***NICHD Research Perspectives* Audio Podcast**

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Announcer: From the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, part of the National Institutes of Health, welcome to another installment of *NICHD Research Perspectives*. Your host is the Director of the NICHD, Dr. Alan Guttmacher.

Dr. Alan Guttmacher: Hello, I'm Alan Guttmacher. Thanks for joining us for another in our monthly series of podcasts. Today we will talk about a report on the well-being of children and adolescents in America that's just been released. The report is called *America's Children: Key National Indicators of Well-being*. This report comes out every year, thanks to the coordinated work of 22 federal agencies that collect data on children and families. Each year, agency officials compile the most recent data on children's well-being and publish it in one convenient reference for policymakers and the public. "Well-being" is a pretty broad topic, but the report breaks it down into seven key areas: family and social environment, economic circumstances, health care, physical environment and safety, behavior, education, and health.

A single statistic in any one of these areas can be useful, but a *collection* of statistics is even more revealing—especially when it shows trends across time. That's why this report matters; it helps us take stock of how well kids in this country are faring, not just as individuals or members of specific groups, but as an overall population.

Our guests today are experts in statistics who helped put together this year's report. They'll highlight for us some of the report's findings and help us understand their significance. From the Census Bureau, we have David Johnson, who is Chief of the Social, Economic, and Housing Statistics Division. From the Centers for Disease Control and Prevention, we have Jennifer Madans, Associate Director for Science at the National Center for Health Statistics. And rounding out this expert panel are two individuals from the Department of Education's National Center for Education Statistics: Chris Chapman, Director of the Early Childhood and Household Studies Program, and Tom Snyder, Director of the Annual Reports Program. Welcome to all of you.

David, let's start with you. The report mentions that the percentage of children in the total U.S. population is declining. From your post at the Census, you must track such trends pretty closely. What can you tell us about this finding?

Dr. David Johnson: Yes, thanks, Alan. As in previous years, we find that the percentage of children in the population fell between 2011 and 2012. In fact, since the mid–1960s, children have been decreasing as a proportion of the total U.S. population. In 2012, children made up about 23.5 percent of the population, down from a peak of 36 percent at the end of the baby boom in 1964. This year, however, there were actually fewer children living in the U.S., there's about 73.7 million children living in the U.S. And if we look at our projections over the next few years, we even project that children's share of the population is projected to continue its slow decline through 2050, when children are projected to make up only 21 percent of the population. One of the main interesting findings, however, is the increased diversity in terms of the racial and ethnic composition. We find that the percentage of children living in the United States who are Asian non-Hispanic actually increased over the year, as did the percentage of children who are of two or more races and the percentage of children who are Hispanic. And again, looking at our projections, we find that by 2050, about half the American population ages zero to 17 is projected to be composed of children who are either Hispanic, Asian, or of two or more races.

Dr. Guttmacher: That's really interesting David. I want to ask you about another topic, too. Your particular areas of interest are income and poverty, and we know that economic circumstances are among the factors that truly influence well-being. What did the report have to say on that front?

Dr. Johnson: Yes, again, I think that one of the important things this report does is not just track the key indicators of how children's lives are changing but also provides a picture of the diversity of children's well-being. So we can look at the poverty rate as one of those pictures of diversity. So although the number of children that were in poverty did not change significantly between 2011 and 2012, we find about 22 percent of all children lived in poverty. That proportion is about 35 percent of the total poverty population, even though, as I said before, they only make up about 24 percent of the population. Looking at this diversity we find the poverty rate was much higher for black non-Hispanics and for Hispanic children than for white non-Hispanic children. About

13 percent of white non-Hispanic children lived in poverty, compared to 39 percent of black non-Hispanic children and 34 percent of Hispanic children. Finally, I think the composition of children living in high- and low-income families is what's really interesting; in fact, one of my favorite figures is the Econ 1B figure that shows the distribution of children relative to their family poverty line, the income, the poverty threshold. And we see that in 2011 about 10 percent of kids live in extreme poverty—are living below 50 percent of the poverty threshold—and we also find that the percentage of children living with families with very, very high incomes at 600 percent of the poverty threshold is 12 percent in 2011. And that actually is almost double the rate of what it was in 1991. So we see an increase in the children living at the high end and an increase of children living at the low end, with a shrinking of children living in the middle of the income distribution.

Dr. Guttmacher: Thanks David, those are certainly very important statistics. Now I'm going to turn to Jennifer Madans of the National Center for Health Statistics, whose team contributed to some of the health statistics in the report. Jennifer, what do the data tell us about the importance of a healthy start among children?

