things we can do to set up the environment to support adolescents— to feel connected, to explore their identity, and to experience different ranges of feelings and emotions that would probably help them to come out better on the other end."

- "What we do to promote adolescent wellness might not be different than what we should do to prevent problem behaviors," says **José Szapocznik, PhD**, chair emeritus, Public Health Sciences and honorary founding director, Miami Clinical Translational Science Institute at the University of Miami Miller School of Medicine.

"You need opportunities for involvement in productive prosocial roles, skills to be successful in these roles, and consistent systems of recognition and reinforcement...And you need two more protective factors: bonding to family, school, and peers, and clear standards for behavior." —J. David Hawkins, University of Washington

Some examples support this holistic view:

- "There is a huge interest in transgender youth right now," notes **Dahl**. "Sexual identity is a powerful aspect of adolescent development, figuring out who you are as the physical and emotional changes are occurring during puberty. These are huge issues for all kids and of course they are intensified for some kids. But if you just pull out subgroups of kids with particular kinds of issues and only study them, we won't be as successful in advancing a deeper understanding that can inform ways to help a wide range of kids struggling with relationship and identity development in broad ways."

- "I wonder about the unintended consequences of that [employing targeted rather than universal strategies]," says **Alexa Eggleston, JD**, senior program officer, domestic programs, at the Conrad N. Hilton Foundation. "I think about some of what has transpired with the methamphetamine and opioid epidemics largely occurring, at least initially, in rural white communities. Is it because we have historically and mistakenly

seen substance use largely as an urban issue and targeted resources there? We need to embrace comprehensive public health frameworks that balance the need for universal and targeted interventions."

- "Mental and physical wellness, or their absence, co-occur in the same neighborhood," *Szapocznik* points out. "Psychological and behavioral problems occur in the same geographic locations as unwanted pregnancies, HIV, drug addition, Hepatitis C, shortened life span, and many other health and social problems. The impact of contextual factors in neighborhoods—and families—are powerful influences in promoting wellness. Interventions at the community and with families have the potential to promote mental and physical wellness. Even interventions that might target a single outcome, if conducted at the level of the family or neighborhood, are likely to have broad impact in promoting physical and mental wellness."

The Influence of Context

While promotion of positive development and the creation of interventions designed to assist adolescents overall are important, the challenges youth face when their environments do not foster well-being cannot be ignored. The reality is that some environments make it harder for kids to succeed. Many of the interviewees believe that that is where the resources should be directed, and they point to some contextual factors that have particular impacts on young people living in those environments.

Economic Insecurity, Trauma, Discrimination

Environmental factors such as economic insecurity, trauma, and discrimination affect how and how well young people navigate their adolescence and their transition to productive adulthood. These factors interact with individual characteristics such as genetic make-up, age, and presence or absence of physical or emotional problems in fostering or inhibiting adolescent well-being.

At this critical period of brain development, too many adolescents experience deep levels of adversity that put them at greater risk for dropping out of school, engaging in criminal activity, or using substances. In particular, marginalizing people through poverty, structural and institutional racism, sexism, homophobia, and xenophobia creates layers of urgent challenges that stymie parents and institutions and prevent the development of wellness.

Poverty

The constellation of "lacks"—lack of adequate and safe housing, lack of good health care, lack of strong educational institutions, lack of opportunities for physical activity, lack of food security, etc.—that characterize a life lived in poverty has many potentially negative implications for adolescent wellness. This reality cannot be ignored.

- At the Ford Foundation, says *David Barth*, "we basically say 'If you are in persistent poverty—that is trauma.' To me, the policy interventions should be around the kids who need it the most. We are a nation that should be providing opportunity, and if there are extreme manifestations of inequality, we should look at that. There is nothing wrong with saying 'Where is the inequality? Where are the failures?'"

- Even when services for low-income people exist, they are less effective than they could or should be. According to the University of Miami's *José Szapocznik*, "There are lots of services being provided to populations in need but there is such fragmentation that the systematic and comprehensive scale at which impact needs to occur is not being attended to.... No one is looking at the big picture and saying: 'What are the three most important things we have to do in this community to improve the wellness of adolescents and their families?'"

But not all children and youth growing up in poverty experience negative outcomes and the relationships between children and poverty are complex. The question is: how can we best mitigate the potentially negative effects of poverty and nurture the successful development of adolescents in that context?

- Temple University's *Laurence Steinberg*: "What happens [when we target certain groups] is that we overlook the fact that not all kids growing up in disadvantaged communities have problems, and they deserve to grow up in a context where adults care about facilitating their positive development and not just on correcting their problems. That leads to setting the bar lower in the work we do in those communities."

- *Szapocznik* offers a perspective about whether we have to change the mediators of poverty or whether we have to change the context itself.

  "The context is poverty—the lack of access to opportunities and the culture that builds in poor communities of hopelessness and being overwhelmed with surviving and not being able to nurture the next generation. The basic fundamental context issues are difficult to change.

  "Then you have the mediators, such as improving parenting or family functioning. The question, then, is 'If we had interventions strategically organized to help parents across the

life course of their child, could we help these children escape the cycle of poverty and crime and move up and beyond?' I don't think anyone has really answered that question."

"Can we, by attacking mediators in a comprehensive and systematic way—not the haphazard way we have been doing it—can we improve outcomes for the next generation? Or do you have to tackle some of the fundamentals of the neighborhoods and the communities?" —José Szapocznik, University of Miami

Past and Current Trauma

The literature on the short- and long-term negative effects of adverse childhood experiences[8] is extensive and well-known. Youth who have experienced adversity and trauma in their lives will likely find the path through adolescence to be much more of a struggle than those whose lives have been freer of such experiences. They need—and deserve—attention and support that may be lacking in their personal contexts.

- *Angela Diaz, MD, PhD, MPH*, is director of the Mount Sinai Adolescent Health Center, which serves the medical, mental health, and prevention education needs of underserved and at-risk youth. She notes: "Probably the major impediment to a healthy life for a young person is having had the history of childhood physical, sexual, or emotional abuse and neglect, or trauma, and the impact of violence. When children who have that history become teenagers they are much more likely to develop problems like depression and suicidal ideation and substance abuse and stress and poor sense of self."

- *Steven Niles Adelsheim, MD*, clinical professor, psychiatry and behavioral sciences, Stanford University School of Medicine, and director, Stanford Center for Youth Mental Health and Wellbeing, agrees. "If you're trying to support communities of young people who have been traumatized from a very early age that are also dealing with the effects of that early trauma—when you're getting to adolescents, you can't ignore the trauma they faced and the intellectual challenges that come with having very high cortisol levels at a very early age from huge amounts of stress."

- "Adverse childhood experiences are likely contributors to behavioral and mental health problems that some children have," University of Washington's *J. David Hawkins* says.

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[8] Adverse childhood experiences (ACEs) include physical, sexual, and verbal abuse; physical and emotional neglect; mental illness of a family member; alcoholism or drug addiction of a family member; witnessing the abuse of a mother; losing a parent to divorce, separation, or other reason (including incarceration). Other traumatic events also can have a negative impact on child, adolescent, and adult health and well-being. See ACES Too High for more information.

"An emphasis on ensuring that you are providing resources to build protection into high risk environments is really important because if you look at kids in high risk environments, you will see that there are lower levels of protection."

Structural and Institutional Racism, Sexism, Homophobia, Xenophobia, and Other Discrimination

Structural and institutional biases that marginalize individuals, groups, communities, and cultures affect how adolescents are thought about and treated by adults. These hostile environments shape adolescents' emotional, psychological, and social development in significant ways.

- "The way we think about different groups of adolescents is one angle. They have very different access and different opportunities to choose from, and that defines limits or boundaries," says the University of Pennsylvania's ***Howard Stevenson***, describing how black youth are forced to navigate hostile environments and how doing so affects their development—a point that applies to other sidelined groups of adolescents. "There is a lot to support the notion that how adults in those systems [schools, police, etc.] treat them and see them has a major influence on the kinds of outcomes that these youth have."

Bias and discrimination can play out also in the crisis of identity that may result from one's day-to-day reality being disregarded or minimized. For example:

- Despite comprising almost a quarter of the adolescent population, not enough attention is directed at really understanding Latino youth and their lives and concerns, according to ***Britt Rios-Ellis, MS, PhD***, dean of the College of Health Sciences and Human Services at California State University Monterey Bay. And among those, she notes, there are the identity issues faced by those of mixed race/ethnicity kids: Latino-white, Latino-black, Latino-Asian. "It's the 1.5 generation," she says, "and how they handle and find ways to balance their identities, their languages, their family structures within their mixed race/mixed ethnicity status and how that balance moves them forward."

- The Native American experience is "generally not prioritized by anyone," notes Stanford's ***Steven Adelsheim***. Yet, Native American youth experience "huge" disparities in education, health care, and other supports and systems.

- Both girls and boys are negatively affected by how young women are portrayed in the media. "The way that girls are objectified and sexualized in the media, and particularly in social media, obviously has a strong impact on girls," says ***Naomi Katz, MA***, co-founder of Her Wisdom, a nonprofit organization dedicated to cultivating the uniqueness of women's leadership. But, she stresses, "It also creates a lot of pressure for boys about

how they think girls should look, how they think girls should act, what they think
sexuality should be like."

- The LGBTQ community of color is one that "we still have to learn a lot about," says
RWJF Senior Program Officer **Maisha Simmons, MPA**. "In terms of pathways to
wellness, being in schools, and being in loving families, LGBTQ young people are most
likely to be rejected by their families. Adolescence is when they start presenting their
sexual identity."

