



# Committee on the Neurobiological and Socio-behavioral Science of Adolescent Development and its Applications

May 16, 2019

# Study Sponsors

## The Funders for Adolescent Science Translation (FAST)

- Annie E. Casey Foundation
- Bezos Family Foundation
- Chan Zuckerberg Initiative
- Ford Foundation
- Conrad N. Hilton Foundation
- National Public Education Support Fund
- Raikes Foundation
- Robert Wood Johnson Foundation

# Committee Members

**RICHARD J. BONNIE (Chair)**

Institute of Law, Psychiatry and Public Policy, Schools of Law, Medicine and the Frank Batten School of Leadership and Public Policy, University of Virginia

**ANNA AIZER**

Department of Economics, Brown University

**MARGARITA ALEGRÍA**

Departments of Medicine and Psychiatry, Harvard Medical School & Disparities Research Unit, Department of Medicine, Massachusetts General Hospital, Boston, MA

**CLAIRE D. BRINDIS**

Philip R. Lee Institute for Health Policy Studies & The Adolescent and Young Adult Health National Resource Center, University of California, San Francisco.

**ELIZABETH CAUFFMAN**

Department of Psychological Science, University of California, Irvine

**MESMIN DESTIN**

Department of Psychology, School of Education and Social Policy & Institute for Policy Research, Northwestern University

**ANGELA DIAZ**

Department of Pediatrics and Department of Environmental Medicine and Public Health & Mount Sinai Adolescent Health Center, Icahn School of Medicine at Mount Sinai

**NANCY E. HILL**

Graduate School of Education, Harvard University

**MICHELLE JACKSON**

Department of Sociology, Stanford University

**ARLENE F. LEE**

Maryland Governor's Office for Children (retired)

**LESLIE LEVE**

Department of Counseling Psychology and Human Services, College of Education, and Prevention Science Institute, University of Oregon

**JENS LUDWIG**

Harris School of Public Policy, University of Chicago

**SUSAN VIVIAN MANGOLD**

Juvenile Law Center

**BRUCE S. MCEWEN**

Harold and Margaret Milliken Hatch Laboratory of Neuroendocrinology, The Rockefeller University

**STEPHEN T. RUSSELL**

Department of Human Development and Family Sciences, University of Texas at Austin

**JOANNA LEE WILLIAMS**

Curry School of Education and Human Development, University of Virginia

# Study Staff

**EMILY P. BACKES**

Study Director

**ELIZABETH TOWNSEND**

Associate Program Officer

**DARA SHEFSKA**

Research Associate

**MARY GHITELMAN**

Senior Program Assistant

**TAMMY CHANG**

University of Michigan School of Medicine  
James C. Puffer, M.D./American Board of Family Medicine Fellow

**STEPHANIE OH**

Christine Mirzayan Science and Technology Policy Graduate Fellow  
(January through May 2018)

## Statement of Task

The study sponsors asked the National Academies of Sciences, Engineering, and Medicine to provide an evidence-based report that:

- Examines the neurobiological and socio-behavioral science of adolescent development, and
- Explores how this knowledge can be applied to institutions and systems so that adolescent well-being, resilience, and development are promoted and that systems address structural barriers and inequalities in opportunity and access.

## Scientific and Policy Context

- Twenty years ago, the National Academies published a landmark study on early childhood development, *From Neurons to Neighborhoods: The Science of Early Childhood Development*. The report emphasized that there is a continuous and adaptive interaction between biology and environment from conception through the early childhood years.
- Over the last several decades large-scale investments in supports for young children—such as Early Head Start, Head Start, and home visiting programs—have contributed to broader public awareness of the importance of prenatal and early childhood development in achieving positive outcomes for all young children.
- Investing in early childhood is important, but “early intervention is an investment, not an inoculation.” Early life conditions, including supports and adversity, can affect adolescent development and past developmental challenges may be mediated in adolescence.
- The reports, together, take a life-course perspective arguing that the strong infrastructure for young children should be extended throughout adolescence to nurture positive development for all children from birth to adulthood.

# Why Adolescence?

- Recent advances in neurobiology and neuroimaging have demonstrated the dramatic extent of brain maturation during adolescence.
- Adolescent brains have evolved to meet the needs of this stage of life, allowing them to explore new environments, learn and adapt to changes, and build new relationships with the world and people around them.
- Policies and practices that capitalize on the promise of adolescence and create incentives for discovery and innovation are needed, rather than those that are preoccupied with vulnerability and shielding adolescents from harm.
- Adolescence is a sensitive period of neurodevelopment that is especially affected by the environment. Deeply rooted, and growing, structural inequalities curtail the promise of this developmental period.
- The challenge is to take advantage of the developmental opportunities afforded by adolescence. The adaptability, plasticity, and heterogeneity of adolescence creates accompanying opportunities—and obligations—for society to help all adolescents flourish.

