



THE JACOBS CENTER
RESEARCH SEMINAR SERIES

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Campus

***THE EFFECT OF EARLY INTERVENTION SERVICES ON GROWTH IN LOW-
INCOME AND VERY LOW BIRTH WEIGHT INFANTS***

Even though a small portion of infants are born very low birth weight, very low birth weight is associated with a host of long-term health and neurodevelopmental difficulties that have severe consequences on life-long health, expenditures, and lost productivity. To ameliorate the effects of low birth weight, pediatric organizations recommend follow-up developmental services. One of the most common sources of follow-up therapy for very low birth weight infants in the United States is Part C Early Intervention (EI) services. Part C authorizes states to provide a state-wide system of developmental services for infants and toddlers with developmental delays and disabilities. Although there is evidence on the effectiveness of early intervention therapies based on randomized clinical trials, little is known about the effectiveness of these therapies as they are actually implemented by states, in part due to the difficulties of establishing causal effects from observational data. In this study, we use a fuzzy regression discontinuity design to estimate the effectiveness of early intervention services, as they are implemented by states, on weight growth. We exploit the fact that low birth weight thresholds strongly predict use of early intervention services. Although eligibility criteria varies across states, from 1,000 grams to as high as 2,500 grams, low birth weight is one key eligibility factor in many states. We use 2002-2016 data from the Nurse Family Partnership, a program that provides prenatal and postnatal visitation to low-income women by registered nurses, to obtain information on infant birth weight, eligibility and use of Part C EI, and demographic and health characteristics of mothers. Our outcome of interest is future weight at 6 and 12 months after birth. We restrict our analysis to windows of varying widths around the eligibility threshold based on weight. Our analysis of 105,737 births over the study period shows that infants below the eligibility threshold are 15 percentage points more likely to use Part C. Importantly, mother and infant characteristics are similar close to the eligibility thresholds, providing support for the regression discontinuity design. Our second stage estimates show that infants that receive therapy have similar weight over the follow up period than infants that are not very low weight at birth. These results show that early intervention therapies, as implemented by states, may be effective in ameliorating the effects of very low birth weight, although higher intensity of treatment is likely to be needed to achieve the same outcomes observed in clinical trials.

Wednesday, July 24, 2019, 10:00 h

At the Jacobs Center for Productive Youth Development
Andreasstrasse 15, 4th floor, AND 4.19, 8050 Zürich