**Responses by adolescents to the negative ways in which they are treated by adults in
authority merit consideration for their potential as protective and appropriate.**

- "The failure to address the de-humanization in our thinking around adolescents and the
trauma effects that come from that de-humanization, is an over-arching frame," says
Howard Stevenson. "I am thinking primarily about youth of color and youth who are
different. We haven't captured very much about how the larger conceptualization around
the difference is influencing how they have voice or choice. … The attitude that young
people have towards authority gets misinterpreted as somehow aberrant or abnormal or
not human, almost animal-like. It's [seen as] aggression, instead of passion. I think we're
missing that they are reacting to systems' threats toward them. You want authority to be
able to not de-humanize the aggression of kids of color, but to see it differently, as
something that could be useful."

- "I see a lot of strengths in the Latino community," says **Britt Rios-Ellis**, "but I don't see a
lot of discussion about these strengths. I see, at best, a lowered set of expectations that is
often liberalized as the '*Oh pobrecito'* ('oh poor thing') model. This is both
condescending and racist to Latinos and all underrepresented minorities for that matter.
We need to recognize and acknowledge that populations who have struggled are resilient
and that it is often the strengths of their cultural values, such as *comunitarismo,
familismo,* and *personalismo* that facilitate their success."

Excessive Pressure to Excel

**A family and/or school environment characterized by extreme pressure to succeed or to
outdo everyone else—often, but not exclusively, occurring in especially affluent
communities—can affect youth in significantly deleterious ways, including causing high
levels of stress and anxiety or alcohol and drug use and dependence.**

*"It is really important to take another look at what it means to
achieve. Particularly for parents' relationships to their kids'
achievements and what it means to be successful, both as a student*

and as a human being, we owe it to our kids to own the undue stress and pressure that we put on kids to be that or do that. That needs a complete overhaul." —Robin Stern, Yale University

- The focus on academic and other kinds of external achievement can take a real toll on a young person's social and emotional development, with lasting negative consequences for them and for society. As *Naomi Katz* points out, "Kids who are raised to be academic powerhouses, often learn that the last thing on their agenda is to develop emotional intelligence, to really invest energy in developing meaningful relationships. Too often, they learn that their peers are their competition, rather than their support system. And many of these kids will grow up to be our future leaders."

- There is limited interest in studying the effects of this pressure when it is associated with adolescents in high-achieving schools, according to *Suniya Luthar* at Arizona State University. "There is a gut tendency to want to ignore them," she says. "There can also be some level of judgment from scientists as well as the lay public about: 'not them again, these privileged kids who have it all.'"

Social Media, the Internet, and Instant Information

Adolescents today are growing up in a different world from the one their parents knew—a world that is changing more rapidly than at any time in human history. Advances in science and technology, the information explosion, and the global economy are transforming how adolescents learn, play, relate to others, and grow into adulthood.

Adolescents spend a great deal of time interacting with technology—on smartphones and computers, through social media and websites—time that can diminish that spent in activities (such as physical activity, sleeping, in-person engagement with family and friends, etc.) that foster physical, social, and emotional health and wellness, notes RWJF Senior Learning Officer *Tracy Costigan, PhD*.

The reach and potential of social media and the internet are pervasive and can be positive.

- Social media permeates the adolescent environment and its impact cannot be overestimated**.** *Naomi Katz* observes that with social media, there is no getting away from a social situation—"It's present on the weekend and it's present in the evening and it's pervasive in a way that we can't imagine."

- "Digital media and broadband technologies offer outstanding new possibilities for engagement and service delivery," concludes the *Lancet Commission*. Adolescents are

high users of social media, phone apps, and the internet. Organizations are emerging that seek to engage adolescents through use of such digital technologies.

Easy access to posting and viewing violence, pornography, and disturbing photos and videos on the internet feed into the risk-taking and adventure-seeking sides of the adolescent brain. These images are not usually tempered with others that promote thoughtful decision-making.

- "People are constantly comparing their insides with other people's outsides when they're involved in social media," says Yale's **Robin Stern**. "That's a huge danger, and they're growing up with that in this culture."

The availability of pornography at a time when adolescents are beginning to explore their sexuality and developing their sexual identities is especially concerning.

- **Katz** notes, "Having access to the internet means having access to pornographic images, which are giving young people distorted perceptions about sex. This type of sexual education demeans both men and women. If we want to have healthy young people who then grow into healthy adults, we have to address that issue."

- "Video games and pornography and their ready access are re-wiring kids' brains," says developmental psychologist **Diana Divecha**.

Systems That Can Lift Up or Undermine

A developing adolescent will interact with a range of systems designed by adults to provide some type of guidance, service, care, and/or control—systems that constitute a substantial portion of their day-to-day environment. Nearly all young people are part of the education system and have some interaction with the health care system. Depending on the adolescent's own circumstances, behavior, and needs, he or she may also become enmeshed in a range of other systems, such as special education, designed to address specific problems. These systems have enormous legal control over their adolescent lives and, consequently, significant influence over their adult futures.

In particular, youth involved in the child welfare, substance abuse, mental health, or juvenile justice systems are some of the most vulnerable and needy, for whom the concept of adolescence as an exciting time of exploration and transition to adulthood is nothing more than wishful thinking. The knowledge needed to develop appropriate interventions for kids involved in these systems may be inadequate or non-existent or, even where evidence is available, the resources and will to implement these interventions may be lacking. For example:

- **Alcohol and drug misuse are serious inhibitors of successful adolescent development.** "Young people can't have health and wellness or reach their potential in life if they are struggling with substance misuse or addiction," says the Conrad N. Hilton Foundation's *Alexa Eggleston.* Yet, the trajectory for adolescents with substance misuse issues is often misunderstood. "Despite the fact that use during early adolescence is a key predictor of developing a problem later on, people often dismiss adolescent substance use as a 'rite of passage' or a symptom that will dissipate with other interventions," she explains. "We know many young people become involved with substance use as a coping mechanism for other challenges and therefore we need comprehensive tailored responses, including substance-use specific interventions and treatment, to support the health and well-being of young people."

- **One-half of all mental health conditions are apparent by age 14, and three-quarters by age 24.** "The literature is really clear that early identification and intervention for mental health issues has huge lifelong benefit," notes *Steven Adelsheim*, "But as of yet we don't have in this country the public health systems or the public mental health systems to provide early recognition and support for young people with mental health needs. The early intervention focus is an important part of building adolescent wellness."

These systems are often underfunded and understaffed. Policy may follow public opinion of the moment, rather than the actual needs of the developing individual. But when officials and key staff are open to learning and change and, where needed, sufficient legislative support can be gathered, they hold the potential to alter the expected life course of a vulnerable young person.

As one example of system-driven context, we took a closer look at juvenile justice—the system that, according to *Robert Schwartz, Esq.*, co-founder and executive director emeritus of the Juvenile Law Center, trumps the rest and "wins whenever it wants to." A brief overview, entitled A Look at Juvenile Justice located in the Appendix, offers key points drawn from interviews with several experts who have extensive experience working with the juvenile justice system.

Adolescence: The Research Perspective

A robust body of evidence provides a sound foundation to explore strategies for promoting adolescent wellness and to offer guidance to policymakers and practitioners. Advances in understanding developmental psychology and neuroscience allow researchers to dig deeper

into the physiological, emotional, and neurological changes throughout the adolescent years. Still, multiple and significant knowledge and research gaps remain.

This section identifies some recent advances in research. It then explores key knowledge gaps such as difficulties in the implementation and scaling of interventions, lack of attention to the lived experiences of adolescents, and inadequate focus on marginalized groups or groups too small to be captured in large studies. It concludes with observations about the limitations of research designs that emphasize large-scale randomized, controlled trials, and about the need for more substantial collaborations among researchers in multiple disciplines.

What We Know (Quite a Lot!)

There is a general sense that a lot is known about how to promote adolescent wellness. Decades of prevention research, multiple studies of protective and risk factors, and the growth of developmental science as a field of research have provided findings and insights that could be used to inform public policy and practice on the ground. Advances in neuroscience have contributed to the knowledge base.

Advances in neuroscience have demonstrated that the adolescent brain is more malleable than previously thought.

- Berkeley's **Ronald Dahl** emphasizes that the brain interacts with the developmental stage and patterns of experience in complex ways. He sees this interaction as having the potential to identify modifiable patterns of experiences, influences, or the kind of learning that can create positive trajectories.

- Temple's **Laurence Steinberg** agrees, adding: "The malleability that helps kids do better also makes them open to bad influences.... There is more dopamine in the brain at this time, so good things feel even better during adolescence...This makes kids seek out those experiences—sensation-seeking increases dramatically during early adolescence. At this time, the parts of the brain that regulate impulse control are still developing, but the pleasure-seeking part is more developed."

- "We've learned that this system of kids' ability to inhibit their responses, self-regulate, self-control, and so on is an underdeveloped system, says **Laurie R. Garduque, PhD**, director of criminal justice at the MacArthur Foundation. At the same time "the sensation-seeking part of the brain is alive and well."

"Kids don't take risks because they are uninformed. They take risks because they don't have the braking systems in place." —Laurence Steinberg, Temple University

- *Diana Divecha* sees opportunities to apply this emerging understanding: "We have a choice about responding from our limbic system versus engaging the frontal lobe. The 'feeling' and 'thinking' regions of the brain connect up across development. But we could be nudging that connectivity earlier and more intentionally, teaching these two parts of the brain to talk to one another better. Only recently, evidence-based programs in emotional intelligence and the social and emotional learning movement are starting to try that."

