

Notes to a Young Investigator on How We Might Change the World

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I'D LIKE TO express my sincere gratitude to the APA for this tremendous honor and recognition. I am also extremely grateful to my mentors: my high-school biology teacher, Ben Kirkland; my college mentor, Ernest Williams; my Robert Wood Johnson Clinical Scholars Program mentors, Alvan Feinstein and Ralph Horwitz; my Robert Wood Johnson Harold Amos Medical Faculty Development Program mentor, Sandy Schwartz; and my cherished pediatric colleagues and mentors, Michael Weitzman, Paul Wise, and Fernando Mendoza. I additionally want to give special thanks to my amazing wife, Za, and my two spectacular daughters, Talia and Rae.

There are many challenges to growing up as a child in America (Table 1). There is poverty. Confucius (551–479 BC) once said, "In a country well governed, poverty is something to be ashamed of." More than 1 in 5 U.S. children lives in poverty, equivalent to 16 million, and 1 in 4 U.S. children younger than 6 years old lives in poverty.

There is hunger. Congressman Floyd Flake said, "As we talk about those who are starving in countries abroad, we have, indeed, all of the elements of a third-world nation within our own borders." A 17-year-old girl, Juana "Janie" Mendez, declared, "When you are hungry, you can't think about anything else." About half of all American children will receive Supplemental Nutrition Assistance Program (SNAP) benefits (food stamps) at some point. Over 16 million U.S. children live in food-insecure households, equivalent to 1 in 5 children (22%), and 1 in 7 Americans receives SNAP—about half are children.

There is lack of health-insurance coverage. Benjamin Disraeli (1804–1881) said, "The health of the people is really the foundation upon which all their happiness and all their powers as a state depend." One in 10 American children is uninsured—equivalent to 7.3 million. Every 42 seconds, a baby is born without health insurance.

There is child abuse and neglect. Henry Wadsworth Longfellow (1807–1882) said, "A torn jacket is soon mended, but hard words bruise the heart of a child." Every year, 3.3 million child maltreatment reports are filed regarding 6 million U.S. children—equivalent to nearly 6 reports every minute. Every day in America, 1 child is

abused or neglected every 42 seconds, and 5 children are killed by abuse or neglect.

There are special health care needs (SHCNs) and chronic conditions. Buddha (563–483 BC) stated, "Without health, life is not life; it is only a state of languor and suffering—an image of death." One in 7 American children has a SHCN—equivalent to 11.2 million children (15%). One in 5 U.S. households with children has at least 1 SHCN child—equivalent to about 9 million households. More than 1/3 of children with SHCN have active asthma.

There is overweight and obesity. Former Surgeon General C. Everett Koop said, "Except for smoking, obesity is now the number one preventable cause of death in this country." About 1 in 3 U.S. children (32%) is overweight or obese. More than 1 in 4 young children 2 to 5 years old (27%) is overweight or obese.

There is violence and bullying. Bertrand Russell (1872–1970) recounted, "I found one day in school, a boy of medium size ill-treating a smaller boy. I expostulated, but he replied: 'The bigs hit me, so I hit the babies; that's fair.' In these words, he epitomized the history of the human race." Over 740,000 children and youth are treated each year in EDs for injuries due to violence—equivalent to 84 kids every hour. Every 3 hours, a child or teen is killed by firearms. One in 5 U.S. high-school students has been bullied on school property in the past 12 months.

There are mental health and health care issues. Erik Erikson (1902–1994) remarked, "Someday, maybe, there will exist a well-informed, well-considered, and yet fervent public conviction that the most deadly of all possible sins is the mutilation of a child's spirit..." One in 5 U.S. children has a mental disorder with at least mild functional impairment, and 1 in 10 U.S. children lives with a serious mental or emotional disorder. Less than one-half of children with a diagnosable mental disorder, however, receive mental health services.

There is school dropout. President Barack Obama stated, "And dropping out of high school is no longer an option. It's not just quitting on yourself, it's quitting on your country..." Each year, 1.3 million U.S. students fail to graduate from high school. Every 8 seconds in America,

Table 1. The Many Challenges to Growing Up as a Child in America

Poverty
Hunger
Lack of health insurance coverage
Child abuse and neglect
Special health care needs and chronic conditions
Overweight/obesity
Violence and bullying
Mental health and health care issues
Dropping out of school
Teen pregnancy
Racial/ethnic disparities

1 high-school student drops out. Every school day, 7000 teenagers become high-school dropouts.

There is teen pregnancy. The Centers for Disease Control and Prevention noted, “Teen pregnancy and child-birth cost U.S. taxpayers an estimated \$9 billion per year because of increased health care and foster-care costs, increased incarceration rates among the children of teen parents, and lost tax revenue from teen mothers who earn less money because they have less education.” Someone once observed, “It’s hard to raise a child when you’re still a child.” Each year, almost 750,000 U.S. teenagers 15 to 19 years old become pregnant. The U.S. teen pregnancy rate continues to be one of highest in developed world, at more than twice as high as rates in Canada and Sweden.

There are racial and ethnic disparities in health and health care. Martin Luther King, Jr., (1929–1968) declared, “Of all the forms of inequality, injustice in health care is the most shocking and inhumane.” Minority children experience substantial disparities in the aforementioned 10 major public-health challenges for U.S. children. A recent Technical Report from the American Academy of Pediatrics¹ concluded: “Racial/ethnic disparities in children’s health and health care are extensive, pervasive, persistent, and occur across the spectrum of health and healthcare.” For example, compared with white asthmatic children, African-American asthmatic children are 5 times more likely to die.

