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THE LONG-TERM EFFECTS OF INCOME FOR AT-RISK INFANTS: EVIDENCE FROM SUPPLEMENTAL SECURITY INCOME

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The Long-Term Effects of Income for At-Risk Infants: Evidence from Supplemental Security Income
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ABSTRACT

The Supplemental Security Income (SSI) program uses a birthweight cutoff at 1200 grams to determine eligibility. Using birth certificates linked to administrative records, we find low-income families of infants born just below the cutoff receive higher monthly cash benefits (equal to 27% of family income) at ages 0-2, and smaller but statistically significant positive effects on transfers through age 10. Yet, we detect no improvements in health care use and mortality in infancy, nor in health and human capital outcomes as observed through young adulthood for these infants. We also find no improvements for their older siblings.

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1 Introduction

A large literature demonstrates that poor early life health has detrimental effects on later life health and achievement. For example, studies of within twin pair differences in birthweight find better long-term outcomes associated with higher birthweights related to cognition and educational attainment, employment, income, health, and reliance on public assistance (Black et al., 2007; Oreopoulos et al., 2008; Lin and Liu, 2009; Bharadwaj et al., 2018). Meanwhile, a small but growing literature shows that positive policy interventions can successfully improve long-run and even intergenerational outcomes. For example, cash payments of as little as $1,300 made to families during the first year of their child's life improve that child's educational outcomes and earnings in young adulthood (Barr et al., 2022). Given these findings, a natural question is whether the outsized, harmful impacts of poor health in infancy or *in utero* can be remediated by timely interventions that support the families of these children. If such interventions are successful at improving life-long trajectories in health, human capital, and earnings, well-chosen policy may be able to undo the adverse consequences that arise from poor early life health.

In this paper, we examine a generous and sustained intervention that provides cash transfers to infants with poor health and little family income, and evaluate whether this intervention can remediate the disadvantaged circumstances into which these infants are born. Specifically, we analyze eligibility for the Supplemental Security Income (SSI) Program, the United States' primary income support program for low-income people with disabilities, which provides generous cash transfers (typically equaling 48% of child recipients' family income, Rupp et al., 2005) and, in most states, eligibility and automatic enrollment in the Medicaid public health insurance program. We take advantage of a program rule that infants with birthweights of less than 1200 grams (or approximately 2.6 pounds) are considered to have a qualifying disability for the purpose of SSI eligibility in order to evaluate this intervention for the marginal infant. Infants with birthweights close to the eligibility cutoff have similar underlying health, but receive very different access to this safety net program depending on which side of the cutoff they fall. This variation in program access results in different cash transfer amounts for infants who fall on either side, and may also generate different experiences associated with being "labeled" as having a disability and being in an economically disadvantaged household.

To conduct this analysis, we take advantage of new large-scale linkages between several different administrative data sources. We link California birth certificate records, which contain birthweight information for the universe of births in the state, to earnings and income data from the Internal Revenue Service (IRS), SSI and Medicaid benefit information from federal agencies, state hospital and emergency department records, mortality information from federal and state sources, detailed K-12 educational performance records from a large number of districts in California, and information on post-secondary school attendance and degree attainment from the National Student Clearinghouse. With this large and comprehensive new dataset, we are able to identify infants born into low-income households with birthweights near the eligibility threshold (our "targeted sample") and follow them throughout childhood and early adulthood. In addition, our use of administrative records provides objective measures of outcomes that do not rely on parental or self reports, and removes any concerns about selective attrition over time that might be present in panel survey data.

Using the newly linked administrative data, we find that infants in these targeted, low-income households with birthweights just below the eligibility threshold receive, on average, an additional $146 per month in SSI benefits during their first year of life, $141 per month at ages 1 and 2, and $33 per month between ages 3 to 10, when compared to infants with birthweights just above this threshold. These transfer amounts are large relative to family income, representing an increase of about 27 percent compared to average pre-birth income at ages 0 through 2, and an increase of about 6 percent at ages 3 through 10. The cumulative amount received in cash benefits by these families far exceeds transfers studied in other work (e.g. de Gendre et al., 2021; Barr et al., 2022; Borra et al., 2022), with expected additional benefits for those whose birthweight puts them just below the threshold totaling more than $8,000, or approximately 129 percent of pre-birth income in our targeted sample. In contrast to other studies of cash transfers (e.g. Dahl and Lochner, 2012; Akee et al., 2018), most of the payments are weighted towards the very earliest years of childhood, when we might expect the effects to be largest. We also find significant increases in Medicaid enrollment throughout childhood (between 2.5 and 5.1 percentage points) for children with birthweights below the cutoff. Taken together, our first stage analysis demonstrates that the families of infants who fall just below the eligibility cutoff enjoy substantial support and benefits beyond those received by the families of infants whose birthweight puts them just above this cutoff, despite similar underlying health and medical care needs.

Despite the empirical and theoretical evidence suggesting that these early life investments may improve outcomes in childhood and adulthood, we do not find evidence that children who narrowly qualified for the program based on the birthweight eligibility cutoff do any better on a variety of outcomes compared to children who narrowly missed qualifying. We find a small increase in the number of days spent in the hospital at the time of the birth for infants who gain SSI medical eligibility, but no statistically significant difference in other infant health outcomes. Our 95 percent confidence intervals allow us to rule out decreases in the number of days hospitalized after the birth larger than 12 percent, and in emergency department visits larger than 16 percent. We find no significant impact on infant mortality, although this estimate is less precise and we can only rule out declines larger than 30 percent.

We also do not find any improvements in a large number of educational outcomes measured during high school, although again our precision varies across specific measures. We can rule out relatively small improvements in an aggregate index of high school achievement of larger than 0.036 standard deviations, in high school GPA larger than 4 percent, in AP courses completed larger than 7 percent, and in math and science courses completed larger than 2 and 4 percent, respectively. However, we can only rule out increases in enrollment in gifted and talented programs larger than 80 percent. We do find that early life SSI eligibility at the cutoff generated statistically significant higher usage of special education services. We find no significant changes in the probability that an infant grows up to attend college or other post-secondary degree programs, or that they receive a college degree, at the eligibility cutoff, and can rule out increases in these outcomes larger than 11 and 32 percent, respectively.