The connections between neuroscience and behavior are subtle and not always fully understood.

- "They [researchers, agencies, and organizations] often think they want neuroscience when what they want is the developmental science informed by the neuroscience," says *Dahl*. "What I mean by that is that the neuroscience doesn't translate simply or directly into any policy...When people try to take too linear a path from the neuroscience to translation I don't think it usually serves either the neuroscience or the translation."

- The adolescent period is sometimes called the "second zero-to-three"—the second period of brain development. "There is a point in adolescence when the brain is starting to go back and prune out some of those unnecessary pathways," Stanford's *Steven Adelsheim* explains. "It's a time of risk and development. When we look at impulsivity, adolescent risk behaviors, there is a biological explanation for them. We're trying give [adolescents] the skills to manage stress. As a part of developing resiliency, we're looking at ways of helping them learn to cope with difficult situations and to avoid the maybe one really bad choice that could potentially have a lifelong impact."

What We Don't Know (Research Gaps)

Despite advances in knowledge, interviewees expressed concerns about a poor track record of applying evidence-based interventions in communities and they noted some areas where more research is needed.

Failure to Integrate Research Findings into Programs

Applying research findings to real-world settings is an ongoing challenge, as is implementing programs at a large enough scale to allow significant and permanent impact. Research is needed on how to do that.

Many interviewees offered this view, and some of their observations follow. See the section of this report Adolescence: The Practice Perspective for more discussion about program implementation.

- *Jennifer Ng'andu,* RWJF Interim Managing Director - Program, says "There is a lot out there that suggests what a critical period this is. Where we get a little stuck is with the implementation science."

"We need a national mechanism for moving effective interventions that promote adolescent mental wellness into wherever the frontline of practice may be...It is everywhere where there is an interface between a child and another system." —José Szapocznik, University of Miami

- "Creating behavior change is an unknown and unexplored lever," says developmental psychologist **Diana Divecha**. "We can know [what should be done] until we are blue in the face, but how do we actually help people change? This is the holy grail of psychology."

- There are many effective programs that are not being implemented, both *J. David Hawkins* and *José Szapocznik* point out. "We need to take advantage of the fact that we have all of these effective parenting programs and recognize that no one goes to these programs and few organizations provide effective programs in any consistent fashion," says **Hawkins**. **Szapocznik** agrees. "We now have maybe 50 family-based interventions that have sufficient evidence that they could be implemented, and the real challenge is moving them from research to practice."

An Emphasis on Fixing Problems: A Low Bar

Too much research focuses on fixing problems and on removing risks. More emphasis should be put on understanding protective factors and cultural strengths and assets, and on helping adolescents thrive.

- RWJF's **Jennifer *Ng'andu*** sees this gap: "The [traditional research] idea is to design programs for those risks—as opposed to thinking about: What are the conditions that really help adolescents to flourish, to reduce risk, and to tap into their assets in order to be successful? That's where I see some of the bigger gaps."

- California State University's **Britt Rios-Ellis** agrees that "We haven't spent enough time understanding protective factors. Even our national perspective is framed from a deficit model. … Reinforcing what's strong and diagnosing what's needed—to me, that's important."

- **Kristin Anderson Moore, PhD**, senior scholar, youth development, at Child Trends, says, "Treatment's important, but we need more anticipatory, universal, positive, promotive strategies to be researched and we need efficient, cost-effective strategies."

Several examples of the over-emphasis on problem-fixing are offered:

- **Steinberg** is concerned that "In those studies, all kids who don't have depressive symptoms are treated the same even though some are just getting by without being depressed and others are exhilarated most of the time." He suggests that that research is needed on what will "elevate the positive well-being of young people"—in a proximal context (what parents or teachers can do that matters) and in an aggregate context (the qualities of a community, society, or country that elevate wellness).

- **Rios-Ellis** describes ways research has neglected significant parts of Latino culture. "The two things that we've studied the most are *machismo* and *marianismo*. So, we've studied over-dominant, violent men and we've studied passive women. But we haven't studied things like *sympatia*, the desire for harmony. We haven't studied *confianza*, the issues associated with trust and what that can bring. We haven't studied *familia ista* enough, unified families."

- **Evelyn M. Kappeler,** director of the federal Department of Health and Human Services Office of Adolescent Health, sees a similarity with work in the area of teen pregnancy and reproductive health, where there "has been an ongoing conversation about how we move away from preventing specific conditions or diseases and talk more holistically about wellness and promoting other behaviors that help adolescents achieve well-being."

Two interviewees note the importance of establishing measures of wellness.

- **Steinberg** believes that measuring wellness is "the most important emerging issue." He asks, "If a school was interested in promoting positive well-being, how would it measure it? How would it see if its changes in curriculum and practice were having hoped-for results?"

- Child Trends' deputy program area director **Brandon Stratford, PhD,** shares this interest. "We need to have measures of these positive traits and skills and stages that we want kids to achieve."

Not enough is known about adolescent resilience—how young people fare under trauma, the complexity of resilience, and how to develop interventions that foster resilience.

- Stanford's *Adelsheim* hopes to see more work in this area. "We still have gaps in models for building resiliency in young people."

- "If you know what makes people resilient you can develop interventions," says Mount Sinai's *Angela Diaz.* There needs to be "research into protective factors that can be strengthened through interventions to foster resilience."

- *Linda Liebenberg, PhD,* director of Everfair Research and Evaluation Consulting, describes the facets of resilience. "Understanding resilience [on an individual level] is really messy business. When you think community resilience, it just gets messier and even more complex and difficult to define. I think of resilience more as an interactive process incorporating personal resources and supports located in relationships and communities. When people are living in very high-risk situations that process becomes very complex."

Failure to Capture the Lived Experience

Research too often fails to adequately capture the lived experience of minority adolescents and of marginalized and vulnerable kids who have been deeply and adversely affected by the contextual or environmental reality of their lives.

- Drawing on his experience studying the lives of black youth, the University of Pennsylvania's *Howard Stevenson* notes serious gaps in the research base, including the overreliance on race as a binary construct, the lack of consideration of racial stress as a mediating variable, the non-inclusion of the lived experiences of youth of color, measuring the impact of de-humanization on black youth, and sample sizes in randomized, controlled studies that are too small for adequate sub-group analyses. He asks, "What are the lived experiences of black people that are different from other groups? Do we have a way of capturing that to explain the outcomes? And not just the outcomes, but the quality of relationships with the adults in these systems."

- We should not overlook the power and potential of adolescents who have come through traumatic experiences, cautions *David Barth* at the Ford Foundation. "That means understanding the effects of their circumstances on an individual level and having dedicated and available the kinds of support they need to maximize those skills they have that are going to allow them to transition successfully. Kids who come through trauma, adversity, persistent poverty, exclusion, criminalization, have tremendous gifts we fail to tap."

The experiences of adolescents from groups too small (e.g. Native American or Alaskan Native adolescents) or too difficult to track down (e.g., immigrant, homeless, or

trafficked adolescents) are often not captured in traditional randomized controlled trial studies.

• ***Kimber Bogard*** notes the problems when these adolescents are dropped from analysis in research. "We don't have a lot of information on populations of youth from multiple cultural groups or those living in vulnerable situations because of small sample sizes. When we look for estimates on vulnerabilities or resilience in these populations of youth, we cannot find them. Some populations that should be included in larger numbers in our studies include Native Americans, Alaskan Natives, Hawaiian Natives, as well as other groups of youth who may be living in potentially vulnerable situations, including homeless youth, youth living in rural Appalachia, and youth who are sex-trafficked."

All kids benefit from thoughtful, careful attention—by researchers, parents, teachers, and the other adults in their lives—to what they are really experiencing and feeling.

• *Naomi Katz* of the Her Wisdom underlines this point. "When you actually ask young men or young women how they feel about something, or what they think about it, it takes them a few minutes to understand that you're really serious and that you really want to hear what they have to say. Even the most outgoing, self-confident young people still aren't used to that because it's not a normal thing in today's society, unfortunately."

Pre-Adolescents and Younger Adolescents

Little research attention is paid to "tweens:" the 9-12 age group. These years are marked by external and internal transitions as children move from elementary to middle school and by physical and hormonal changes that accompany the onset of puberty.

• "There has been work on birth to 5 and birth to age 8; adolescence is a period that garners attention as well; but much less research and time is spent thinking about children in the age 9-12 age range," says ***Kimber Bogard*** from the New York Academy of Medicine. "This is a transition period where young people are exercising their independence. There's an increasing separation from caregivers. They're negotiating their goals. They're experimenting with their identities. There are all these different peer networks."

"There is so much going on there [ages 9-12]. I wish there was more research on this period of development" —Kimber Bogard, New York Academy of Medicine

• ***Ronald Dahl*** of the University of California, Berkeley agrees. "I am glad to see that the early part of your report includes a broad range down to age10. We ought to say, '10 to

13,' or '9 to 14,'— that window may be one of the most dynamic windows where the right kind of scientific understanding of unique opportunities for positive intervention and the timely targeting of those interventions could really impact multiple outcomes."

Research Funding

The level of interest among funders in issues related to adolescent wellness is not adequate to meet the needs of the field, in the experience of many researchers. Funding tends to support large randomized controlled trials over community ethnographies, and generally excludes studies of certain groups or issues.

