

Research In Focus: A Weekly Digest of New Research from the NIDILRR Community

People with Childhood Disabilities May Be at Higher Risk for Chronic Diseases as Young Adults

A study funded by the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR).

Pediatric-onset disabilities (PODs) are conditions that start before birth or during childhood. Examples include cerebral palsy, Down syndrome, congenital heart defects, and lifelong diseases such as type 1 diabetes. People with PODs may have more complex healthcare needs than people without disabilities throughout their lives. Previous studies have shown that individuals with PODs may have a higher risk of chronic noncommunicable diseases later in life. Noncommunicable diseases are not contagious and include diseases like cancer, heart disease, osteoporosis, and type 2 diabetes. These diseases are typically seen in adults over 40, as they are associated with aging and diminished physical activity. In a recent NIDILRR-funded study, researchers looked at the prevalence of noncommunicable diseases for adults under the age of 40 with and without PODs. The researchers wanted to find out which types of noncommunicable diseases were more common for these younger adults with PODs than those without PODs. They also wanted to find out which types of PODs were associated with higher risk of specific noncommunicable diseases.

Researchers at the [Rehabilitation Research and Training Center \(RRTC\) on Promoting Healthy Aging for People with Long-Term Physical Disabilities](#) looked at data from the Optum Clinformatics Data Mart, a large, private insurance claims database. The researchers looked at diagnosis data from 2.2 million adults ages 18-40 who received insurance coverage for doctor's appointments, hospital visits, or emergency room visits in 2016. Based on diagnosis codes, the researchers determined which of the adults had a POD. Among those with a POD, they categorized disabilities into one of nine types based on the body systems it affected: muscles and bones; brain; heart and blood vessels; nervous system; genitals; urinary system, such as kidneys or bladder; eyes, ears, face, or neck; breathing or digestion; or other genetic POD. The researchers then looked at the percentage of the adults who had been diagnosed with any of the following noncommunicable diseases: heart disease, stroke, high blood pressure, type 2 diabetes, cancer, osteoporosis, a mood disorder like anxiety or depression, or a chronic lung, kidney, or liver disease. The researchers examined the percentage of the adults with or without a POD who had each noncommunicable disease as well as the percentage of those who had at least two of the noncommunicable diseases.

The researchers found that the adults with PODs had higher prevalences of all 10 types of noncommunicable diseases than the adults who did not have a POD. For example, 14% of the adults with a POD had high blood pressure while 7.1% of the adults without a POD did. Overall, the rates of all 10 noncommunicable diseases were at least twice as high for the adults with a POD as for the adults without a POD. In

addition, 10% of the adults with a POD had 2 or more noncommunicable diseases, compared to 3.1% of the adults without a POD.

When the researchers looked at the prevalence of specific types of noncommunicable diseases for the adults with specific PODs, they found that the adults with a POD affecting a particular body system tended to be associated with much higher rates of a noncommunicable disease involving that same body system. For example, among the adults with a POD affecting their urinary system, the rate of chronic kidney disease was 17.5%, compared with 0.3% of the adults without any POD.

However, the rates of noncommunicable diseases were still higher even for the adults with PODs affecting a different body system. For example, the rate of Type 2 diabetes was 6.7% among the adults with a POD affecting their brain development, compared with 2.4% of the adults without any POD.

The authors noted that adults with PODs may be at risk of developing several noncommunicable diseases, like heart disease or diabetes, at younger ages than their peers without PODs. Many of these diseases can be prevented, delayed, or managed with appropriate healthcare services and early interventions. Healthcare providers and policymakers may wish to develop comprehensive programs for adults with PODs to help them optimize their health throughout their lives. Preventive services like access to physical activity, nutrition counseling, and early screening may help improve quality and quantity of life for adults with PODs. Future research may be useful to better understand the factors that may place people with PODs at risk for noncommunicable diseases, and ways to overcome them.

[To Learn More](#)

Several NIDILRR-funded projects have developed guides, programs, and tools to help people with life-long disabilities manage their health and wellness. These include:

- The [HealthMatters Program](#) for People with Intellectual and Developmental Disabilities
- [Partnerships in Wellness](#), a health promotion program that pairs people with intellectual and developmental disabilities with a partner without IDD
- [Healthy Community Living](#), a peer-led program to help people with disabilities set and meet goals for wellness and independent living.
- [Health Care Access for People with Disabilities](#) provides recommendations for providers and centers on how to improve programs, policies, and practices

The [National Center on Health, Physical Activity, and Disability \(NCHPAD\)](#) offers a wealth of resources for people with disabilities, healthcare providers, and fitness professionals. The [#DocTalk campaign](#) encourages physicians to talk to their patients about making physical activity a priority.

[To Learn More About this Study](#)

Whitney, D.G., Whitney, R.T., Kamdar, N.S., Hurvitz, E.A., and Peterson, M.D. (2020) [Early-onset noncommunicable disease and multimorbidity among adults with pediatric-onset disabilities](#). Mayo Clinic Proceedings, 95(2), 274-282. This article is available from the NARIC collection.

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