Dr. Jennifer Madans: Thanks, Alan. One of the most important indicators of child health is the percent of babies that are born preterm—that is, born before 37 weeks of gestation. In 2011, the preterm birth rate declined for the fifth year in a row to 11.7 percent. And this is noteworthy because, prior to this decline, the percentage of births that were preterm had been on the rise for several decades. Preterm rates have declined for non-Hispanic black, non-Hispanic white, and for Hispanic births. In fact, the percentage of non-Hispanic black infants born preterm was the lowest reported in three decades. The decline has been fairly steady since 2006 when it was 18.5 percent, and in 2011, it was 16.8 percent. However, as in earlier years, non-Hispanic black women are still much more likely to have a preterm birth than non-Hispanic white women—at 16.8 percent compared to 10.5 percent for non-Hispanic white women. Further reductions in preterm births will be key to improving infant health and survival. Another important trend relates to teen birth. Having a child during adolescence is often associated with long-term difficulties for the mother and for her child. The teen birth has continued to decline for the fourth straight year. And in 2011, the teen birth weight was 15 per thousand teens age 15 to 17. Overall, teen births have been on the decline since 1991 with just a brief increase from 2005 through 2007.

Dr. Guttmacher: Jennifer, what are some the other important findings about child and adolescent health in this year's report?

Dr. Madans: Well, the report includes a wide range of health-related indicators, and I've chosen just three that address different aspects of health to highlight here today. The first relates to exposure to secondhand smoke. And exposure to secondhand smoke has been decreasing. In 2009–2010, 42 percent of children age 4 to 11 had any detectable level of cotinine in their blood, which is down from 53 percent in 2007–2008. Now, cotinine is a byproduct of nicotine, and it's a very useful measure of secondhand smoke exposure. And in addition, the percentage of children under 6 living in homes where someone smoked regularly also declined, from 27 percent in 1994 to 6 percent in 2010.

However, obesity among children continues to be of public health concern. Eighteen percent of children 6 to 17 where considered obese in 2009–2010. Now, contrast this to 1976–1980 when only 6 percent of children were obese. The percent obese rose to 11 percent 1988–1994 and has fluctuated between 16 percent and 19 percent since 2001. Obesity rates continue to be higher for Mexican American and non-Hispanic black children compared to non-Hispanic white children. In 2009–2010, 23 percent of Mexican American children and 26 percent of non-Hispanic black children were obese compared to 15 percent of non-Hispanic white children. Now, both poor eating habits and a lack of physical exercise can lead to childhood obesity. Diet quality for children fell short of USDA dietary guidelines. Diet quality would be improved for children if they increased consumption of vegetables, replaced refined grains with whole grains, substituted seafood for some meat and poultry, and decreased the intake of sodium, solid fats, and added sugars.

And the final indicator I want to talk about is injury, which has a major impact on the health of children and adolescents. Death rates are relatively low among children and adolescents. For example, for adolescents 15 to 19, there are about 49 deaths per 100,000 population in 2011. However, three-fourths of these adolescent deaths are from injuries, with almost 60 percent of these injury deaths related to motor vehicle traffic crashes or from firearms. The death rates for

both motor vehicle traffic and firearms have declined in recent years. Traffic deaths have decreased by nearly 70 percent since 1980, firearms deaths have decreased by more than 60 percent since 1994. But it's also important to keep in mind that for each fatal injury among adolescents, there are nearly 375 injury-related emergency department visits; these often result from violence, sports-related activities, or motor vehicle traffic crashes.

Dr. Guttmacher: Thanks Jennifer. Another area that the report addresses is education. This year, the report includes a special feature on the kindergarten year, an important milestone for both children and their parents. This special feature draws on new data from the Early Childhood Longitudinal Study, Kindergarten Class of 2010–2011, or what's known as the ECLS-K:2011. I'm happy that Chris Chapman of the National Center for Education Statistics is here to tell us about these data. Chris, can you tell us a little bit about the ECLS-K and some of its findings?

Mr. Chris Chapman: Certainly, Alan. Thanks for having me on the broadcast today. As you know, early childhood education is an area that the Forum [the Federal Interagency Forum on Child and Family Statistics] has been interested in highlighting more, so we are really excited about the opportunity to share our data. The ECLS-K:2011 is a recently started cohort study focused on a nationally representative sample of kindergarteners from the 2010–2011 school year. We plan on following their progress through the fifth grade year. The study is actually the third in a series of NCES studies that follow cohorts of young children over time. In terms of the kindergarten year, the report focuses on assessments of the children's reading, math, and science knowledge. The report also includes an analysis of the children's learning behavior as evaluated by their classroom teachers. We tested the kindergarteners' reading and math skills at the beginning and the end of the school year, and teachers reported about the kindergarteners' learning behavior at these two time points as well.