- The University of Washington's *J. David Hawkins* urges, "We have to get a dedicated source of funding for prevention that is evidence-based and sustainable."

- "If you look where research funding is going, especially when you're getting into federal funding," says Everfair's *Linda Liebenberg*, "it's the big randomized controlled trial studies that get funded, big intervention studies. [It is important to] change the way research is seen so that people understand that community ethnographies are equally important."

- *Howard Stevenson* notes that it has been difficult to get review panels and funding sources to support the studies he does on racial stress and racial literacy. "If you don't buy into racism as a reality in the world—or any 'ism'—then you're not asking questions. It feels like a sea change that is too hard to make sometimes."

- There is little-to-no funding available to study the emotional well-being of youth in high-achieving schools. "Public support is cautious at best," according to *Suniya Luthar* of Arizona State University. "All the work I've done with upper middle-class kids has been at the behest of the schools because either a child has been suicidal or there's excessive drug use, etc. There's no money to do this. I have been doing much of this on my own time and resources."

Research Collaboration

Many researchers spoke of the need for deeper and longer-term collaborative efforts among researchers who come from different perspectives and between researchers and non-researchers. The need for better collaboration within and across services was also noted, with an attendant need for studies to determine how to create effective collaboration.

- The Ford Foundation's **David Barth** believes work is needed in this area. "The first meta issue is whether researchers are effectively connecting one to the other and whether those connections are being made across disciplines. I think we are not there yet."

- **Liebenberg** agrees and elaborates, "We have a very solid body of evidence that says we need better collaboration within a service and across services."

"But what we don't seem to understand, or what we haven't really studied, is how you create effective and meaningful collaboration across services."—Linda Liebenberg, Everfair Consulting

Adolescence: The Policy Perspective

Interviewees share a belief that policies regarding adolescents leave much to be desired and, in this section, shed light on some key factors contributing to a lack of strong and cohesive adolescent-focused policy.

These experts believe that policy is not generally driven by research, and they note that there are large policy gaps, especially when compared with policies regarding young children and older adults. They also observe that much of the policy, like much of the research, focuses on problems rather than on wellness. They see potential roles for all levels of government—especially state government—in developing adolescent-focused policies. And they express skepticism about the extent to which research informs policy.

Inadequate Attention to Adolescents Among Policymakers

Adolescents are not getting their fair share of attention among policymakers.

"We did a strategic plan with McKinsey & Company. When the policy experts were interviewed, they said that there has not been an adequate amount of focus on adolescents."—Angela Diaz, Mount Sinai Adolescent Health Center

- The Department of Health and Human Services' **Evelyn Kappeler** explains the paucity of policies. "I don't think that adolescent health is on the national agenda. We have focused a lot of resources and attention on early childhood development, which is warranted—getting children into school. And with the aging population, we have given a lot of attention to older adults and their needs."

- "Overall, there's not a lot of interest in adolescent mental health or mental wellness anywhere—at the federal, state, or even foundation level," says Stanford's **Steven Adelsheim**. "There are not many foundations that are really interested in this at all."

Little Policy Recognition of Wellness

In general, policies are problem-focused, not wellness-focused.

- "We're still probably more focused on the problem outcomes. There is a lot more policy, for instance, around teen pregnancy prevention than there is around promoting the well-being of adolescents," says RWJF's **Jennifer Ng'andu**.

- Temple University's **Laurence Steinberg** points to the structures of policymaking agencies as a source of the problem. "The way the funding streams are set up at the federal and state level tends to be around problems. One of the things about the study of positive development is that it is not domain specific—it cuts across domains."

- Child Trends' **Kristin Moore** believes that while the National Institute of Child Health and Human Development is open to wellness, "most government agencies really are problem-focused."

- **Kappeler** adds, "When we start looking at the adolescent period, people all of a sudden start focusing on risks—and risks are natural for adolescents—and less at youth resilience and positive youth development."

Roles of Federal, State, and Local Government

Both federal and state governments have roles to play, but overall there is more optimism about progress at the state level. Communities are often overlooked as policy drivers.

Some interviewees call for broad national leadership and commitment on behalf of adolescents.

Several federal agencies, offices, and programs address adolescent health in a variety of ways. These include the Maternal and Child Health Bureau Office of Adolescent and Young Adult Health, the National Institute of Mental Health Child and Adolescent Services Research Program, the Division of Adolescent and School Health at the Centers for Disease Control and Prevention, and others.

- Developmental psychologist **Diana Divecha** sees a moral imperative for the federal government in establishing protective policies that are essential to achieving wellness. "I

think the government has a responsibility to protect vulnerable populations and to advocate for kids in need."

- ***Maisha Simmons*** at RWJF points to specific federal laws that offer opportunities for improving policy to promote wellness. "There is the Elementary and Secondary Education Act[9] and some social and emotional development provisions in that—I think there is a lot of power and opportunity there."

- The University of Miami's ***José Szapocznik*** believes it is a federal responsibility to take the lead in the promotion of seamless policies. "When I think about moving away from fragmentation and silos, we have to do that as a nation. We have to do it across government and the private sector. The challenge is at the highest level. How do we create a focus where we can all come together to create a national coordinated strategy for wellness?"

Others believe that state governments have stronger levers to drive change. In key policy and funding areas, significant authority lies within state statutes and structures.

"The real place of innovation is in the states." —J. David Hawkins, University of Washington

- "When it comes to health care policy, the majority is state-driven, so it is critical to focus on [state] policy levers for systems change, says Conrad N. Hilton Foundation's ***Alexa Eggleston***. "Federal funding and policy decisions are certainly important, particularly when it comes to substance use disorders, but much of the action needed to help drive integration of substance use and health is at the state and in some instances the local level."

- ***David Barth*** of the Ford Foundation agrees. "They [federal officials] do have some levers, but not nearly as strong as the states."

- Berkeley's ***Ronald Dahl*** gives one example: "If you review for example one of the success stories—the graduated driver license programs—so much of the action there happened state by state. Rather than waiting for kids' prefrontal cortexes to mature, the graduated driver license programs basically start them earlier but scaffold their learning.

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[9] The Elementary and Secondary Education Act (ESEA) was signed into law by President Lyndon Johnson in 1965 as part of the War on Poverty to increase educational equity through provision of federal funds to school districts serving low-income students. It has been re-authorized every five years since, including as the No Child Left Behind Act in 2001 and the Every Student Succeeds Act in 2015.

Those principles make a great deal of sense from a developmental science point of view. Those were really driven at the state level."

Communities and adolescents themselves are often overlooked as drivers of policies.

- *Kimber Bogard* from the New York Academy of Medicine cautions, "I don't think we should ignore the federal or the state policy levers because they can be really important. But I think one of the gaps in the policy arena is paying attention to the community. Adolescents develop in their communities—it is the proximal environment that enables or hinders everyday decisions and actions."

- "There are formal decisions states can make," notes **David Barth**. "They can commit themselves to community schools or models and that is useful. But a lot of it has to do with the local level: what do we demand for our kids? So that means, what are community groups advocating for, what do our mayors say they want for our kids, what is the diagnosis of the problem?"

- HHS' *Kappeler* notes the importance of "engaging young people themselves through youth councils or youth advisory committees."

Some call for different roles for government based on desired outcomes or best odds for success.

- *Barth* summarizes, "There is probably a role for intervention at all levels, and it depends on the outcome you seek. If you seek a national dialogue to change the narrative and perceptions around young people, then you get the President and Congress. If you are looking for policies around youth-serving systems, particularly school and health, those are state-level and funding issues. If you are looking at direct interventions to help kids, that is very much community."

- *Dahl* suggests a strategic approach. "I think we need to be creative and look for opportunities. If the next administration is a window of opportunity for listening to youth-focused science, that could really be an opportunity. And if not, maybe there are states that want to listen to the science and do some pioneering work."

The Role of Evidence in Setting Policy

Interviewees are generally skeptical about the extent to which research informs policy. They express concern over the limited level of communication between researchers and policymakers and over state policies that at times ignore research findings. They also note one important exception and the value of looking beyond our national borders.

Research does not routinely inform policy.

- *Kimber Bogard* cites work she has done with states and national organizations: "There is a disconnect between what's happening at the state level and what's happening with national organizations when it comes to the early childhood space. There is a lack of bi-directional communication, and I imagine that for adolescents it's even less."

- "From a state government level, the differences in Medicaid are concerning," says Child Trends' *Brandon Stratford*. "There are states where certain services are eligible for Medicaid and states where they're not—and those are services that are evidence-based and have been rigorously evaluated. There needs to be work to make sure that your access to mental health services, should you need them, is not based on where you live."

- *Dahl* offers a perspective on why research is often not applied to policy. "What people want is simple translation—what does neuroscience tell us, what does genetics tell us, what does the intervention study tell us? And they want it in terms they understand for their discipline or approach. You need to have dynamic interaction where people at the policy or system level, who have intuitions about what can make an impact, interact with the people with the scientific expertise, and over a long enough period of time to identify promising approaches. If you wait for the scientist who does the work to translate it into 'what do you do differently?' interesting things rarely happen.*"

Yet integrating evidence into policy is possible: the field of juvenile justice has made progress in this arena. But the gains are fragile and reform is incomplete.

- The work of the MacArthur Foundation's Research Network on Adolescent Development and Juvenile Justice created "a paradigm shift in juvenile justice," says *Robert Schwartz* of the Juvenile Law Center. "The developmental research was built upon by the neuroscience research that has led courts and legislatures and policymakers to understand that kids are different and that we have to think of them differently."