# Defining Adolescence

- Adolescence is a period of developmental change in a person's life that bridges childhood and adulthood.
- Adolescence begins with the onset of puberty (approximately age 10) and ends during the mid-20s.
- Sometimes useful to say adolescence encompasses four periods that shade into one another—early adolescence (10-12), middle adolescence (13-15), late adolescence (16-18), and young adulthood (19-25).
- 73.5 million adolescents in the United States (about a fourth of the whole population).
- Adolescents in the United States are an increasingly diverse group.



# The Promise of Adolescence

## **PART I: Adolescence as a Period of Opportunity**

- Adolescent Development
- Interplay between Biology and Environment
- Inequity and Adolescence

## **PART II: Using Developmental Knowledge to Assure Opportunity for All Youth**

- Education
- Health System
- Child Welfare System
- Justice System
- Research Recommendations

# Adolescent Development

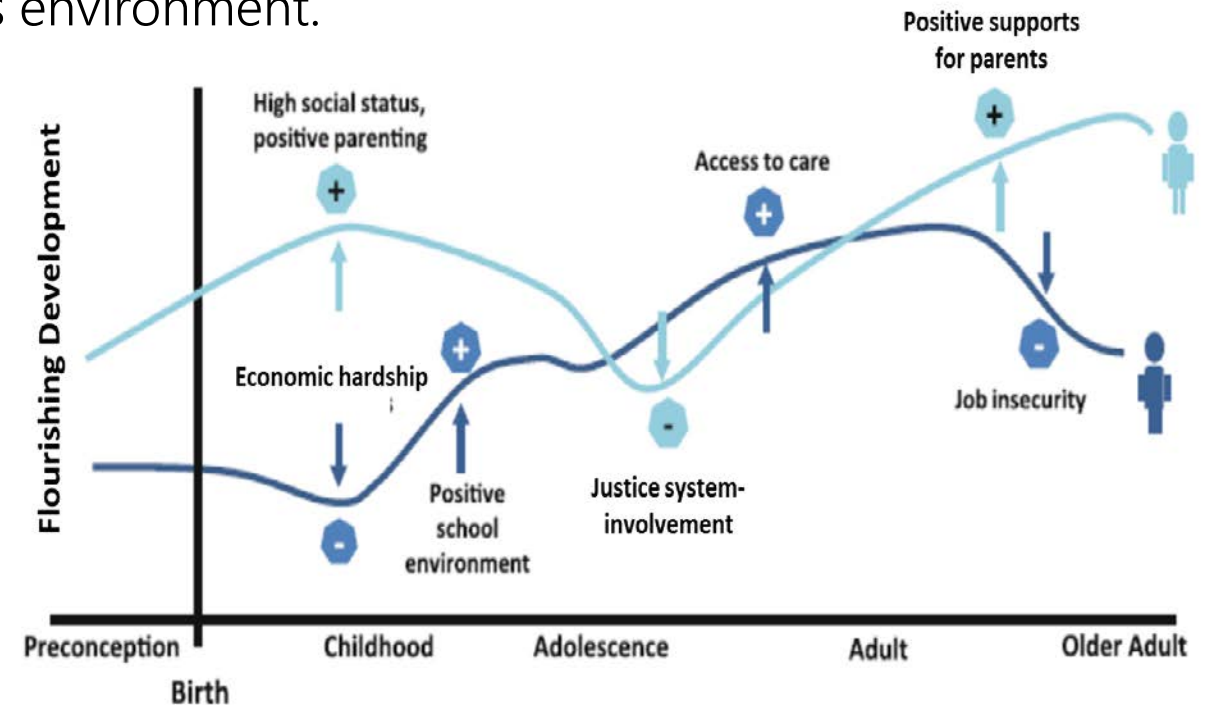
- As noted, adolescents' brains have evolved to meet the needs of this critical stage of life.
- Developmental changes heighten curiosity and reward sensitivity and invite exploration, discovery, and an associated tendency to take risks.
- By exploring new environments, and developing new social relationships with peers and adults outside the family, adolescents build cognitive, social, and emotional skills necessary for mature relationships and productive contributions in adulthood.
- Adolescents are active participants in their own development. Their developing competencies in problem-solving, their awareness of and concern with others, and their openness to exploration and novelty make this a particularly opportune time to promote social engagement and encourage leadership.

# Adolescent Development

- Increased cognitive abilities provide capacity for psychosocial development, such as developing identity and capacity for self-direction.
- An adolescent's identity is an emerging reflection of one's values, beliefs, and aspirations, and it can be constructed and reconstructed over time and experience.
- Young people become increasingly aware of and attuned to their social status during adolescence, and institutions, policies, and practices may reinforce status hierarchies and stereotypes about members of groups that are nondominant or stigmatized in society.
- Adolescence is marked by a growing capacity for self-direction. Over the course of adolescence, youth gain the cognitive skills needed to reflect on complex questions about their role in the world.