The science assessment was fielded only at the end of the school year. We focused the analysis on children in kindergarten for the first time to control for the possible influence of repeating kindergarten on assessment performance and on teacher evaluations. As you probably know, previous research has shown that there are already gaps in children's knowledge and skills by the time they start kindergarten. The ECLS-K:2011 data, as reported in the report, support these

findings. To give just a few examples, scores on the assessments were lower for first-time kindergarteners from families living in poverty than for their peers from families living above poverty. Considering the year before, children entered kindergarten, we see that those who had not had any early education and care by someone other than their parents, and children whose primary nonparental arrangement was with relatives, tended to have lower scores than children who were in center-based care arrangements. There are also consistent differences amongst first-time kindergarteners from different racial and ethnic backgrounds. Generally we found that white non-Hispanic children and Asian non-Hispanic children scored higher that did their peers. We saw similar differences in terms of teacher-reported learning behaviors. Groups of students that scored relatively highly on the assessments also tended to exhibit behaviors conducive to learning. The differences by gender were a little less consistent. Girls tended to score higher than boys in reading and in the learning behavior reports, but we really didn't see any differences between girls and boys on the math and science assessments. In general, differences between groups of students that we observed during the first data collection period—that is, in the fall of the school year—persisted through the end of the school year.

Dr. Guttmacher: So what do you make of all these findings, Chris? Does this feature give us a report card for kindergarten?

Mr. Chapman: Great question, Alan. Listeners may be familiar with reports from my agency regarding student assessment results that focused on proficiency levels like basic, proficient, and advanced. Those reports tended to focus on students in 4th, 8th, and 12th grades. The kindergarten year ECLS-K:2011 assessments were designed specifically for kindergarteners, and the assessment structure is not really conducive for development of proficiency levels. However, scores can be interpreted by comparing them to the broad content domains underlying the assessments. For example, the reading test had items covering a wide range of early reading skills from basic letter recognition up to the ability to draw inferences from texts that the student him- or herself read. Lower scores on the reading assessment indicate that the children may be able to recognize letters but really can't yet read anything. Students with higher scores—or the highest scores, I should say—are more likely to be able to read and possibly draw some inferences from the read text and also be able to do more basic things like recognize letters. Essentially, the special feature provides

a good national picture of our student's academic performance as they enter formal education, and the feature also gives us an idea about which groups of kindergartners may need additional support to better prepare them for first grade.

Dr. Guttmacher: Thanks, Chris. Our final guest, Tom Snyder, also of the National Center for Education Statistics, will tell us about some of the other education statistics in the report. Tom, you studied the indicators in the report that focused on education beyond the kindergarten year. Tell us, what does the report show about this? Are there any new or unexpected findings?

Mr. Tom Snyder: Thanks, Alan. There are a number of positive developments among the education indicators. Average math and reading scores for elementary and secondary students have generally improved in recent years. Also, more high school students are taking rigorous courses and earning their diplomas. In particular, the percentage of Hispanic kids completing high schools increased from 57 percent in 1980 to 82 percent in 2011. Despite this progress, though, gaps across these measures among different student groups remain in areas such as poverty, race, and Hispanic origin; these are some of the same differences that Chris just mentioned with respect to finding as early as kindergarten. The percentages of high school completers who enrolled in college has increased over time but has been stable in recent years; about two-thirds of young high school graduates go on immediately to college following their graduation. Yet many people are having difficulty making the transition to school and the labor force. In 2012, about one in seven 18- and 19-year-olds were neither enrolled nor working. New to the report this year are estimates that give us an international perspective on some of our education indicators. For example, we find that across 57 countries and education systems, our fourth graders were among the top 15 in math and the top 24 in eighth-grade math. These international benchmarks offer a useful comparison point of how improvements and assessment scores in the United States compare to developments in other countries.

Dr. Guttmacher: Thanks, Tom. Well, that brings us to the end of our podcast for this month. I'd like to thank all of our guests again for taking part. And thanks to our podcast listeners for joining us.

If you're interested in learning more, you can find the full *America's Children* report online at www.childstats.gov, that's www.childstats.gov. There you'll find more details about all of the findings our guests spoke about today, plus many more.

I'm Alan Guttmacher, and I hope you'll tune in next month, for more *NICHD Research Perspectives.*

Announcer: This has been *NICHD Research Perspectives,* a monthly podcast series hosted by Dr. Alan Guttmacher. To listen to previous installments, visit nichd.nih.gov/researchperspectives. If you have any questions or comments, please email NICHDInformationResourceCenter@mail.nih.gov.