- According to MacArthur's *Laurie Garduque*, "We knew that, while there was a substantial body of research knowledge about how adolescents are not adults, that work had not been framed with respect to the law, which had set up a separate justice system for kids." That led to the creation of the Research Network, which set up a framework and a program in the field "to demonstrate how the juvenile justice system, informed by knowledge about adolescent development and best practices, could produce better outcomes for kids and their families and could help communities improve public safety and save the taxpayer dollar."

- As a result of these and other efforts around the country:

"The developmental research has had a huge impact on how kids in the adult system are punished. Elimination of the death penalty. Reducing life without parole. Courts and legislatures have had to recognize that kids are different, even when they commit the most heinous crimes." —Robert Schwartz, Juvenile Law Center[10]

- Even so, worries **Garduque**, "It wouldn't take much to start a stampede to reverse what we've seen as progress. The state of mind right now, tight budgets, growing inequality, people's outlook for the future, lack of jobs and housing—it wouldn't take much to reverse what we've seen as more appropriate responses to juvenile crime and violence."

(For more information see A Look at Juvenile Justice in the Appendix.)

More adolescents across the world are coming of age than at any time in history. The United States can learn and benefit from engaging with initiatives underway in other countries.

Unfortunately, most of these adolescents are coming of age under bleak circumstances. Adolescents in wealthy and poor countries alike have extensive access to information via cell phones, social media, and the internet, and many countries are exploring ways to use that access to promote healthy adolescent development. These initiatives are essential not only to building healthy lives and communities, but also to countering the disturbing and offensive messages adolescents receive from extremists.

- **Steven Adelsheim** describes a Canadian initiative of the Graham Boeckh Foundation. "They are partnering with the [Canadian] federal government and smaller foundations to create a really strong youth mental wellness, early intervention program, with strong evaluation components. Canada has found ways to make this investment."

- **Dahl** notes an interest in evidence even in a country not known for openness and transparency: Singapore. "They have an ability to say 'What does the science say, what are the implications for policy?' and then invite the scientists in for thorough discussion."

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[10] While there has been progress in keeping juvenile offenders out of the adult system and within the juvenile system, there remain situations in which young people are tried and punished as adults. For example, in some jurisdictions and in some cases prosecutors may charge, as an adult, a 16- or 17-year-old (or even younger) accused of murder.

Adolescence: The Practice Perspective

Multiple prevention and intervention programs exist that are based on findings from rigorous studies, and many of those programs have been extensively evaluated.[11] Yet, these evidence-based programs do not have broad reach, and gaps in programs and services remain.

This section makes the case for supporting implementation more rigorously, helping those on the front lines improve and scale sound programs. We note continuing challenges such as limited interest by funders, the tendency for practitioners to implement appealing practices in advance of evidence to support them, and problems that result from failure of practitioners to understand the multiple cultures and contexts that affect behavior.

Implementing and Scaling Evidence-Based Practice

Much may be known about how to promote adolescent wellness, but the stumbling block is translating what is known into practice with integrity and at a scale that allows for sustainability.

Many interviewees note with frustration that inadequate attention is paid to the challenges of on-the-ground implementation or to implementation science.

> *"One of my biggest frustrations is the translation piece—the translation to practice. There is so much knowledge out there that we don't apply. I think it is a great question for philanthropy: 'What is the right balance between funding research, implementation of evidence-based approaches, and new innovations?' We clearly need innovation but if we just did what we know works, we would be so much further ahead of where we are now." —Alexa Eggleston, Conrad N. Hilton Foundation*

- "If you don't do the implementation science, if you don't really look at how you implement in a real school district or in different school districts, for example, if you don't look at how to scale up the principle to a larger number of settings you can totally miss," says Berkeley's **Ronald Dahl.** "So, evaluating this at the implementation level and

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[11] One source of evidence-based programs to promote the health and well-being of adolescents (and children) is Blueprints for Healthy Youth Development, which lists model and promising evidence-based programs, both broad prevention-focused as well as those targeted to specific at-risk groups. Blueprints is hosted by the Center for the Study and Prevention of Violence at the Institute of Behavior Science, University of Colorado Boulder, and funded by the Annie E. Casey Foundation.

scaling level with the same kind of rigor that you do the science is a really important step."

- *Jennifer Ng'andu* notes: "I feel like we do have enough information to act on. At a minimum we can start to think about and invest in things that are youth-inclusive and youth-led in terms of adolescents being able to see their own solutions in communities."

- "People also need to understand how to best use whatever tools are discovered," says Mount Sinai's *Angela Diaz*. "It can work beautifully when you pilot new interventions with a small population in experimental conditions, but when you take an intervention to scale with diverse people and diverse communities with the complexities that make up everyday life, it doesn't always have the same impact."

- *Child Trends' Kristin Moore* describes some of the challenges. "It's around implementation. That seems to be the barrier that is obstructing so many programs these days. One critical question is: —what are the critical components in a program? First of all, we don't often know. They are just what the developer thought they were. And assuming we know what they are, we don't really know how to implement them with fidelity and quality over time, and in places where there is not a professor overseeing it."

- Speaking about her experience working on juvenile justice issues, MacArthur's *Laurie Garduque* says, "Even when you have the effectiveness research, you still have to figure out what's the leverage you use, the incentives, the reward systems, to move an organization, a culture, a climate in the direction that would support change and adoption and implementation. There is this new field of implementation science...In some cases we know what the better practices are, but it's very hard to spread or diffuse those practices. And we need better scaffolding, or infrastructure, to support those better practices."

- *Robert Schwartz* of the Juvenile Law Center says, "[Within juvenile justice] the larger problem is that anything we design has to be deliverable by very average people in systems with a lot of turnover, poor training, and a skill set that is usually focused on a general population but not outliers...That's one of my biggest fears about any reform effort right now, the lack of ability to go to scale."

- At the Ford Foundation, *David Barth* notes, "There are a lot of individual manifestations of it [translating into practice] but our strategy is to look at youth-serving systems. Our whole strategy asks: 'How can we turn those not into exceptions but into standard practices?'"

- "Internationally, aboriginal communities are a source of useful, community-based practice that demonstrates how communities can support adolescent mental wellness,

says Everfair's **_Linda Liebenberg_**. "A big question, though, is how this small-community experience can translate to a large urban setting."

Research is often not presented in a format that is useful to practitioners.

- _**Eggleston**_ says: "Research is not accessible, and the translation piece is often neglected. Researchers aren't trained to translate or talk to policymakers or practitioners. The different skill sets are so stark. You go to a research conference and the disconnect is almost comical."

- "There need to be better systems for disseminating information to people who are not likely to read this report or read _The New York Times_," says **_Diaz._**

- _**Stevenson**_ at the University of Pennsylvania notes that it is important to "get at the integration of intervention research—how do we support not only grassroots community programs but also make research user-friendly and trustworthy at the frontline level of these experiences. A lot of translation still needs to be done because many communities have been unfairly portrayed as pathological." Yet, he sees some opportunities in this arena: "I do think there are strengths at the local level that are not being tapped to do the translation. There are ways to translate that don't require a lot of time."

- _**Moore**_ notes another challenge: "The whole notion of how you become an evidence-based program has not permeated the program community. There's a real rush to do random assignment evaluation and ignore the importance of performance management. That is a huge problem."

There is inadequate financial support for implementation.

- "Workforce development needs to evolve beyond the traditional problematic approach of sending staff to a few days of training—time that often isn't reimbursable through current payment structures—and then having them return to a setting that isn't set up for practice change so they can't use what they learn. There is very little training and technical assistance support for real systemic change," says **_Eggleston_**. "There are innovations in training approaches that need to be applied more broadly in addition to providing infrastructure approach to fully support implementation."

- There are policy recommendations and documents available, as **Steven Adelsheim** points out, "but no one knows about them and the implementation hasn't happened."

- In describing the work of the Office of Adolescent Health at the U.S. Department of Health and Human Services, RWJF's **_Ng'andu_** notes, "They've got a huge effort on

adolescent health called TAG: Think-Act-Grow. But they don't have resources for implementation themselves. They're trying to build a groundswell among their networks."

"We're investing in all this amazing science, but then the results don't get translated into real life interventions or communicated to the people who need it the most, whether as providers or consumers or communities. We need to do more to try to connect scientific advances to practical everyday interventions and implementations." —Angela Diaz, Mount Sinai Adolescent Health Center

Running with Practice in Advance of the Evidence

In the absence of evidence-based, accessible, and real-world-feasible implementation models, practitioners are developing interventions and running with them.

- "Waiting for that research stream to be translated into practice is not like rearranging the chairs on the Titanic but like ordering the chairs from China while you are sinking," as developmental psychologist **Diana Divecha** puts it. She encourages researchers, policymakers, and funders "to look from the ground up, at insiders, at locals who are doing programs that are changing teens' lives in big ways. [There are a] lot of little organizations that are doing great work with teens."

- *Child Trends'* **Kristin Moore** agrees. "There are a lot of good practices bubbling up from the field. There are a lot of extremely thoughtful, wise people working with adolescents who realize that it isn't just a matter of wagging their finger at them and telling them to be better people and punishing them when they fail. They realize they need to make investments such as mentoring programs that really provide kids with role models and positive activities. I don't think the research community can take credit for it. It's coming from the community."

- The Conrad N. Hilton Foundation strives to be open to newer ideas that have a promising "practice-informed" evidence base, according to Eggleston, who notes the constraints of focusing solely on gold standard evidence driving policy and practice. "We can't focus on evidence to the point of excluding innovation—to try or test new ideas," says **Eggleston**. "I think this is the role of philanthropy in part."