# Interplay between Biology and Environment

- Genes and environment interact: The way heredity is expressed in behavior depends significantly on influences in a person's environment.
- The trajectory of an individual's life may be changed, negatively or positively, at each life stage.
- Protective factors in the environment – such as supportive relationships with family and caretakers, and access to resources – support positive trajectories, while harmful experiences may lead to at-risk or poor trajectories.



# Interplay between Biology and Environment

- Adolescents' heightened sensitivity and responsiveness to environmental influences implies creativity, adaptability, risk, and resilience.
- Adolescents have the opportunity to develop neurobiological adaptations and behaviors that leave them better equipped to handle adversities that emerge throughout the life course.
- Adolescence provides an opportunity for recovery. Because of the malleability and plasticity of the adolescent brain, redirection, recovery, and resilience are possible.
- Investments in programs and interventions that capitalize on brain plasticity during adolescence can promote beneficial changes in developmental trajectories for youth who may have faced adverse experiences earlier in life.

# Inequity and Adolescence

- Disparities in family and neighborhood resources and supports, biased and discriminatory interactions with important social systems, and resulting inequalities in opportunity and access severely curtail the promise of adolescence for many youth
- These potent structural inequities and societal determinants shape adolescents' life-course trajectories in multiple ways. They reduce access to opportunities and supports enjoyed by more privileged youth, and they also expose less privileged youth to excess risks, stresses, and demands.
- These excess pressures “get under the skin” and adversely affect the brain and body during this critical developmental period.

# Inequity and Adolescence

- Striking differences in opportunity are associated with differences in outcomes—in health, safety, well-being, and educational and occupational attainment—and in trajectories over the life course. For example:
  - LGBTQ youth have much higher rates of alcohol, marijuana, and tobacco use than the general population of adolescents and higher rates of HIV infection.
  - Black youth ages 10 to 24 have mortality rates roughly 50 percent higher than White and Latinx youth, driven mainly by differences in rates of death by homicide.
  - In education, among fourth grade students that qualified for free lunch, 25% are proficient in math, compared with 57% of paid-lunch students.
  - In the juvenile justice system, Black youth are detained at a rate six times higher than White youth and three times higher than Latinx youth.

# Inequity and Adolescence

- Disparities in adolescent outcomes are not immutable. They are responsive to changes in underlying conditions, and adolescents themselves show resilience and demonstrate strengths and assets that may be utilized to overcome inequities. Ending the disparities in adolescent development will also require sustained and effective system change.
- An effective strategy, or set of strategies, to reduce inequities needs to address their sources. Some promising policies and programs that attempt to tackle these disparities in opportunity, include:
  - Policies and programs to reduce disparities in income, wealth, and neighborhood resources, such as the Supplemental Nutrition Assistance Program and the Earned Income Tax Credit.
  - Trauma-informed approaches preparing adults serving youth to address differential exposure to violence and trauma, such as the Cognitive Behavioral Intervention for Trauma in Schools and the Sanctuary Model.
  - Emerging tools to erase or counteract bias in decision making, such as using predictive analytics for investigations and placement decisions in the child welfare system.



## PART II: Guiding Principles for Policy and Practice

- Adolescence is a sensitive period for discovery and learning, providing opportunities for life-long impact
- Learning how to make decisions and to take responsibility for shaping one's own life are key developmental tasks of adolescence.
- Forming personal identity is another central task of adolescence. The increasing diversity of U.S. adolescents and the nation as a whole requires youth-serving systems to be culturally sensitive and to be attuned to the integrated needs of each adolescent.
- Supportive familial, caregiver, and adult relationships play a significant role in fostering positive outcomes for adolescents.
- Adolescence provides opportunity for ameliorating harmful effects of childhood exposures.
- Disparities in family and neighborhood resources and supports, biased and discriminatory interactions with important social systems, and resulting inequalities in opportunity and access severely curtail the promise of adolescence for many youth.

# Education

- Changes in our understanding of adolescence, together with major changes in the labor market, require rethinking and modernizing the education system.
- The school system of the future must offer differentiated and responsive academic opportunities – including individualized instruction, tutoring, and credentialing – and incorporate the teaching of non-academic skills such as decision-making, practical knowledge, and adaptability into their mission.
- The education system will need to provide additional supports for adolescents and their families to assist them in navigating an increasingly complex sector.
- The growing diversity of adolescents also requires schools to better recognize adolescents' integrated needs, become more culturally sensitive, and become adept at assisting youth with issues related to identity and social competence.
- Increasing income segregation of schools and rising income inequality suggests that adolescents from disadvantaged households likely need more resources if society is to reduce disparities in educational outcomes.