Finally, we track infants over time and observe their earnings, transfer program use, and mortality in early adulthood (up until age 29). With the caveat that the cohorts we study are still young, we do not find that those who benefited from the program in infancy experience significantly better outcomes along these dimensions. Our confidence intervals allow us to rule out improvements in a summary index of adult economic outcomes larger than 0.038 standard deviations, in earnings larger than 5 percent, and in the probability of having any earnings larger than 4 percent. Our estimate of the program's impact on mortality later in life is noisier, and we can only rule out reductions larger than 53 percent. We also do not find significant evidence of changes in welfare dependency in adulthood, which runs contrary to a narrative that use of social programs encourages prolonged reliance on these services; our confidence intervals allow us to rule out increases (decreases) in SSI receipt in adulthood of about 36 (29) percent, of Medicaid enrollment of about 14 (6) percent, and in EITC receipt of about 30 (24) percent.

These null results are not sensitive to specification or sample choices and also hold across a large number of subgroups, including some groups who experienced much higher increases in average payments at the cutoff (such as non-Hispanic Black children) and groups for whom previous research has found particularly large effects of early life cash transfers (such as males). Our estimates are precise enough to rule out changes in earnings and educational outcomes found for similar cohorts who received smaller cash interventions in infancy documented in existing studies (Barr et al., 2022). Analysis of family resources suggests that any reductions in parental labor market earnings due to the program were modest, such that the SSI program generated higher total household resources comparable to the SSI benefit amount size for families just below the cutoff.

Our rich data also allow us to examine how aspects of this program "spill over" onto other children in the family. We conduct an analysis of these spillovers by examining the outcomes of older siblings of the focal child, who may also benefit from the increase in family income but are less likely to experience any "labeling" effects of the program. We assess whether older siblings were more likely to enroll in Medicaid and SSI during childhood if their younger sibling was medically eligible for SSI on the basis of low birthweight, and whether their outcomes in adolescence and young adulthood were affected by their siblings' SSI eligibility. We show that siblings did not change their use of public benefits, nor did they experience improved outcomes across the many dimensions we consider, if their younger sibling's birthweight was just below versus just above the eligibility threshold, despite infant SSI eligibility resulting in substantially higher cash transfers to the household. Our estimates of the spillover effects on siblings exhibit similar precision to those derived from our analysis of the focal child; for example, we can rule out improvements among siblings in a composite index of adult economic outcomes larger than about 0.02 standard deviations. These results suggest that spillovers of the program to the older siblings of low birthweight infants are likely minimal overall.

Our analysis contributes to multiple strands of literature within economics and public policy. First, we provide new evidence on the role of targeted cash transfers to families experiencing both economic and health disadvantage. In the wake of the COVID-19 crisis, policymakers have increasingly experimented with cash transfers to alleviate poverty and reduce disparities, including transfers targeted specifically to the most economically disadvantaged families and to those with health-related burdens.[1] Our analysis of the SSI program, which also serves families who are highly disadvantaged on multiple dimensions, may be informative of the impacts of these types of targeted cash transfers

[1]E.g., the Flint RxKids cash transfer program was motivated in part by the Flint, Michigan water crisis of 2014 and its lingering negative health effects, see https://www.theguardian.com/us-news/2024/apr/25/flint-michigan-child-poverty. The Chicago Resilient Communities cash transfer program specifically targeted low-income residents with COVID-related health and economic burdens, see https://www.chicago.gov/city/en/sites/resilient-communities-pilot/home.html.

more broadly. Importantly, programs that target beneficiaries on the basis of disadvantage may also generate stigma associated with their usage. Our results capture the net effect inclusive both of the direct (plausibly positive) impacts of the cash transfer and of any (plausibly negative) stigma effects such targeting may induce, which could be relevant for programs that similarly seek to identify participants that experience severe or multi-dimensional disadvantage. Second, we build on work examining the impacts of childhood SSI benefits specifically. SSI provides benefits to approximately one million low-income children with disabilities and represents a large public investment, with expenditures on child SSI exceeding those of other poverty alleviation programs, such as Temporary Assistance to Needy Families (TANF) benefits to children (Tambornino et al., 2015). Despite its importance for families of children with disabilities, there are relatively few papers documenting how SSI receipt early in life affects beneficiaries and their families both during participation and after leaving the program. Our analysis complements previous research on the short-run effects of infant eligibility, which relied on survey data (Guldi et al., 2024) or data for continuously enrolled Medicaid recipients (Ko et al., 2020). We contribute to this previous work by bringing a large, linked administrative dataset covering the full population of births in California and providing us access to multiple policy-relevant outcomes across several domains extending through young adulthood. We provide further discussion of these papers, and other relevant work related to childhood SSI, in Section 2.1. Third, our work provides novel evidence on spillovers of SSI benefits to siblings, an important but under-explored dimension of this policy.

Overall, our results show that despite the large increase in cash transfers received by infants just below the SSI birthweight eligibility cutoff, there are no discernible improvements across the broad set of early life, childhood, and young adult administratively measured outcomes we study. These results indicate that current levels of support targeted to populations endowed with especially high levels of need across multiple dimensions are likely insufficient to achieve the earnings and health gains observed in more advantaged samples.

2 Background

2.1 Early life cash benefits and long-term outcomes

A large literature in economics and epidemiology has demonstrated that early childhood is a period during which a child is uniquely receptive to investments, and that investments in health, human capital, and general well-being that occur early in childhood have the potential to yield substantial payoffs later in life (see Almond et al., 2010, 2018). These patterns have been posited to reflect the persistence, or self-productivity, of these investments, as well as dynamic complementarities, in which investments early in life spur future investments in childhood and throughout the lifecycle (Cunha and Heckman, 2007). Studies focused on health, nutritional, and educational interventions–such as access to health insurance coverage through the Medicaid program, food supplements via WIC, home nurse visits following the birth of a child, or high-quality preschool interventions–have found that these programs improve later-life educational and labor market outcomes for the children who benefited in infancy or even *in utero* (e.g., Michalopoulos et al., 2017; Miller and Wherry, 2019; Chorniy et al., 2020).