Several concepts have gained recent momentum and visibility in practice. These include: the notion of "grit," positive youth development, mindfulness, and mobile technology. While in the view of some researchers more evidence is needed on the value

of these ideas, people working in the field have embraced them in advance of the evidence. As such, they are examples of practice-leading research.

- Regarding the notion of "**grit**," Child Trends' ***Brandon Stratford*** believes that "research is presented in a way that makes it seem like now we've figured out everybody needs 'grit,' so introduce grit programs into all the schools—make kids 'gritty.' But maybe the science isn't yet there to be able to say exactly what that means. They [practitioners] want to use the research, but because it hasn't been translated into how it might look in a program for them, they might be misinterpreting the meaning of the research."

- ***Laurence Steinberg***'s measure of grit calls it "perseverance." "We can ask: Are certain kinds of parenting associated with higher scores on this measure? Are certain social or educational policies associated with well-being?" He wonders, though, if a parent asked "What can I do to make my kid grittier?" whether people who promote grit would know how to answer.

- "There is a working assumption in the **positive youth development** community that you can prevent negative outcomes by investing in positive behaviors," notes ***Moore***. "And there's scattered (and growing) body of references that show that. But, to my amazement, there isn't a really strong empirical base for that working assumption. And I think that is a question we really need answered."

- ***J. David Hawkins*** believes that **"mindfulness** is quite important because it allows kids to stop in the frantic pace of life and think about how they want to proceed and what they want to do next. So, the testing of mindfulness as a tool both for teachers and for kids is well worth doing." ***Steinberg*** notes the "growing interest in mindfulness for children that is a part of well-being and health" and considers it to be "an example of people trying to do something."

- There has been some research on using **mobile technology** with adults but, according to ***Stratford***, "I don't think there has been much in terms of how it can be used with adolescents, which seems funny since they're the ones who are growing up in this tech world and probably know better how to use these sorts of things than most adults do. But there hasn't been enough really good research around how those things can be effective."

  More broadly, he adds, "[We could be] doing a better job of understanding how technology interventions can be used to reduce some of the barriers that a lot of kids and families have for accessing treatment and also for screening."

Consideration of Culture and Context

As noted earlier, quite a lot is known about adolescent development. Neuroscience has taught us more about how the adolescent brain works and has been an important tool in designing programs that support healthy development. Developmental psychology and social science research have informed many well-tested programs that promote the protective factors that all young people need and reduce the risk factors that make them vulnerable to problems. This knowledge is not complete, of course, but the people interviewed believe that overall, enough is known to act on, expand, and sustain those interventions that have solid track records.

At the same time, interviewees note that cultural and environmental contexts have enormous influence over how even interventions with strong track records play out in adolescents' lives. They commented that programs often fail to recognize and draw from the strengths inherent in cultures and at times even misinterpret strengths as problems to be addressed. They also note that services are especially lacking for certain groups of adolescents.

Interviewees offered examples of their concerns in this area:

• *Howard Stevenson*, in addressing the multiple stressors facing black adolescents, suggests some responses: "'Be proud to be black,' or 'As a black person, you have to work twice as hard to be considered as good'—these are messages that families have been saying for years. ...Data has shown that that kind of racial socialization is generally a protective factor. The challenge is, though, to be explicit, rather than haphazard or serendipitous, and to include in the intervention very specific skill sets around racial coping. What do you do when somebody rejects you and you have only 60 seconds to make a healthy decision? How do you respond in those moments? That's where racial coping skills can be taught directly, practiced, and re-practiced, and role-played until they become habitual."

• "The group that is getting the shortest end of the stick are our girls of color," says RWJF's *Maisha Simmons*. "Holistically, girls' issues in terms of philanthropy get attention but the nuance of the difference of young girls of color does not. I think there is growing momentum around that."

• *Simmons* adds, "I think another community starting to get more interest but where we still have to learn a lot is the LGBTQ community of color. If you think about issues like trafficking, etc., the LGBTQ kids of color are high in all of those. We need to learn a lot more how to support that community."

- "Kids of color, and poor kids, and kids who are gay, lesbian, bisexual or transgender, face tremendous disparities in health outcomes," says **Angela Diaz** at Mount Sinai. "There's a lack of suitable, culturally relevant services to start with. But also, there's a lack of understanding of the challenges faced by these populations and what they need."

Others mentioned groups for whom services are often not available:

- "There's a gap for groups like Hispanic and Native American populations and rural white populations," says Child Trends' **Kristin Moore**.

- "You see a lot of programming and information geared to folks in the 14 to 19-year-old space," notes RWJF's **Jennifer Ng'andu**. "[No one pays attention to] middle childhood. It's really problematic."

- It is important to consider older adolescents Child Trends' **Stratford** stresses, "A lot of them are out of school and that is a hard transition...There are very few programs because they are no longer necessarily a captive audience in a school setting."

Some are concerned about the limited services available to parents, teachers, and other adult caregivers of adolescents.

"Adult development is a really, really important piece...choosing the wise, evidence-based program, and developing the adults who work with teens are key. Sometimes just working with the adults, absent the teen, can make a positive impact." —Diana Divecha, Developmental Psychologist

- **Robin Stern** of the Yale Center for Emotional Intelligence notes, "There's a lack of parenting books for [parents of] kids who are the older teenager, because nobody knows what to do. Or somehow they think their parenting job is over. But anyone who gets to that age knows that their parenting job is far from over."

- **Stratford** agrees: "Focusing on helping parents [is important]—particularly for parents to understand how they need to change their parenting style as their children are growing up."

- "Teachers and adults who work with kids need skills, or their own development can stand in the way," according to **Divecha**. "You can only deliver a program in schools that is at the teacher's level, or you have to develop the teacher."

David Barth, comments on The Ford Foundation's overall thinking about programs. "We try to be model agnostic but we are quite dogmatic around certain components. We think these kids need social supports and there should be dedicated academic pathways. [But,] within the

universe of social supports, what are the most important ones? Is a guidance counselor more important than an internship? Is a mental health intervention more important than a non-teaching assistant in school? Then you get into harder to measure things like the role of parents, community organizations, after-school programs, summer jobs. A lot of things outside of the school are environmental—we could learn more about disaggregating that."

Opportunities for Learning and Action

"There aren't that many big organizations thinking about health and youth that are thinking strategically about how to leverage the emerging science to have an impact." —Ronald Dahl, University of California, Berkeley

The interviewees suggested opportunities that would advance the field of adolescent wellness by forging new knowledge, policy, and practice in this area. We categorize these suggestions into theme areas and, in some cases, we offer examples of specific strategies or actions people might take to advance learning in the field.

Standard-Bearers to Move the Field Forward

The field of adolescent wellness desperately needs strong, articulate, and trusted champions willing and able to make a long-term commitment to promoting additional learning and to moving the field forward.

Specific activities these champions might undertake include:

- **Leading and advocating for the re-framing of how adolescents are perceived in our society**—changing the language used to describe adolescents and advancing the view that adolescence is an important, normal, and positive developmental stage.

- **Developing a strategy for and engaging an organization in developing the language and the message.** Organizations with the capacity to design, conduct, and publish communications research to frame social and scientific topics can be of assistance in developing language and promoting a message.

- **Taking collective public action to communicate that now is the time to invest in promoting the wellness of adolescents**, that "investments" go beyond financial support, and that all sectors of society have a role and a responsibility. Actions might include announcing a new initiative or publishing and widely disseminating a white paper or call to action.

- **Taking a role in helping to shape the adolescent health objectives for Healthy People 2030**. As of February 2018, staff at the U.S. Department of Health and Human Services is finalizing the Healthy People 2030 framework based on public comments received on the draft framework.

Sustained Discussions Among Key Stakeholders

Such discussions—among researchers, policymakers, practitioners, and adolescents themselves—are essential to promoting learning across disciplines and to advancing this work. To be effective, these discussions need to have a clear focus and take place in a structured manner and over a period of time.

While there were many areas of consensus—adolescence as a positive time, the importance of advances in neuroscience and developmental science, and the existence of evidence-based programs—there were also areas where consensus was lacking or limited.

People with different perspectives need dedicated opportunities to share their ideas and learn from the ideas of others. Groups or panels that are stable over time, meet regularly, and are well-supported administratively can be highly productive and significant contributors to the field. One strategy for promoting learning through these groups is to give group members a practical challenge to address and then allow them sufficient time and resources to work through differences and generate creative ideas.

Possible topics for these groups are:

- **The balance between broad interventions and interventions targeted to specific groups or issues;**

- **Strategies for creating messages and for changing public perception of adolescence; and**

- **Scaling effective practices and policies.**

Possible configurations of groups include:

- **Researchers**—a research network on adolescent wellness could bring together researchers working in similar and disparate parts of the field.

- **Researchers together with practitioners and adolescents**—a think tank on adolescent wellness could bring researchers, practitioners, and adolescents together to trade ideas on how to effectively translate research into practice.

- **Researchers, policymakers, practitioners, the business community, and interested others**—a national institute would provide a forum for exchanging knowledge, ideas, and insights.

- **A consortium of foundations and other funders known to be committed to adolescent issues** could work together to move the field forward.

Promoting Learning Among Those Who Work with and Care About Adolescents

Opportunities exist to develop avenues for knowledge sharing and learning throughout the wider adolescent health field.