# Recommendations

## Recommendations for the Education System

**Recommendation 6-1:** Rectify disparities in resources for least-advantaged schools and students.

**Recommendation 6-2:** Design purposeful but flexible pathways through education.

**Recommendation 6-3:** Teach practical knowledge and nonacademic skills, such as decision-making, adaptability, and psychosocial skills.

**Recommendation 6-4:** Protect the overall health and well-being of each student.

**Recommendation 6-5:** Foster culturally sensitive learning environments.

**Recommendation 6-6:** Help adolescents and families navigate the education sector.

# Health System

- Access to appropriate health care services is important to ensure adolescents' well-being today and for a lifetime, particularly as they develop habits that will affect their long-term health.
- Limited access to health care is associated with financial barriers, but adolescents also face additional challenges in that they are generally inexperienced in navigating the health care system, concerned that their health needs remain confidential, and more likely than adults to engage in risk-taking behaviors that could have both short- and long-term effects on their health.
- Developmentally appropriate changes to provider practices and innovative care delivery systems can help adolescents become more engaged with their care and achieve better outcomes. Health systems should offer integrated, comprehensive health services that prepare youth for the distinct physical, cognitive, and social changes that take place during adolescence, prepare them to navigate the health system independently, and provide services that are culturally informed and attentive to the needs of all youth.

# Recommendations

## Recommendations for the Health System

**Recommendation 7-1:** Strengthen the financing of health care services for adolescents, including insurance coverage for uninsured or under-insured populations.

**Recommendation 7-2:** Improve access to comprehensive, integrated, coordinated health services for adolescents.

**Recommendation 7-3:** Increase access to behavioral health care and treatment services.

**Recommendation 7-4:** Improve the training and distribution and increase the number of adolescent health care providers.

**Recommendation 7-5:** Improve federal and state data collection on adolescent health and well-being, and conduct adolescent-specific health services research and disseminate the findings.

# Child Welfare System

- Historically, the U.S. child welfare system has focused on young children. This approach is ill-suited to help adolescents in the child welfare system flourish, given their more advanced decision-making skills and their need for a balance of autonomy and healthy relationships, compared to younger children.
- Over the past two decades, Congress has gradually enacted statutory changes that better align the child welfare system with the developmental assets and challenges adolescents face, including focusing attention on family reunification, prioritizing placement with relatives over strangers, and providing services for adolescents aging out of foster care.
- These are significant advances, but additional efforts – particularly broader uptake at the state level of the optional components of recent federal laws – are needed to ensure that all adolescents involved with the child welfare system have the opportunity to flourish.

# Recommendations

## Recommendations for the Child Welfare System

**Recommendation 8-1:** Reduce racial and ethnic disparities in child welfare system involvement.

**Recommendation 8-2:** Promote broad uptake by the states of federal programs that promote resilience and positive outcomes for adolescents involved in the child welfare system.

**Recommendation 8-3:** Provide services to adolescents and their families in the child welfare system that are developmentally informed at the individual, program, and system levels.

**Recommendation 8-4:** Conduct research that reflects the full range of adolescents in the child welfare system.

**Recommendation 8-5:** Foster greater collaboration between the child welfare, juvenile justice, education, and health systems.

**Recommendation 8-6:** Provide developmentally appropriate services for adolescents who engage in noncriminal misconduct without justice-system involvement.

# Justice System

- Findings regarding adolescent brain development have highlighted the diminished culpability of adolescents involved in the justice system and their potential responsiveness to preventive interventions.
- Recent advances in the science of adolescent development have had a substantial impact on juvenile justice reform. However, racial and ethnic disparities in police, prosecutorial, and judicial decision-making persist and in some cases are increasing.
- Areas of opportunity for reform within the **juvenile justice system** include: increased family engagement and greater attention to procedural fairness, such as interactions with police, legal representation for youth, and reduced use of juvenile fines and fees.
- Similar reform efforts recognizing the developmental needs of older adolescents and young adults are emerging within the **criminal justice system**, including reducing automatic transfers of juveniles to criminal courts based only on the charged offense, and creating developmentally informed correctional programs for young offenders..



# Recommendations

## Recommendations for the Justice System

**Recommendation 9-1:** Reduce disparities based on race, ethnicity, gender, ability status, and sexual orientation or gender identity and expression among adolescents involved in the justice system.

**Recommendation 9-2:** Ensure that youth maintain supportive relationships while involved in the justice system and receive appropriate guidance and counsel from legal professionals and caregivers.

**Recommendation 9-3:** Implement policies that aim to reduce harm to justice-involved youth in accordance with knowledge from developmental science.