So how might we change the world? Vincent Van Gogh (1853–1890) said, “I dream my painting, and then I paint my dream.” I offer my suggestions to young investigators on four urgent priorities to tackle (Table 2), and five habits that may help you successfully realize your aspirations for changing the world (Table 3).

URGENT PRIORITIES

First: tackle the social determinants of health. Let’s begin another war on poverty, and let’s eliminate childhood poverty. A recent randomized, controlled trial (RCT) published in the *New England Journal of Medicine* revealed

Table 2. Suggestions to Young Investigators on 4 Urgent Priorities to Tackle

Tackle social determinants of health
Reengineer the world
Advocate for equity wherever injustice resides
Empower children and families to help themselves

Table 3. Five Proposed Habits That May Help Young Investigators to Successfully Realize Their Aspirations for Changing the World

Take action
Work hard and be persistent
Focus your time and effort
Don’t be afraid to innovate: be different
Strive to make a difference

that, among families living in public housing in high-poverty areas, those provided with vouchers to live in low-poverty areas experienced significant reductions in the prevalence of extreme obesity and diabetes.²

Second: reengineer the world. All children deserve a healthy, safe, nurturing environment that allows attainment of their full potential. Let’s reengineer environments harmful to children so that they become health-promoting. In a *JAMA* RCT,³ 1997 APA Research Award winner Dr. Michael Weitzman demonstrated that removing lead-contaminated soil from around children’s homes and replacing it with clean soil resulted in reduction in children’s blood lead levels.

Third, advocate for equity wherever injustice resides. Let’s ensure that no child disproportionately suffers because of his or her income, race/ethnicity, primary language, special healthcare needs, or immigration status. An RCT conducted by our team⁴ showed that, for Latino children, community-based case managers were substantially more effective than traditional Medicaid/CHIP outreach and enrollment in obtaining health insurance, getting insurance quicker and more continuously, and achieving high parental satisfaction, and that disparities in health care can be eliminated. This research resulted in a Congressional Research Briefing, a bill in the U.S. Senate, and the President’s Children’s Health Insurance Program Reauthorization Act (ie, CHIPRA) legislation that includes community health workers as means of insuring uninsured children.

Fourth, empower children and families to help themselves. Let’s provide opportunities, resources, and guidance that empower children and families to be healthy, productive, and happy. Community-based participatory research may be particularly useful in attaining this goal. An RCT by our team⁵ examined the efficacy of a Parent Mentor intervention for minority children with asthma. Parent Mentors were experienced parents of asthmatic children who received training on childhood asthma, met monthly with asthmatic children and their families at community sites, phoned parents monthly, and made home visits. This Parent Mentor intervention resulted in reduced wheezing, asthma exacerbations, ED visits, and missed parental work days; improved parental self-efficacy; cost little; and saved money.

PROPOSED HABITS TO HELP SUCCESSFULLY REALIZE YOUR ASPIRATIONS FOR CHANGING THE WORLD

I propose 5 habits that may help young investigators to successfully realize their aspirations for changing the world.

TAKE ACTION

Lao-tzu (c. 604–531 BC), credited with being the “father of Taoism,” stated: “A journey of a thousand miles must begin with a single step.” Anne Frank (1929–1945) said, “How wonderful it is that nobody need wait a single moment before starting to improve the world.”

WORK HARD AND BE PERSISTENT

Thomas Jefferson (1743–1826) noted, “I find that the harder I work, the more luck I seem to have.” Abraham Lincoln (1809–1865) declared, “Always bear in mind that your own resolution to succeed is more important than any one thing.”

FOCUS YOUR TIME AND EFFORT

Thomas Alva Edison (1847–1931) commented, “The first requisite of success is the ability to apply your physical and mental energies to one problem without growing weary.” The 1983 winner of the Nobel Prize in Physiology or Medicine, Barbara McClintock (1902–1992), remarked, “I never thought of stopping, and I just hated sleeping. I can’t imagine having a better life.”

DON’T BE AFRAID TO INNOVATE—BE DIFFERENT

George Washington Carver (1864–1943) proclaimed, “When you do the common things in life in an uncommon way, you will command the attention of the world.” The winner of the 1937 Nobel Prize in Physiology or Medicine, Albert Szent-Györgi (1893–1986), observed, “Discovery consists of seeing what everybody has seen and thinking what nobody has thought.”

STRIVE TO MAKE A DIFFERENCE

Consider the unparalleled fulfillment and joy of a life devoted to bettering the world by helping the disadvantaged. The scholar/teacher/scout leader Forest E. Witcraft (1894–1967) remarked, “A hundred years from now... it will not matter what my bank account was, the sort of house I lived in, or the kind of car I drove. But the world may be different because I was important in the life of a child.” The great athlete and social justice pioneer

Jackie Robinson (1919–1972) stated, “A life is not important except in the impact it has on other lives.”

In conclusion, millions of our children face substantial challenges to growing up in America, including poverty, hunger, lack of health insurance, child abuse and neglect, special health care needs, overweight/obesity, violence and bullying, mental health and healthcare issues, dropping out of school, teen pregnancy, and racial/ethnic disparities. Four urgent priorities proposed for young investigators aspiring to change the world for children are: tackle the social determinants of health, reengineer the world, advocate for equity wherever injustice resides, and empower children and families to help themselves. Five habits that may help young investigators to successfully realize their aspirations for changing the world are: take action, work hard and be persistent, focus your time and effort, don’t be afraid to innovate—be different, and strive to make a difference.

Some final thoughts from two of my all-time heroes. President John F. Kennedy (1917–1963) declared, “Children are the world’s most valuable resource and its best hope for the future.” Sitting Bull (c. 1831–1890) proclaimed, “Let us put our minds together and see what life we can make for our children.”

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