Activities to promote learning here include:

- **Creating a rigorous and ongoing online learning network** open to a broad range of researchers and practitioners to share research findings and concerns as well as real world programmatic experience and outcomes;

- **Ensuring the timely dissemination of research evidence to the wider field,** including policymakers and practitioners; and

- **Engaging in a variety of activities to inform and educate families, teachers, and the general public** about advances in knowledge about adolescent brain development and the cost effectiveness of preventive interventions.

Adolescents and Programs on the Ground as Sources of Learning and Inspiration

Too often, adolescents themselves are left out of serious discussions about policies and programs that promote wellness. In addition, the expertise of the local programs that serve adolescents can also be overlooked.

Learning can be maximized by:

- **Bringing adolescent voices to the field in multiple and meaningful ways**, such as:

  o Focus groups that ask a wide range of young people to talk about their own perspectives, insights, and feelings about their lived experiences, expectations, and hopes—and how they describe wellness; and

  o Including adolescents in one or more of the multidisciplinary discussion groups.

- **Drawing on the knowledge and expertise of local programs working on the ground** to change the lives of young people.

Research that Promotes Learning by Advancing Knowledge, Policy, and Practice in the Field

Opportunities exist to advance learning by investing in studies focused on issues about which less is known or on which consensus is lacking.

Examples include:

- **Research that will contribute knowledge to grow the field**, such as:

  o The elements of successful scaling of interventions that have proven beneficial in initial settings;

  o The development of measures of adolescent wellness;

  o The intersection between physical health and mental wellness for adolescents, similar to research linking mental well-being and cardiovascular health in adults; and

  o Connecting adolescent brain development and the adolescent's environmental context through publication of a book/report similar to that published by the National Research Council and the Institute of Medicine on early childhood, *From Neurons to Neighborhoods: The Science of Early Childhood Development.*[12]

- **Efforts that address the context and environments within which adolescents live**, such as:

  o Contributing to the research base on adolescent resilience;

  o Supporting initiatives to shrink and improve the juvenile justice system, allowing it to serve youthful offenders in their communities when possible and exploring ways for the juvenile justice system to promote wellness and appropriate development;

  o Expanding knowledge about the effects of pressure and stress on affluent youth and their longer-term physical and mental health outcomes;

  o Investigating best practices in parenting adolescents; and

  o Exploring how communities can become more adolescent-friendly.

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[12] Shonkoff JP and Phillips DA, Editors *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Washington: National Research Council and Institute of Medicine, 2000.

- **Supporting studies that address groups of adolescents that have been overlooked or underserved,** such as:

  o Encouraging research that measures the impact of de-humanization of black youth;

  o Shining research attention on groups frequently overlooked, such as Native American, rural, immigrant, homeless, LGBTQ, and trafficked youth; and

  o Addressing the "tween" development period.

Conclusion

Adolescence should be and often is a time of wonder, optimism, and hope. Yet, too often, adults fail to see adolescents this way. Advances in neuroscience and developmental science offer new opportunities for improving how policymakers, practitioners, and others can harness the energy and excitement of adolescents to help them shape not only their own lives, but the lives of future generations as well.

Researchers, policymakers, practitioners, parents, teachers, and others stand at a crossroads between traditional thinking about adolescence as a period to be endured and survived and new thinking that holds that adolescence is the best time and perhaps the last chance to nurture, guide, and support these young people who will determine the future of the country and the world.

The active engagement and commitment of those who seek this new path will benefit today's young people and those to come. Their collective work will offer hope and support for a future inspired and powered by the energy, imagination, and resourcefulness of the next generation and generations to follow.

Appendix

A Look at Juvenile Justice

As one example of system-driven context we took a closer look at juvenile justice. This brief overview draws on interviews with several experts who have extensive experience working with the juvenile justice system. They provided perspective on key issues and on the system's potential for improving the trajectory for the adolescents enveloped in it.

- *Laurie R. Garduque, PhD*, directs the Criminal Justice program at the MacArthur Foundation and previously directed the Juvenile Justice program, which ended in 2017 after 20 years. MacArthur's Research Network on Adolescent Development and Juvenile Justice was a major driver in the application of adolescent developmental research to juvenile justice policy and practice.

- *Robert Schwartz, Esq.*, co-founded the Juvenile Law Center in 1975 and was executive director from 1982 to 2015. Schwartz represented dependent and delinquent children in Pennsylvania, brought class-action litigation over institutional conditions, and fought nationally and internationally for youths' rights. He was a member of the MacArthur Foundation Research Network.

- *Laurence Steinberg, PhD*, Laura H. Carnell professor of psychology at Temple University, was the lead scientist in the preparation of briefs submitted by the American Psychological Association to the Supreme Court in support of cases which abolished the juvenile death penalty, banned the use of life without parole for juveniles convicted of non-homicide crimes, and prohibited the use of mandatory life without parole for all juvenile crimes. Steinberg was Chair of the MacArthur Foundation Research Network.

The System's Impact on the Adolescent

An adolescent's experience with the juvenile justice system will have a major impact on his or her development.

- "Kids who get into trouble with the law are a vulnerable and high-risk population," says *Garduque*. "And a lot of that is criminogenic risk—it's because of where they live or their family resources and the peers that they hang out with and so on. These are all things that can be changed or managed."

- *Schwartz* emphasizes the trauma attendant to the criminal justice process. "When you arrest a kid, it's a traumatic event—when you take a kid away from a parent. There's a

trauma involved in putting a kid in a locked detention center. The act of placement is traumatic. And many places are not the safest places for kids to be. The use of interventions like solitary confinement are traumatic and harmful to kids."

The juvenile justice system may not always be the appropriate system to handle young people that get into trouble with the law.

- "There are still too many kids who end up in juvenile court for misbehavior that is probably a one-off for many kids," says *Schwartz*. Others may exhibit behavior that is consistent with mental health issues, developmental disorders, and other personal challenges. These adolescents may be referred to juvenile justice when their behavior becomes difficult to control within "a system that was supposed to address their behavior [e.g., special education] to one that has much less expertise but has the mandate to do it."

- *Garduque* offers an alternative approach to simply prosecuting young offenders. "We've always tried to get the justice system to understand that they're not necessarily the appropriate system to respond to kids when they get into trouble with the law...framing it more from a perspective of the mistakes that kids make and holding them accountable in ways that don't jeopardize their future life chances. Allow them to repair the harm or make the victim whole and give them the opportunities to gain the skills and competencies so that they don't reoffend."

  "We try to get them to think of other systems that are more appropriate," she adds. "Often the education system, or access to mental health and substance use treatment, if that's appropriate. Or, in many cases, it's the child welfare system that should be responding."

- *Schwartz* notes that efforts to reduce referrals of kids from special education classes to juvenile courts backfired, because they "led Congress in the later 1990s to amend the Special Education Law to say that there is nothing that prohibits referring a kid to juvenile court for misbehavior. So, schools began using juvenile courts all the time. If you couldn't control the kid, have him or her arrested."

Mental health issues are endemic to the population in the juvenile justice system.

- *Garduque* notes that "kids who are involved in the justice system have three times the prevalence rate of mental health issues of kids in the community sample. A significant number of them have a serious enough mental health issue that it interferes with their functioning."

- *Schwartz* parses this mental health status and how it intersects with the juvenile justice experience: "Generally about two-thirds of the kids involved with the juvenile justice system have been identified with some sort of mental health disorder and about one in

five has a serious disorder. There are kids who are well, but risk-taking and misbehaving as part of the natural [adolescent] trajectory. And then [there are] kids who have disorders, with mental health needs. And there is what the system itself does by exacerbating disorders, particularly with respect to trauma—creating traumatic events in kids' lives without knowing how to minimize the impact of those events."

Good Progress—But Not There Yet

Incorporation of developmental research evidence into juvenile justice policies and processes since the mid- to late-nineties, and particularly in the last decade, has made a notable difference in the ways in which kids are handled by the system.

- "The developmental research has had a huge impact on how kids in the adult system[13] are punished," says *Schwartz*. "Elimination of the death penalty. Reducing life without parole. Courts and legislatures have had to recognize that kids are different, even when they commit the most heinous crimes—and those are a miniscule number compared to the kids who are picked up by the system for a broad range of normative misbehaviors."

- The MacArthur Foundation, through its 20-year commitment to juvenile justice reform, had a major impact on state reform efforts. "It's been a huge change," says *Garduque*, "with states closing large institutions and providing programs with services to kids in the community, diverting more kids, with more kids having process protections and access to an attorney earlier on."

- "There has been enormous progress in the last 10 years in particular," *Schwartz* notes, "The trend line has never been better."

Much more needs to be done.

- *Steinberg* has conducted research on juvenile offenders over many years. "If you look at juvenile justice policy and research that informs juvenile justice policy, you will see that studies have a single measure of whether juvenile justice works—recidivism," he says. "That is all that policymakers care about. And they should care about that, but it isn't the only thing they should care about. The diminution of problems is not the only thing that should matter."

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[13] While there has been progress in keeping juvenile offenders out of the adult system and within the juvenile system, there remain situations in which young people are tried and punished as adults. For example, in some jurisdictions and in some cases prosecutors may charge, as an adult, a 16- or 17-year old (or even younger) accused of murder.

- "Much less attention has been paid to the non-placement aspects of the juvenile justice system," **Schwartz** stresses, "such as the way kids are processed. Whether their voices are heard. Whether they get to make decisions. How lawyers and bailiffs interact with them in ways that reduce trauma. How judges interact with kids—do they yell at them, make them feel worse, abuse them?"