**Recommendation 9-4:** Implement developmentally appropriate and fair policies and practices for adolescents involved in the criminal justice system.

**Recommendation 9-5:** For those youth in the custody of the justice system, ensure that policies and practices are implemented to prioritize the health and educational needs of adolescents and avoid causing harm.

# Conclusion

- Society has a collective responsibility to build systems that support and promote positive adolescent development.
- These systems should reflect a rich understanding of the developmental needs of adolescents and a specific recognition of adolescence as a time of great opportunity to promote learning and discovery and to remediate past developmental challenges.
- Until society embraces this responsibility, the promise of adolescence will remain unfulfilled for millions of youth.
- To fail to build systems that support all youth is to waste human capital, reducing economic growth and exacerbating rising income inequality.
- Creating positive impact through opportunities not only improves trajectories, but also can provide high-impact, cost effective interventions to counteract the effects of childhood stresses and deprivations and prevent negative outcomes in adulthood.

Thank you!



To read or download a copy of the report, please visit:

[www.nationalacademies.org/  
adolescentdevelopment](http://www.nationalacademies.org/adolescentdevelopment)

For more information about the study or dissemination activities, please contact:

Emily Backes, Study Director, [ebackes@nas.edu](mailto:ebackes@nas.edu)

Dara Shefska, Research Associate, [dshefska@nas.edu](mailto:dshefska@nas.edu)

Elizabeth Townsend, Associate Program Officer [etownsend@nas.edu](mailto:etownsend@nas.edu)

# Appendix

# Education

## **Recommendation 6-1: Rectify disparities in resources for least-advantaged schools and students.**

- A. All states should take steps to eliminate resource disparities across districts and schools by exploring methods or formulas for financing education to augment or replace municipal tax bases.
- B. In coordination with states and localities, the federal government should develop “NextStep,” a program targeting underprivileged adolescents to promote both their academic and non-academic development.

# Education

## Recommendation 6-2: Design purposeful but flexible pathways through education.

- A. Recognizing the enormous heterogeneity in the academic levels and needs of adolescents, school districts should be funded to improve their capacity to adapt to individual students' needs, including pace of learning and need to make up work.
- B. School districts should facilitate diverse pathways and postsecondary plans for adolescents, including for those students interested in career-oriented or vocational education and training as well as those who are college-bound, and ensure that students have the skills and access to coursework necessary for the option to switch between the two as their interests may evolve.
- C. School districts should design flexible schedules for course offerings during the academic year and the summer to enable youth to easily make up classes, recover lost credits, and advance in their course work, especially for youth who are over-age and under-credited. In addition, school personnel should help youth and families create specific plans to recover lost credits, to advance in their course work, and to pursue postsecondary job and career opportunities.
- D. Schools should provide flexible and diverse opportunities for students to develop interests, talents, and dispositions to foster their general wellbeing and facilitate their civic engagement.
- E. States and localities should provide funding to allow schools to hire sufficient career, vocational, and college counselors who are knowledgeable about the local job markets in order to prepare youth for 21st century jobs and identify internships and apprenticeships to facilitate the training youth need to transition to the job market.
- F. Local businesses and school districts should create robust relationships and specific programmatic linkages to ensure that school curricula enable youth to learn the skills and information needed to prepare them for meaningful jobs and careers in the local economy.
- G. Local businesses, local colleges, and school districts should create specific internships and apprenticeship training programs to prepare youth for, and provide credentials for, meaningful jobs and careers.

# Education

## **Recommendation 6-3: Teach practical knowledge and non-academic skills, such as decision-making, adaptability, and social-emotional competence.**

- A. Schools should create significant opportunities for youth to develop non-academic skills, including project-based learning, socio-emotional learning, and practices encouraging reflection on intellectual growth and personal identity
- B. Schools should teach adolescents specifically about brain development so that they understand its connections to their own health and well-being.
- C. Schools should provide opportunities to youth both within classrooms and within the larger school context to regularly make impactful decisions in order to develop both decision-making skills and efficacy for civic engagement.
- D. The U.S. Department of Education should create guidelines for, and school districts should create, curricula to ensure mastery of practical life skills for youth upon graduation, either through specific courses or integration into existing courses. Practical knowledge includes finance management, budgeting and banking; obtaining and managing insurance (e.g., health, auto); housing (renting, leasing, mortgages, contracts); and transportation (e.g., drivers licenses, identification and processes for using public transportation such as trains, buses, and air travel).
- E. To foster civic engagement and decision-making and to empower youth to effect change in their communities, school districts and local governments should provide youth with opportunities to participate in research designed to improve the agencies that are directed to serve them (e.g., by designing and identifying appropriate research questions, analyzing appropriate data, and drawing recommendations and conclusions).