A growing empirical literature in economics and psychology supports the idea that cash payments in early childhood may also improve health and economic outcomes throughout childhood and into adulthood. For example, de Gendre et al. (2021) find that infants whose families (quasi-randomly) received a $3,000 one-time payment at birth had significantly fewer hospitalizations in the first year of life as a result. In addition, Barr et al. (2022) take advantage of a discontinuity in the amount of tax refunds received based on a child's date of birth. The authors find that lump sum tax refund payments in the first year of life of approximately $1,300 result in measurable improvements in educational outcomes and earnings in adulthood as early as ages 23 to 25. In the area of cognitive neuroscience, a recent randomized controlled trial that provided unconditional cash transfers of $333 per month for the first 52 months of their child's life to low-income mothers found suggestive evidence of increased infant brain activity as a result (Troller-Renfree et al., 2022). However, follow-up work from this study found no effects of the cash transfer on maternal reports of the child's health, use of health care services, or sleep quality, although children in the treatment group were reported to eat more fresh produce compared to the control group (Sperber et al., 2023). Similarly, Borra et al. (2022) find no beneficial effects on child health or test scores associated with a one-time transfer of a €2500 "baby bond" issued by Spain in 2007. Although the evidence base is mixed, taken as a whole, these studies demonstrate that, in some populations and settings, early life cash transfers can have major later life benefits.[2]

One important distinction in our setting when compared to other evaluations of early life cash transfers is that the SSI payments we study target infants who are disadvantaged on both economic

[2]There is also evidence for beneficial effects of cash transfer interventions that occur at later ages or throughout childhood (e.g. Akee et al., 2010; Milligan and Stabile, 2011; Dahl and Lochner, 2012; Aizer et al., 2016; Akee et al., 2018; Bullinger et al., 2023).

and health dimensions. To medically qualify on the basis of low birthweight, the infants we study must weigh less than 1200 grams, or 2.65 pounds. The result of premature birth and possible maternal, fetal, placental, and environmental factors (National Academies of Sciences, Engineering, and Medicine, 2024), this small size is often accompanied by severe infant and childhood impairments, including cerebral palsy, and vision, hearing, and cognitive impairments. These types of chronic health conditions can require intensive healthcare and educational services (Purdy and Melwak, 2012; Mandy, 2021). Furthermore, families with a child whose birthweight falls near the cutoff and with incomes qualifying them for the maximum SSI benefit amount typically earn less than the federal poverty line,[3] in addition to the other likely constraints they face in terms of the time and costs associated with the care and support necessary for their high-needs child.

There is relatively little work examining the effects of child SSI receipt on either short- or long-term outcomes. Two existing studies examine the effects of SSI receipt on early childhood health for the infants who qualify on the basis of the 1200 gram eligibility cutoff. Guldi et al. (2024) examine child health and development as measured using parental survey responses when the infant is approximately 9 months of age. The authors do not find significant changes in child development or parent-reported health associated with SSI eligibility, although the direction of the point estimates tends to suggest improvements. Meanwhile, Ko et al. (2020) examine the presence of chronic health conditions using administrative data for children enrolled in Medicaid from birth through age 8. They find reduced rates of acute and chronic conditions among children who were SSI eligible due to birthweight, with evidence of both a decrease in the number of conditions and delayed onset. If we expect short-term health benefits to translate into better longer term outcomes, then both of these studies suggest there may be beneficial long-term effects of SSI receipt in early childhood. However, interpretation of the results in Ko et al. (2020) are complicated by the fact that the authors use a sample of children continuously enrolled in Medicaid during their first eight years of life. Since SSI provides eligibility and automatic enrollment in Medicaid in most states (including their study state of New York), birthweight relative to the eligibility cutoff may also change the probability a child enrolls in Medicaid and remains enrolled throughout childhood, as we demonstrate to be the case in our setting.

This paper provides the first look at the effects of early life SSI receipt on longer-term outcomes. Three prior studies examine the long-term effects of SSI receipt among school-age children who benefited from an expansion in the SSI disability qualifying criteria, especially for youth with mental dis-

[3] Based on our calculation that 93 percent of our targeted sample earns less than the federal poverty line prior to the birth.

orders (Hemmeter and Gilby, 2009), in the early 1990s.[4] These studies have conflicting results: Levere (2021) finds negative effects on later adult earnings and increased reliance on SSI, Singh (2020) finds increased years of schooling, yet reduced probability of college completion and increased likelihood of welfare receipt, and Coe and Rutledge (2013) finds greater labor force attachment and less welfare receipt, for those who gained SSI as children under the expanded disability criteria. In addition to the mixed evidence these studies provide, they also do not tell us how targeted SSI receipt at the very beginning of life affects long-term outcomes for those infants identified as high-risk for long-term disability. Our research design and large administrative dataset provide a unique opportunity to credibly investigate both the short- and longer-term effects of early life SSI participation. We study the effects of child SSI eligibility on a range of important outcomes, including outcomes not previously studied using administrative data such as educational performance, college attendance and completion, and Medicaid enrollment.

2.2 SSI and low birthweight infant eligibility

The Supplemental Security Income (SSI) program is a means-tested program that provides income transfers to the elderly and individuals with qualifying disabilities. The SSI program has provided benefits to children with disabilities since 1974; and, the number of children participating in the program has grown considerably over time. Today there are approximately a million child beneficiaries who receive, on average, $732 per month in cash benefits (Social Security Administration, 2023). Children receiving SSI also qualify automatically for Medicaid benefits in most states, including California.

The Social Security Administration (SSA) considers both a child's financial situation and their impairment in determining eligibility for SSI. For children living with their parents, a portion of parental income and resources is considered available to the child through a process called "deeming."[5] Deemed parental income is added to a child's own income to determine the child's financial eligibility for SSI and payment amount. Typically, children's families must have low incomes to qualify for SSI. For example, a single parent with one SSI eligible child, no unearned parental income, and no child income, may not earn more than $3,779 a month ($45,348 annualized or about 216% of FPL for a family of two) for the child to be financially eligible for SSI payments in 2023.[6] In addition, the

[4]In addition, two studies find that losing benefits once child SSI recipients reach adulthood result in higher earnings but greater criminal justice involvement compared to child recipients who remain on the program in young adulthood (Deshpande, 2016a; Deshpande and Mueller-Smith, 2022).

[5]For SSA parental deeming rules, please see here https://secure.ssa.gov/apps10/poms.nsf/lnx/0501320000 and Hemmeter (2015).