- **Schwartz** further notes that developmental literature and science have not had adequate impact in areas such as interrogations of juveniles and confessions by juveniles.

- **Garduque** points out that "juvenile crime has gone down as have the incarceration rates." Yet, she knows that "there are really onerous laws still in the books about transferring juveniles to adult criminal court, shackling kids, not having competency standards, locking up kids who commit status offenses [acts that are only an offense when committed by a minor, such as truancy, violating curfew, underage use of alcohol], sex offender registries. So, there still is a need to change those laws."

"There are fewer kids arrested each year than there used to be because of the developmental research. But still you have 1 to 2 million kids arrested every year. It [the juvenile justice system] is not a system that's thinking of their mental wellness very much." — Robert Schwartz, Juvenile Law Center

Annotated List of Those Interviewed

Outside the Robert Wood Johnson Foundation

Steven Niles Adelsheim, MD

Clinical Professor, Psychiatry and Behavioral Sciences, Stanford University School of Medicine

Director, Stanford Center for Youth Mental Health and Wellbeing

Stanford, Calif.

sadelsheim@stanford.edu

> *Adelsheim is a child/adolescent and adult psychiatrist who develops and implements early detection/intervention programs (for depression, anxiety, prodromal symptoms, and first episodes of psychosis) for young people in school-based, community and primary care settings. He is leading the U.S. effort to implement headspace, the Australia-based mental health early intervention model.*

David Barth, JD

Director, Global Grants

The Ford Foundation

New York, N.Y.

D.Barth@fordfoundation.org

> *Barth joined the Ford Foundation in November 2015 after working in a range of capacities for USAID over 20 years. These included stints as a regional legal advisor in the Middle East and Central America, establishing and directing the Office of Middle East programs, directing the Office of Education, serving as Deputy Chief of Staff, and serving as Mission Director in Bosnia and Herzegovina.*

Kimber Bogard, PhD

Senior Vice President of Strategy and Programs

New York Academy of Medicine

New York, N.Y.

kbogard@nyam.org

> *Bogard provides strategic vision and operational direction for integrating and leveraging program areas across the New York Academy of Medicine to increase its impact and visibility. In her prior work as director of the Forum on Investing in Young Children Globally and other roles at the National Academies, Bogard connected knowledge and science with policy and decision-making at the local, national, and international levels to advance health, health care, and overall well-being.*

Ronald E. Dahl, MD

Director, Center for the Developing Adolescent

Director, Institute of Human Development

Professor, Community Health Sciences

Berkeley School of Public Health

University of California, Berkeley

Berkeley, Calif.

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At UC Berkeley, Dahl directs the Institute of Human Development. A pediatrician and developmental scientist, his work focuses on understanding developmental windows of opportunity for improving adolescent trajectories in health, education, and social success. His long-standing research interests include the development of sleep/arousal regulations, affect regulation, and the development of behavioral and emotional health in children and adolescents.

Angela Diaz, MD, PhD, MPH

Director, Mount Sinai Adolescent Health Center

The Jean C. and James W. Crystal Professor in Adolescent Health and Professor of Pediatrics and Preventive Medicine at the Icahn School of Medicine at Mount Sinai

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Under Diaz's leadership, the Mt. Sinai Adolescent Health Center has become the largest of its kind in New York City, serving more than 11,000 disadvantaged youth each year. Diaz has directed several NIH-funded research projects and is active in public policy and advocacy nationally and has conducted health projects in Central and South America, Europe, Africa, and Asia.

Diana Divecha, PhD

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As a research affiliate with the Yale Center for Emotional Development, Divecha collaborates with Center researchers on the approaches to bullying and trauma offered by the Center's RULER program and on informing the public on the importance of emotional intelligence. She was on the psychology faculty of Sonoma State University in Northern California and has worked with children with developmental disabilities, mental illness, and severe behavior problems.

Alexa Eggleston, JD

Senior Program Officer, Domestic Programs

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At the Hilton Foundation, Eggleston leads the implementation of its youth substance use prevention and early intervention initiative. Previously she was Substance Abuse Program Director with the Council of State Governments Justice Center and Director of Public Policy for the National Council for Behavioral Health.

Laurie R. Garduque, PhD

Director, Criminal Justice

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Garduque directs the Criminal Justice program at MacArthur and directed the Juvenile Justice program, which ended after 20 years. Prior to her more than 25 years at MacArthur, Garduque directed the National Forum on the Future of Children and Families, a joint project of the National Research Council and the Institute of Medicine.

J. David Hawkins, PhD

Endowed Professor of Prevention Emeritus

Founding Director of the Social Development Research Group

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Hawkins' research addresses the understanding and prevention of child and adolescent health and behavior problems, seeking to identify risk and protective factors. He develops and tests prevention strategies to reduce risk by enhancing strengths and protective factors in families, schools, and communities. He was principal investigator of the Community Youth Development Study that tests the effectiveness of the Communities That Care prevention system in 24 communities across seven states.

Evelyn M. Kappeler

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Evelyn Kappeler served as the Acting Director when the HHS Office of Adolescent Health was created in 2010 and became its Director in 2012.

Naomi Katz, MA

Co-founder of Her Wisdom

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Katz is the author of Beautiful: Being an Empowered Young Woman and the visionary behind Her Wisdom, a non-profit organization dedicated to cultivating the uniqueness of women's leadership. She is an educator who provides tools for women and girls to redefine culture by reclaiming the language they use to talk about themselves. Katz has worked with young women for over 20 years on four continents. Inspired by the indigenous practices of the women of the earth, she has traveled the world studying ancient wisdom.

Linda Liebenberg, PhD

Director

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> *Liebenberg is a researcher and evaluator in youth resilience and community development, with a particular focus on children and youth with complex needs. She is a methodologist whose research approaches include participatory image-based methods, longitudinal quantitative designs, and the design of child- and youth-based measurement instruments. She consults and teaches in Canada, where she is based, and internationally.*

Suniya Luthar, PhD

Foundation Professor of Psychology

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> *Luthar's research has addressed vulnerability and resilience among youth in poverty and from families dealing with mental illness, among other populations. Her current work focuses on challenges among youth in high-achieving schools (including substance abuse and anxiety) and on fostering resilience by systematically "tending the caregivers."*

Kristin Anderson Moore, PhD

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> *Moore is a social psychologist who studies trends in a wide range of developmental, structural, and policy influences on the well-being of children and families. Her work in the Youth Development research area of Child Trends seeks to expand information on programs that work, effective implementation approaches, and rigorous evaluation.*

Britt Rios-Ellis, MS, PhD

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> *Rios-Ellis is a researcher and promoter of Latino health research and education. She has served on many national committees that further Latino health and, in her previous position on the faculty at California State University Long Beach, founded and directed the NCLR [National Council of La Raza]/CSULB Center for Latino Community Health, Evaluation and Leadership Training.*

Robert Schwartz, Esq.

Co-Founder and Executive Director Emeritus

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> *Schwartz co-founded the Juvenile Law Center in 1975 and was executive director from 1982 to 2015. Among his many career accomplishments, Schwartz represented dependent and delinquent children in Pennsylvania, brought class-action litigation over institutional conditions, and fought nationally and internationally for youths' rights. He was a member of the MacArthur Foundation Research Network on Adolescent Development and Juvenile Justice.*

Laurence Steinberg, PhD

Distinguished University Professor and Laura H. Carnell Professor of Psychology

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> *Steinberg is internationally known as an expert on psychological development in adolescence. His research topics have ranged from adolescent brain development, risk-taking, and decision-making to parent-child relationships to juvenile justice. Steinberg was the lead scientist in the preparation of briefs submitted by the American Psychological Association to the Supreme Court in support of cases which abolished the juvenile death penalty, banned the use of life without parole for juveniles convicted of non-homicide crimes, and prohibited the use of mandatory life without parole for all juvenile crimes.*

Robin Stern, PhD

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Stern is a psychoanalyst with more than 25 years of experience treating individuals, couples, and groups. She is a co-developer of RULER, the emotional intelligence curriculum created at the Yale Center for Emotional Intelligence. She is a principal investigator for the RULER for Parents project to increase parent involvement in their children's emotional intelligence education, and she works on adapting RULER for high school students.

Howard Stevenson, PhD, MA

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Stevenson is a professor, clinical psychologist, and researcher whose work focuses on African-American psychology, the effects of at-risk neighborhoods on youth, racial literacy, racial/ethnic socialization and negotiation, violence prevention, and racial rejection, among other topics. He has also served for many years as a clinical and consulting psychologist teaching racial coping in impoverished rural and urban neighborhoods across the United States.

Brandon Stratford, PhD

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Stratford's research focuses on child and adolescent health. He has been an educator and a school-based social worker in the United States and Latin America with experience as an implementer of evidence-based programs addressing students' behavioral health and positive parenting behaviors. A particular interest is the pathways through which schools contribute to child well-being.

José Szapocznik, PhD

Professor of Public Health Sciences, Architecture, Psychology, and Counseling Psychology & Educational Research

Director, Center for Family Studies

Co-Director, Florida Node Alliance, National Drug Abuse Treatment Clinical Trials Network

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Szapocznik pioneered national efforts to prevent and treat adolescent drug abuse and related behavior issues in Hispanic youth through family-based, evidence-tested approaches and is a

leader in the national initiative to translate effective drug abuse treatments into clinical practice. He is especially interested in the role of context in development, behavior, and health outcomes, and studies culture, family, neighborhood, and the built environment as key contexts affecting minority populations.

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