# Education

## **Recommendation 6-4: Protect the overall health and well-being of each student**

- A. Given the importance of sleep for adolescents, researchers and policy makers should prioritize identifying ways to mitigate the potential challenges of later school start-times and fully consider the benefits of sleep for adolescents. School staff should consider the value of sleep as they plan the school day and design homework and assignments.
- B. School districts should enact policies and practices that promote supportive school climates and ensure safety for all students.
- C. States and localities should provide funding for, and direct schools to provide, increased access to mental health services for students.
- D. School districts, in coordination with their local communities, should ensure that adolescents have the time and opportunity to engage in sufficient health-promoting physical activity each day and that healthy food options are available.



# Education

## Recommendation 6-5: Foster culturally sensitive learning environments.

- A. State and federal agencies, school districts, and schools should require that teachers, counselors, administrators, and staff engage in regular training on implicit bias and cultural sensitivity, generally and as they relate to specific populations within the school.
- B. Schools should recruit and retain a diverse workforce to mirror the diversity of their student bodies
- C. College and university schools of education and other teacher training programs should require coursework that assures mastery of adolescent development and culturally inclusive pedagogy and implicit bias in their training of teachers.
- D. School districts and schools should implement curricula that are culturally inclusive and affirm the value of the diverse ethnic and cultural backgrounds represented among students, both in content and learning styles.
- E. Schools and school districts should create curricular opportunities for culturally relevant content and exposure to perspectives of non-dominant groups.
- F. Schools and districts should establish and utilize disciplinary policies and practices that are developmentally appropriate and ensure that disciplinary measures are applied equitably and fairly. School leaders should assess and monitor their disciplinary practices to assure that they are free of biases by race, gender, socioeconomic status, or ability status.
- G. School districts and schools should implement equity-driven principles of conflict intervention.

# Education

## **Recommendation 6-6: Help adolescents and families navigate the education sector.**

- A. Schools should support adolescents and families by serving as a coordinator of institutional services, such as providing assistance in identifying internships, apprenticeships, mentoring, and training for career and vocational transitions, along with navigating the college admissions process.
- B. School districts should assist families in navigating the education sector to identify opportunities and resources to meet the specific educational needs of their adolescents.

# Health

## **Recommendation 7-1: Strengthen the financing of health care services for adolescents, including insurance coverage for uninsured or underinsured populations.**

- A. Federal and state policymakers should make changes within Medicaid to increase access for adolescents, including expanding Medicaid in states that have not yet done so, increasing Medicaid reimbursement rates for pediatric health services to be on par with those for Medicare, allowing equitable reimbursement for comprehensive health services, and eliminating the five-year-eligibility restriction on the use of Medicaid for documented immigrant adolescents.
- B. Federal, state, and local agencies, in partnership with philanthropic foundations and the private sector, should ensure adequate financial support for comprehensive, high-quality, culturally informed, and integrated physical and behavioral health services for adolescents.
- C. To finance comprehensive, adolescent-friendly health services, federal and state policy makers should adapt eligibility requirements to allow blending of existing funding mechanisms across sectors at the local level.

# Health

## **Recommendation 7-2: Improve access to comprehensive, integrated, coordinated health services for adolescents.**

- A. State and federal agencies, health systems, and health care providers should collaborate to provide comprehensive, integrated, and coordinated care for adolescents, linking physical and behavioral health providers as well as connecting other vital support services to the health sector.
- B. With help from federal agencies and designated funding, health care providers, public and private health organizations, and community agencies should work to develop or enhance coordinated, linked, and interdisciplinary adolescent health services. This includes funding community outreach efforts to attract and retain adolescents and their families in the health care system.
- C. To better understand effective methods for delivering coordinated care, federal research agencies and other research funders should encourage and replicate pilot programs and interventions that aim to decrease fragmentation and alleviate the complicated maze of services for adolescents and their families.
- D. Health care providers and health organizations should implement policies and practices that support adolescents' emerging sense of agency and independence, such as ensuring that all adolescents receive confidential health care for sensitive services as appropriate, such as empowering youth to meaningfully participate in their health care.
- E. Health care providers, public and private health organizations, health insurers, and state governments should ensure that all adolescents receive confidential care for sensitive services. Policies and ethical guidelines should enable adolescents who are minors to give their own consent for health services and to receive those services on a confidential basis when necessary to protect their health, and states should enact stronger regulations that ensure confidential access to sensitive services.

# Health

## **Recommendation 7-3: Increase access to behavioral health care and treatment services.**

- A. Federal agencies and behavioral health education institutions should work together to grow the behavioral health workforce available to adolescents, particularly those in underserved areas by expanding HRSA's Behavioral Health Workforce Education and Training program and expanding the National Health Service Corps' scholarship program to include mental and behavioral health providers.
- B. Federal, state, and local policymakers should develop and implement behavioral health programs for prevention, screening, and treatment that better meet the needs of all adolescents, with particular attention to vulnerable groups. Adolescents should actively participate in program development and implementation.