[6]Authors' calculation based on SSI benefit formula and federal benefit amounts.

benefit amount is determined by a formula that subtracts income from the maximum federal benefit rate, after taking into account various exclusions and allocations based on family structure.[7] SSA also considers the household's assets and deems parents' assets, with some exclusions, towards the child's $2,000 resource limit. Excluded items include, for example, the family's primary residence, one vehicle, and $2,000 of parental assets for a one-parent household, $3,000 for a two-parent household (Social Security Administration, 2024).

After determining a child's financial eligibility for SSI, state agencies assess the child's medical eligibility. To be SSI eligible, a child's impairment must be severe and meet, be medically equivalent to, or functionally equivalent to one of the listings of impairments published by SSA along with the medical criteria for this determination (see Wixon and Strand, 2013). As a way of targeting infants at high risk for long-term disability, SSA simplified the process for infants with low birthweights to medically qualify for SSI starting in the 1990s (Social Security Administration, 1991). On February 11, 1991, SSA made low birthweight a condition "functionally equivalent" to a listing, which made children meeting this definition medically eligible for benefits. Note that SSA defines low birthweight as weighing less than 1200 grams, which is well below the clinical definition of low birthweight of 2500 grams.[8] In 1993, low birthweight became a presumptive disability category, allowing SSA staff to expedite payments to children while they waited for a final ruling on their application. Our analysis studies cohorts born during this year and later, when these presumptive disability rules were in effect.

The length of time infants remain eligible for SSI depends both on how their financial situation and impairments change over time. During our period of study (1993 and later), parental resources are not deemed while the low birthweight infant is in the hospital (Social Security Administration, 1997). While in the hospital or medical institution, infants are eligible for a small monthly SSI payment ($30). When the infant comes home from the hospital, family income and resources are deemed to the child and considered to determine eligibility and monthly benefit amount. During our period of study, SSI recipients are automatically enrolled in Medicaid in most states (including California).

[7]Similar to most states, California supplements the federal benefit amount with a small supplemental payment; the maximum supplemental payment was $65 per month for a child with a disability in 2011 (Social Security Administration, 2011). This additional amount is federally administered and therefore included in our later estimates of total SSI benefit amounts using SSA administrative data.

[8]SSA staff can also determine low birthweight using gestational-age specific birthweight thresholds (see `https://secure.ssa.gov/apps10/poms.nsf/lnx/0434005100` for the rules in place during our study period). In practice, these gestational-age specific thresholds do not appear to be commonly used during most of our study time period. This is most notably true for infants with gestational lengths of 34 weeks and greater. Furthermore, our analysis of the restricted-use version of the Current Population Survey linked to national respondents' SSA participation histories from the Supplemental Security Record (SSR) shows that 87.5 percent of children who receive SSI on the basis of low birthweight received this designation using the 1200 gram cutoff rule, rather than other gestational-age specific birthweight thresholds. See more discussion and evidence of this in additional analyses reported in Appendix Section A for the interested reader.

In addition, low birthweight infants must have their SSI eligibility status redetermined within one year of birth, or later if the impairment is not expected to improve within 12 months, in a Continuing Disability Review (CDR) (Social Security Administration, 2015). In practice, most low birthweight infants have their CDR conducted between their first and third birthdays (Hemmeter and Bailey, 2015). To continue on SSI after the 1-year CDR, low birthweight infants must have an additional qualifying disability. At this CDR, SSA has historically discontinued between 34.6 and 63.2 percent of cases (median is 43.6 percent of cases for yearly determinations made between 1994 and 2016, data from Social Security Administration, 2020). Beyond this point, if the child's impairment is expected to improve, SSA generally conducts a childhood CDR every 3 years. For children whose impairment is not expected to improve, SSA conducts CDRs at least every 7 years (Hemmeter et al., 2021).

2.3 Potential impact on short- and long-term outcomes

Existing research on the SSI program suggests several mechanisms through which cash assistance may improve outcomes for the population we study. First, the assistance may improve outcomes for this population if it provides additional resources for the care and support of the child. Prior work has documented an increase in total household income following child SSI enrollment, along with a decrease in rates of household poverty among recipient families (Duggan and Kearney, 2007).

Second, the program may enable parents to reduce their labor supply in order to provide more care, or higher quality care, to their child. However, the evidence on whether parental labor supply responds to a child's SSI receipt is mixed (Kubik, 1999; Duggan and Kearney, 2007; Deshpande, 2016b). Most relevant to our study, Guldi et al. (2024) find that working mothers, but not fathers, switch from full-time to part-time work when their low birthweight infants receive SSI payments. The authors also document an improvement in parenting behaviors, suggestive of a reallocation of maternal time toward child investment.

Another potential mechanism for improved outcomes for child recipients is increased participation in Medicaid or enrollment in other social services during childhood. Previous work finds that child SSI receipt leads to only small increases in Medicaid enrollment and no changes in overall insurance coverage (Duggan and Kearney, 2007; Guldi et al., 2024), presumably because the majority of children on SSI would already be eligible for Medicaid due to their low family incomes. Guldi et al. (2024) find that low birthweight infants eligible for SSI are more likely to receive services for special needs in childhood, and receive a greater number of these services, although these results are not statistically significant. This is consistent with prior work documenting that parents of children eligible for higher SSI payments are more likely to want to enroll, or to actually enroll, their children in special education services (Kubik, 1999; Cohen, 2007). However, Ko et al. (2020) find some evidence of a decrease in Medicaid covered medical services indicated in an IEP (special education) among children with birthweights below the 1200 gram SSI eligibility cutoff who are continuously enrolled in Medicaid.

There are a number of reasons, however, that SSI participation may not necessarily translate into improved child outcomes either in the short- or longer-term. First, it is not clear that the generosity of payments is large enough to fully offset the additional expenses and labor market complications that may accompany having a high needs child (Duggan et al., 2016). Second, unconstrained cash payments are not guaranteed to be spent in ways that will improve the lives of the intended child recipients (Aizer et al., 2022). While SSA specifies that child payments be spent exclusively on the child, parents may reallocate family resources, including time or monetary resources that were previously spent on the child recipient, when the child receives SSI.