# Health

## **Recommendation 7-4: Improve the training and distribution and increase the number of adolescent health care providers**

- A. Regulatory bodies for health professions in which an appreciable number of providers offer care to adolescents—such as the American College of Obstetrics and Gynecology, American Academy of Family Medicine, American Academy of Pediatrics, American Academy of Physician Assistants, and state boards of nursing and social work—should include a minimum set of competencies in adolescent health care and development into their licensing, certification, and accreditation requirements, and all pediatricians and primary care providers should have a minimum level of competency in adolescent medicine.
- B. Public agencies and private organizations should work together to expand the number of training sites for board-certified adolescent medicine fellowships across multiple academic training centers.
- C. HRSA, medical and nursing schools, and other key stakeholders should work together to create new pathways for medical students and other health professionals to become adolescent health specialists.

# Health

## **Recommendation 7-5: Improve federal and state data collection on adolescent health and well-being, and conduct adolescent-specific health services research and disseminate the findings.**

- A. The Federal Interagency Forum on Child and Family Statistics should work with federal agencies and, when possible, states to organize and disseminate data on the health of and health services for adolescents, including developmental and behavioral health.
- B. To improve the health of adolescents, data must be used to assess whether existing programs and services are working. State and local health agencies should work with community-level adolescent service providers to identify opportunities for improvement in their programs.
- C. Federal health agencies and private foundations should prepare a research agenda for improving adolescent health services that includes assessing existing service models, developing new models for providing adolescent-friendly health services, piloting projects to develop and test innovative approaches for incorporating neurodevelopmental and socio-behavioral sciences in the delivery of healthcare to adolescents, and evaluating the effectiveness of collaborations.

# Child Welfare

## **Recommendation 8-1: Reduce racial and ethnic disparities in child welfare system involvement.**

- A. State and local departments of child welfare should implement policies and practices that ensure that families of color have access to the same levels of in-home preventative services as other at-risk families.
- B. State and local departments of child welfare should establish guidelines and protocols regarding appropriate levels of surveillance in communities to improve the overall efficiency and benefit of surveillance systems, a practice also expected to reduce disparities. Responsible agencies should actively monitor implementation of these guidelines.

## **Recommendation 8-2: Promote broad uptake by the states of federal programs that promote resilience and positive outcomes for adolescents involved in the child welfare system.**

- A. All states should adopt the existing federal option to provide extended care to youth until age 21 and Chafee services to age 23 and provide comprehensive aftercare support to youth as they transition out of the child welfare system.
- B. All states should ensure that child welfare-involved youth are eligible for education and training vouchers until they reach age 26 and should facilitate and support youths' application process.
- C. All states should ensure that youth who have experienced foster care are eligible for Medicaid until age 26.



# Child Welfare

**Recommendation 8-3: Provide services to adolescents and their families in the child welfare system that are developmentally informed at the individual, program, and system levels.**

- A. State and local departments of child welfare should implement policies and practices that incorporate a developmental approach to service provision and case management for adolescents with child welfare system involvement, prioritizing family connections and supportive adults, and taking maximum advantage of adolescents' increasing cognitive and social capacities.
- B. State and local departments of child welfare should adjust the type and structure of services and the level of adolescent involvement in decision-making related to their housing, education, and services to best align with adolescents' developmental capabilities and needs.
- C. Recognizing the growing capacity of adolescents for self-direction, case managers and courts should ensure that adolescents have the opportunity to fully participate in developing and implementing their service and transition plans, while maintaining critical ties with caring adults. To this end, adolescents should be viewed as respected partners in decision-making regarding their placements, education, and support services.

# Child Welfare

**Recommendation 8-4: Conduct research that reflects the full range of adolescents in the child welfare system.**

- A. The federal government, state and local child welfare agencies, and philanthropic institutions should fund research on service characteristics and outcomes for the full range of adolescents in the child welfare system in order to better design and evaluate services specifically for adolescents, depending upon their age, child welfare system history, and placement situation.
- B. Individual and program successes identified through this research should be scaled to system-level change for adolescents in the child welfare system.

# Child Welfare

## **Recommendation 8-5: Foster greater collaboration between the child welfare, juvenile justice, education, and health systems.**

- A. Child welfare, juvenile justice, education, and health agencies should collaborate to create an integrated data system that links information to track, evaluate, and provide an effective and integrated set of services to adolescents across these systems.
- B. State and local child welfare and education agencies should collaborate to minimize educational disruptions for child welfare-involved youth. This includes insuring proper transfer of credits, appropriate school placement and services, and school transportation services when continuation in the original school is desired.
- C. An arrest, court petition, delinquency finding or other involvement in the juvenile justice system should not disqualify an otherwise eligible child from remaining in or re-entering foster care for the full period of eligibility.