Third, there are potential disincentives for work and savings generated by the program's eligibility criteria because participating families could lose benefits when their income and savings increase. The income and asset limits could prevent families from generating higher earnings or saving for the future in ways that have negative consequences for both short- and longer-term resources available for the child. We are able to explore changes in income directly in the analysis that follows, but are unable to measure changes in savings or investment. Notably, it is likely that the asset limit is binding for a non-trivial number of SSI recipient families; for example, analysis of the 2013-2019 Survey of Income and Program Participation (SIPP) waves shows that about 22 percent of California households below the poverty level with at least one child have assets that exceed the SSA limit.[9]

Fourth, there could be negative consequences of the diagnosis of a disability from the very beginning of life due to a negative stigma or "labeling" effect. While early recognition of a limitation could lead to treatment or interventions with positive benefits that might otherwise not be received, it could alternatively negatively alter parent, teacher, or self perceptions of ability and affect educational opportunities (see discussion in Duggan et al., 2016). As a result, children who enroll in SSI may receive fewer investments and encouragement and have worse educational and labor market outcomes compared to children with similar abilities who do not enroll.

[9] Authors' calculations from the SIPP. We required that both a child and mother were observed in the SIPP to include the family in our sample.

Fifth, families might overestimate the likelihood of their child qualifying for SSI benefits as an adult, as documented in Deshpande and Dizon-Ross (2023), with potential negative consequences for decisions regarding human capital investments during childhood or preparation for later economic self-sufficiency. However, in their randomized controlled trial testing this prediction, Deshpande and Dizon-Ross (2023) do not find evidence of this type of response in human capital investment. When they reduce parents' expectations that their children (ages 14-17 years) will receive benefits as adults, there is no change in the take-up of resources offered in the form of tutoring or job training services for their children.

Sixth, families and child recipients themselves might be incentivized to hold onto the disability designation to increase the likelihood of benefit receipt in adulthood. For example, parents could potentially withhold investments in the child if improvements in their health might jeopardize continuing eligibility for the program (Duggan et al., 2016).

Finally, it is possible that the type of long-run improvements associated with early life cash transfers in other populations (described in Section 2.1) may not manifest among child SSI recipients given the high health needs of this population. For example, some SSI recipients may have a disability that limits or prevents their ability to work in available jobs in adulthood regardless of early intervention or support; in this case, there is no mechanism through which early life cash transfers could realistically increase earnings or labor force participation. In Appendix Table A1, we present some descriptive statistics that suggest that such concerns about limited potential for economic self-sufficiency and achievement do not apply as strongly to the specific group of SSI child recipients we study—SSI beneficiaries who gain eligibility due to the low birthweight cutoff criteria. The majority of infants near the birthweight eligibility threshold—92 percent of them—do not participate in SSI as adults, 72 percent have positive earnings, 52 percent receive some post-secondary schooling, and 11 percent have a college degree. Furthermore, more than 90 percent of the low birthweight, low-income infants in our sample report no serious or long lasting physical, cognitive, or sensory difficulties when surveyed later in life in the American Community Survey or 2000 Decennial Census (see Appendix Table A2). Although the population we study has somewhat higher rates of health challenges and worse economic outcomes in adulthood than those in the general population who fall in the same age range as our sample (also reported in Appendix Tables A1 and A2), a large majority do not report serious or long lasting sensory, physical, and cognitive health difficulties that might preclude them from pursuing higher education or participating in the labor market later in life. In later analyses, we examine whether there are heterogeneous effects of SSI participation among infants who are more and less likely to experience long-term disability, as estimated using pre-treatment characteristics.

2.4 Potential spillover effects for siblings

Very little is known regarding the effects of child SSI receipt on recipients' siblings, despite more than 80 percent of child SSI recipients having siblings (Rupp and Ressler, 2009). While some child SSI recipients have siblings who also participate in the program, most do not. There is, however, some existing evidence of family spillovers in applications for disability benefits, with individuals more likely to apply or receive disability if a family member also received benefits (Dahl et al., 2014; Bratberg et al., 2015; Deshpande, 2016a,b; Dahl and Gielen, 2021). Even without sibling receipt of disability benefits, the gain in household resources could also benefit siblings depending on how families use this additional income. One recent study suggests that SSI child receipt has positive spillovers on the long-run outcomes of non-disabled siblings. Analyzing the expansion in child SSI disability qualifying criteria in the early 1990s, Singh (2020) finds higher rates of high school completion, increased adult income, and a higher likelihood of private health insurance coverage for the siblings of children who might have gained SSI eligibility due to their impairment and age; however, the study uses survey data with small sample sizes and the results could be driven by pre-trends and other confounding factors.

3 Data

To examine the long-run impact of eligibility for SSI, we rely on a novel data source compiled in collaboration with the California Departments of Public Health and Health Care Access and Information, the U.S. Census Bureau, the National Student Clearinghouse, and Educational Results Partnership, a non-profit organization that receives and harmonizes student-level data directly from public school districts in California. To construct this dataset, we link confidential birth certificate records for the approximately 14.6 million children born in California from 1993 to 2019 to a large number of administrative data sources. The birth certificate records contain detailed information on the health of the infant at birth including birthweight in grams, which we use as a running variable in our regression discontinuity (RD) model. The birth records also contain identifying information for the infant and parents that the Census Bureau used to bring these records into the Census data infrastructure via their Person Identification Validation System (PVS). This system assigns each record an anonymized unique identifier, called a Protected Identification Key (PIK), that allows researchers to link individuals across multiple datasets. For the California birth records, the PVS assigns each infant a PIK based on full name, date of birth, and address. Among infants born just under 1200 grams (between 900 and 1199 grams) during our study period, the PIK rate is 93.6 percent. Our analysis of long-term outcomes with Census-held administrative data is necessarily limited to birth records with an assigned PIK for the infant; importantly, PIK rates do not appear to vary significantly at the birthweight cutoff we study (see Appendix Table A3). Other administrative data sources were linked directly to the birth certificate records by the data providers; we provide more details below.

3.1 Parent information

Our sample construction uses parental income information assembled from Census-held administrative data sources to identify households meeting the SSI income eligibility criteria. The primary source of data on parent identity is the information for the parents on the birth certificate records, although these fields are sometimes incomplete or do not match to a PIK during the PVS process. For instance, mothers' identifying information was incomplete for 0.5 percent of the birth records during our study period. However, fathers' identifying information needed for the PVS process is only partially available beginning in 1997 and fully available in 2005 and later. Even when full identifying information is available, fathers' information is missing at a higher rate than mothers' information on the birth certificate record. In these instances, we supplement the birth certificate records with Census-held administrative and survey data to help identify the parents of each infant.[10] With these additional data sources, we are able to identify the mother of infants born under 1200 grams for 93.4 percent of births for these years, but only 73.3 percent of fathers. For this reason, our analyses focus on the mother's information to identify low-income households, who are likely to be income eligible for SSI. It is important to note that most child SSI recipients (nearly 70 percent) reside in one parent families (Social Security Administration, 2023), with the parent being the mother in nearly all cases (Rupp et al., 2005).

3.2 Family income

Next, we use administrative records on earnings and income to identify households most likely to benefit from meeting the SSI low birthweight criteria. These data come from several sources that have

[10] First, we pull in parent information from a composite administrative dataset called the Census Household Composition Key (CHCK) available from 2016 to 2022. This dataset uses information from a variety of federal sources, including Social Security Number applications, the IRS Form 1040, and the Decennial Census, to identify the parents for children born in 1997 and later (U.S. Census Bureau, 2020; Genadek et al., 2021). Second, for children without parent information on the birth certificate record or CHCK, we identify parents who live with their children in families who appear in the 2000 Census, 2010 Census, or 2001 to 2021 waves of the American Community Survey (ACS). See the Appendix of Miller et al. (2024) for additional information on this process.

different years of availability. First, for 1994-1995 and 1998-2021, we observe adjusted gross income on IRS 1040 tax filings for households that file. Second, for the years 2005-2022, we use earnings data from IRS W2 filings. These data are reported to the IRS by employers and, importantly, provide information on an individual's earnings even if they did not file taxes. For individuals with multiple W2s (e.g., those who work more than one job), we sum earnings across all observed W2s. Finally, for 1991 through 2004, we also rely on quarterly earnings reported to Census by state unemployment insurance (UI) agencies under the Longitudinal Employer-Household Dynamics (LEHD) program. These records include reports for earnings at jobs covered by the UI system, which is estimated to cover over 90 percent of the United States workforce (Isen et al., 2017).[11] We are able to observe LEHD earnings for AZ, CA, DC, DE, KS, MD, ME, ND, NV, OK, TN, and WI. We use LEHD data to measure earnings for years in which we observe no tax data (1991-1993 and 1996-1997) and for households that do not file taxes in the years we have 1040 forms but no W2 filings (1994-1995 and 1998-2004). This step assumes that the mother would be observed in the California LEHD or one of the other included states if she had UI covered income, but may misclassify individuals to the extent they have high earnings in states for which we do not have LEHD data.

In order to identify infants born in families most likely to benefit from SSI, we construct a measure of household income immediately prior to the birth using these sources. Appendix Figure A1 provides a summary of the algorithm. As described above, we use earnings from the mother to identify infants likely to be income eligible for SSI because maternal information is more consistently reported on the birth record over the period we study. We use household income (i.e. adjusted gross income, or AGI) as reported on the 1040 form associated with the mother in the year prior to the birth. If the mother did not appear on a 1040 tax form in that year, we instead use the mother's earnings as a measure of household income. Note that this may result in some mismeasurement of earnings among non-filers, for example if their primary earnings are through "gig economy" occupations that do not generate W2 forms, or if they work in a sector not covered by unemployment insurance. If neither household income nor earnings are available, we search for the most recent income information up to three years prior to the birth year in an effort to limit the misclassification of infants to low-income households if there was an error in income measurement.[12]

[11]Some types of earnings (such as those of the self-employed, contract workers, agricultural workers, and some government employees) are not included. Abowd et al. (2009) provides further discussion of the LEHD records.

[12]For the 1993 birth cohort we can only look two years prior.

3.3 Sample construction

We next limit the sample to infants in families most likely to benefit from the SSI program. We define this sample as infants whose family's pre-birth income likely falls into the range that would qualify for the maximum possible SSI benefit amount. The amount we calculate varies by family size. For additional information on how we determine financial eligibility for the maximum benefit amount, including our calculation of the eligibility unit, earned and unearned income and resources available for deeming, see further details in Appendix Section B. We further limit our sample to infants with birthweights near the cutoff–between 900 and 1499 grams–with gestational lengths of less than 32 weeks. We also exclude multiple births, such as twins or triplets.

Baseline annual household income prior to the birth is $6,414 (2019 dollars) among those calculated to be eligible for the maximum SSI benefit.[13] In our "targeted sample," we also include infants for whom we are unable to find evidence of maternal earnings or income during the 3 years prior to birth, as well as infants whose mother's identifying information is missing, implicitly assuming that they were born into an income-eligible household. Results are similar if we use mothers' educational attainment reported on the birth certificate record to define the targeted sample as infants whose mother had less than a high school degree at the time of the birth, instead of basing the inclusion criteria on family income (see Appendix Tables A4-A7).

In addition to observing outcomes for the low birthweight child (the "focal" child), we use the parental information recorded on the birth certificate to identify siblings in order to examine potential spillover effects. We define siblings as children who have the same mother as the focal child. The mothers for siblings are identified in the same way as for the focal child; i.e. via identifying the mother on the sibling's birth certificate or through Census-held administrative and survey sources.[14] We restrict our analysis to older siblings to avoid a setting where there might be selection into the siblings sample (e.g., if mothers are more or less likely to have future children based on the eligibility of the focal child). We also limit the sample to siblings who were under age 18 when the focal child was born, and only include sibling ages that correspond to years when the focal child was alive. For example, if the focal child was born when the sibling was 5 years old, we would examine outcomes for that sibling at age 5 and older, but not at earlier ages.

Table 1 shows sample characteristics of all children in the birthweight and gestational age range

[13] Unless otherwise specified, the reported baseline sample means are the average for infants in the sample with birthweights between 1200-1250 grams (i.e. those infants who just miss the SSI eligibility cutoff).

[14] We use the same process described earlier in footnote 10.

that we study (900-1499 grams and under 32 weeks gestation) in the first column. Characteristics for the targeted sample that we use in our main analysis are reported in the second column, and the older siblings of the main sample in the third column. Compared to the full sample of births, those in the targeted, income-eligible sample have somewhat younger and less well-educated mothers. In addition, non-Hispanic Black and Hispanic mothers are somewhat over-represented and non-Hispanic white and Asian mothers are somewhat under-represented in the targeted sample. Average birthweight and sex are very similar across the two samples. Infants in the targeted sample have much lower family incomes than all low birthweight children, as expected given the sample criteria for this group. Older siblings of the main sample are born to younger mothers, since their births preceded the infants in the targeted sample. Notably, older siblings of the targeted sample have an average birthweight of 3059 grams, close to the unconditional average in California of 3322 grams.