# Child Welfare

## **Recommendation 8-6: Provide developmentally appropriate services for adolescents who engage in noncriminal misconduct without justice-system involvement.**

- A. The primary strategy for states and localities for addressing noncriminal misconduct (status offenses) by adolescents should be the provision of services to the youths and their families on a voluntary basis, wholly outside the legal system.
- B. States should end the practice of treating a violation of a court order in a by an adolescent adjudicated as a child in need of services (CHINS) as contempt of court and, thus, as a legal basis for initiating a juvenile delinquency proceeding.
- C. If adolescents are referred to the juvenile justice system for noncriminal misconduct, the disposition should be limited exclusively to placement in a community-based program that emphasize the provision of services and keep the child at home.

# Juvenile Justice

## **Recommendation 9-1: Reduce disparities based on race, ethnicity, gender, ability status, and sexual orientation or gender identity and expression among adolescents involved in the justice system.**

- A. Congress should ensure proper implementation of the Juvenile Justice and Delinquency Prevention Act (JJDP), including oversight of state efforts to monitor and reduce racial and ethnic disparities with an increased focus on research and data collection.
- B. The Office of Juvenile Justice and Delinquency Prevention (OJJDP), in accordance with requirements laid out in the JJDP, should require at a minimum that all states furnish specific, rigorous metrics on the race and ethnicity of youth involved in the justice system.
- C. School systems should leverage available federal, state, and local funding to implement evidence-based programs to improve social and structural conditions to reduce racial disparities and student referrals to the justice system.
- D. Law enforcement officials and other institutions and community organizations should undertake prevention programming designed to reduce justice-system involvement by disadvantaged groups, based on social and structural inequities differentially experienced by those groups.

# Juvenile Justice

**Recommendation 9-2: Ensure that youth maintain supportive relationships while involved in the justice system and receive appropriate guidance and counsel from legal professionals and caregivers.**

- A. Juvenile facilities should amend policies that curtail visitation rights as punishment, and states and localities should implement policies and practices to assist families in overcoming barriers to prison visitation so that youth can remain connected to parents, caregivers, and other relatives.
- B. Probationary programs should connect parents and caregivers with community and educational resources that can teach them how to help their child succeed and avoid future interactions with the justice system.
- C. State legislatures and courts should ensure that justice-involved youth are provided with competent counsel throughout the legal process.
- D. State legislatures and courts should ensure that adolescents under the age of 15 are not allowed to waive the right to an attorney or the right to remain silent without prior consultation with an attorney.

# Juvenile Justice

**Recommendation 9-3: Implement policies that aim to reduce harm to justice-involved youth in accordance with knowledge from developmental science.**

- A. Congress and state legislatures should enact legislation to eliminate the use of sex offender registries for non-violent juveniles.
- B. Given the robust evidence of the harmful effects of solitary confinement, the federal government or philanthropic organizations should fund research on effective alternatives to solitary confinement so that detention facilities will be able to scale back or eliminate the use of this practice as soon as practicable.

# Juvenile Justice

## **Recommendation 9-4: Implement developmentally appropriate and fair policies and practices for adolescents involved in the criminal justice system.**

- A. Legislatures should restore judicial discretion in decision-making about transferring juveniles to or from criminal courts.
- B. Prosecutors and courts should be guided by the principles of proportionality and individualization with consideration given to the maturity, needs, and circumstances of the individual offender when making transfer decisions.
- C. Judges sentencing juveniles in criminal courts should place these youth in juvenile correctional settings rather than adult correctional facilities. These youth should be entitled to all of the services they would have received if they had received a juvenile disposition and, upon turning 18, should be entitled to placement and services available to young adult offenders. Courts should conduct formal review of youths' criminal sentences on an individualized basis to determine whether the sentences should be adjusted in light of their mitigated culpability and prospects for successful adjustment in the community.



# Juvenile Justice

**Recommendation 9-5: For those youth in the custody of the justice system, ensure that policies and practices are implemented to prioritize the health and educational needs of adolescents and avoid causing harm.**

- A. Correctional programming for adolescents and young adults in the criminal justice system should promote accountability and reduce re-offending through developmentally appropriate services in both correctional facilities and residential and community settings, including mental health, substance abuse, education, and social services.
- B. Researchers, in partnership with practitioners, should urgently examine and evaluate effective alternatives to solitary confinement that promote the healthy development of individual youth and protect the safety of all in the facility.
- C. State and local educational agencies should work in partnership with their justice system counterparts to ensure that rigorous and relevant curricula for adolescents are delivered in residential facilities and that these curricula are aligned with career and technical education standards and meet the needs of all youth, including those with disabilities and English learners.