3.4 First stage outcomes

Having identified families most likely to benefit if their infant is below the birthweight cutoff, we next use administrative records to examine outcomes. For convenience, we also provide a table (Appendix Table A8) summarizing the years and cohorts used in the analysis of all outcome data.

First, we analyze how the birthweight eligibility cutoff affected SSI and Medicaid receipt to characterize the first stage. We examine program participation in infancy and early childhood (ages 1-2), as well as at older ages (ages 3-10 and 11-17). Data providing a "snapshot" of monthly SSI benefit receipt for each of the years 2010-2014, 2016, and 2019-2021 is provided to Census from the Social Security Administration (SSA), allowing us to directly examine SSI participation and the monthly benefit amounts.[15] Benefit amounts are inflation-adjusted to 2019 dollars. Since SSI eligibility also makes an infant automatically eligible for Medicaid in California without a separate application, we also examine data on annual Medicaid enrollment provided by the Centers for Medicare and Medicaid Services (CMS) available from 2000-2016.

One limitation of our SSI benefit data is that we do not observe SSI receipt for earlier years. Although the birthweight eligibility cutoff rule was in place for all cohorts we include, without SSI benefit data for every year, we cannot directly validate that it was being faithfully implemented. However, several historical sources provide reassuring suggestive evidence that the cutoff was highly relevant in determining SSI eligibility in California specifically, and that information about this eligibility rule was

[15] Wyse et al. (2024) document a small (1 to 6 percent) undercount of adult SSI receipt in this data extract, but for the childhood ages we study, such undercount is negligible.

widely disseminated to relevant parties like physicians and social workers during the earlier period when no individual-level data are available. These sources, described in greater detail in Appendix Section C, give us confidence that the earliest cohorts experienced an increase in SSI enrollment at the birthweight cutoff, even though we cannot directly assess the magnitude. As shown later, we find similar results if we restrict the analysis sample to cohorts born in 1997 and later, which is when SSA documentation indicates that the low birthweight designation stabilized at its more recent share of awards to disabled children (Muller et al., 2006).

3.5 Health in the first year

We next examine whether SSI eligibility affects use of medical care and health outcomes early in life. To do so, we use linked data on hospitalizations, emergency department (ED) visits, and mortality during an infant's first year of life provided by the California Department of Health Care Access and Information (HCAI).[16] Hospitalization records are available for the 1993 to 2012 cohorts, ED visit records for 2005 to 2012, and infant mortality for the 1993 to 2011 cohorts. These linkages to the birth certificate records were performed by HCAI using information available in state administrative data sources. Infant mortality information is derived from California death certificate records. We supplement this information with mortality records from the Social Security Administration in the Census Numident, which includes deaths that occur outside of the state. More details on the Census Numident are provided below. Together, these data sources allow us to examine whether the increased support received through the SSI program resulted in any measurable changes in infants' use of health services or mortality risk in the first year of life, which could indicate an improved health trajectory.

3.6 Educational performance

We next examine educational outcomes measured during childhood using administrative records from California public schools between 2005 and 2018. We received this information from Educational Results Partnership (ERP) who linked the data to the California birth certificate records using information on student name, date of birth, and sex. ERP then returned the educational data to us with an anonymized record identifier that allowed us to merge the de-identified education data with our birth certificate records housed in the Census integrated research environment.

Using this data source, we examine the impact of SSI eligibility on a variety of educational outcomes. We focus our analysis on outcomes we observe in high school. We examine whether the

[16] The HCAI was formerly known as the Office of Statewide Health Planning and Development.

student repeats a grade, whether they are enrolled in a gifted and talented program, the student's overall GPA, the number of AP courses in which the student is enrolled, and whether the student is enrolled in any math or science courses.[17] Since we observe a large number of educational outcomes, we also construct an index summarizing the student's overall educational performance during each year in high school. We do this by subtracting the mean and dividing by the standard deviation of each educational outcome for individuals with birthweights between 1200 and 1499. We then average these standardized outcomes over all non-missing components. Higher values of the index represent better educational outcomes. We also separately examine whether a student has an Individualized Education Program (IEP), indicating there is a written education plan to provide special education and related services. An IEP is required for public school children enrolled in special education programs or who receive related services by the Individuals with Disabilities Education Improvement Act of 2004. Rates of IEP usage in our data appear to be markedly lower than those provided in statewide reports, so we suspect there is some under-reporting of this variable in our sample. However, our results are similar if we restrict to just schools who report at least one IEP student per year; these schools cover about 72 percent of the schools in our sample; see Appendix Tables A9-A11. In addition, the probability of being in such a school does not change discontinuously at the birthweight cutoff.

We also construct indices from outcomes observed in elementary school (whether the student repeats a grade or is enrolled in a gifted and talented program) and middle school (repeats a grade, enrolled in a gifted and talented program, and overall GPA). These analyses are reported in the Appendix. As with the main analysis, we separately examine the presence of an IEP during these school years, but this indicator is not included in the summary indices.

ERP receives educational data directly from public school districts in California, but their collection does not include all districts. Furthermore, not all schools report all outcomes in all years. On average, we observe about 57.7 percent of our sample of school-aged low-income, low birthweight infants in the ERP data at least once.[18] Because our data on educational outcomes are incomplete, there could be concern about selection into the analysis at the cutoff. In Appendix Table A3, we verify that there is no change in the probability of being observed in the education data at any grade, or in high school in particular, at the cutoff.

Following childhood, we observe post-secondary school enrollment and degree attainment with

[17]Note that the state of California only requires 2 years of science and math classes in high school, see Gao et al. (2017).

[18]A similar percent of our sample, 56.9 percent, appear in the high school records when we observe them at high school ages.

information provided by the National Student Clearinghouse (NSC). In contrast to the ERP data, the NSC data are not limited to California and cover between 93 to 97 percent of enrollment nationally in post-secondary, Title IV institutions, depending on the year of data.[19] Similar to the process described above for the ERP data, NSC performed the linkage of their data to the California birth records using information on student name and date of birth. The de-identified data file we received back from them included an anonymized record identifier that allowed us to merge their file with our birth certificate records at Census. With these data, we observe whether an individual has any college or other post-secondary school enrollment and whether they have obtained a bachelor's degree or higher as of July 2022. We restrict the analyses for these outcomes to cohorts who are at least 18 years of age for post-secondary enrollment (1993-2003 cohorts) and 23 years of age for college degree attainment (1993-1998 cohorts).

3.7 Economic self-sufficiency

We also observe several outcomes related to labor market earnings and use of public support programs in early adulthood. First, we observe annual earnings information from the IRS W2s at ages 19-29. We look both at total annual earnings and whether the individual had any earnings in a given year. Earnings are inflation-adjusted to 2019 dollars. While we are able to examine early adult earnings, this age range includes some ages where individuals might be enrolled in college. We, therefore, also perform our analysis of earnings only for individuals observed between the ages of 22 and 29 (inclusive), in addition to ages 26 and older in case there are observable effects at even older ages. Second, we observe receipt of SSI, enrollment in Medicaid, and receipt of the federal Earned Income Tax Credit (EITC) in adulthood, allowing us to capture participation in each of these social programs. We construct an index summarizing these earnings and program participation outcomes in the same manner as with the high school educational index. Here earnings are signed positive and program use negative, resulting in higher values of the index representing less welfare reliance and improved labor market outcomes. Note that in some years only some elements of the index are available (e.g., SSI participation is not available in 2015). In those years, the index uses only the non-missing elements. See Appendix Table A8 for details on outcome availability.

Finally, we observe non-infant mortality from the Census Numident file. This file contains administrative death data for individuals with a Social Security Number collected by the SSA. Mortality records measured in the Numident closely track adult mortality statistics as reported by the Centers

[19]See https://nscresearchcenter.org/workingwithourdata/.

for Disease Control and Prevention and it is considered a comprehensive source of individual-level mortality information (Finlay and Genadek, 2021; Miller et al., 2021). In our analyses, we examine cumulative mortality for individuals who survived their infancy year through the third quarter of 2022, which is the most recent information available.

4 Empirical Approach

Our main analysis takes advantage of the cutoff rule used for SSI medical eligibility based on birthweight in a regression discontinuity (RD) design framework. This approach compares infants born close to the birthweight cutoff, presumably with similar health at birth, who meet the qualifying disability criteria vs. those who do not based on the cutoff rule. While birthweight likely matters for the outcomes we study for reasons separate from SSI eligibility, the identifying assumption is that the underlying effect of birthweight does not change discontinuously at the cutoff. Note that this is a "fuzzy" regression discontinuity design since some infants above the cutoff may qualify for SSI under other disability definitions. It may also be the case that some infants below the cutoff do not qualify because their families do not meet the income or asset requirements of the program, as we do not observe family assets and income may be mismeasured.

In the analyses that follow, we present reduced form estimates that examine changes in outcomes at the cutoff, or the "intent-to-treat" estimates. We do not estimate instrumental variables models that estimate the effect of a change in SSI participation at birth, since we do not observe this time period for all cohorts in our sample. We do, however, provide first stage analyses that estimate the change in participation for the cohorts for whom we have these data.

Following the standard for estimation (Cattaneo and Titiunik, 2022), we estimate the RD model with a local linear regression using the `rdrobust` package in Stata (Calonico et al., 2017). We use a triangular kernel that assigns the highest weights for observations at the cutoff and weights that decrease linearly as observations move away from the cutoff. Due to Census disclosure rules and concerns about generating small implicit samples, we fix the bandwidth to all births between 900 and 1499 grams; this is similar to the optimally chosen bandwidth for all of our outcomes. We present all estimates as the change in intercept for births born *below* the 1200 grams birthweight eligibility cutoff (i.e. who gain SSI medical eligibility). We also verify that our results are robust to estimation with a "parametric" linear model based on the following regression:

$$Y_{it} = \beta_1 + \beta_2(BW_i - 1199) + \beta_3(BW_i - 1199) \times (BW_i < 1200) + \beta_4(BW_i < 1200) + \epsilon_{it}. \quad (1)$$

In this alternative parametric specification, $\hat{\beta}_4$ is the RD estimate that captures the discontinuity at 1200 grams.

We observe all annual outcomes at the individual by year level. We therefore construct our analytic dataset as an individual by year (or individual by grade, in the case of the ERP data) panel. If an individual dies, they are removed from the panel in subsequent years. It is also possible that siblings may appear in the panel (e.g., if the same mother has more than one child with very low birthweight). We, therefore, estimate cluster-robust standard errors that we cluster by mother, allowing for correlation of the error term both within individuals over time and across individuals in the same family.

The RD approach relies on the assumption that infants born close to the cutoff do not vary systematically across the cutoff except in their treatment by the SSI program rules. We bolster the credibility of that assumption by examining whether infants on either side of the cutoff vary discontinuously on other dimensions that we would not expect to be related to SSI eligibility, nor to jump discontinuously. Specifically, we examine whether maternal age, race, ethnicity, education level, pre-birth income, infant's sex assigned at birth, number of prenatal visits, gestational length in weeks, number of abnormal newborn conditions, and 5-minute Apgar score vary discontinuously at the cutoff in our sample of low-income, low birthweight infants. As we show in Appendix Table A3, only one of these baseline characteristics (Hispanic ethnicity of the mother) varies significantly at the 1200 gram cutoff and the point estimate is small, indicating a difference of about 3 percentage points (or about 5% relative to the baseline mean). Furthermore, a joint F-test of their significance shows no significant difference in these characteristics when considered together (p=0.165). Later we show that our results are robust to the inclusion of these characteristics as control variables (see Appendix Figures A3-A5).

A second assumption is that there is no manipulation of the running variable related to the knowledge of (or potential benefit from) treatment. Ideally, the running variable is smoothly distributed at the cutoff. However, as documented in previous studies (Almond et al., 2010; Barreca et al., 2011, 2016; Guldi et al., 2024), birthweight tends to exhibit "heaping." This occurs when certain providers round the reported birthweight to the nearest 100 grams or nearest ounce. Such heaping may be a concern for our analysis if correlated with hospital characteristics or patient populations; e.g., if hospitals in poorer areas have lower resolution scales and are more likely to report birthweight in heaps that fall on one side of the cutoff or the other (Barreca et al., 2016), and these hospitals also generate worse health outcomes.

We do observe this type of heaping in the California birth records (see Appendix Figure A2). However, the heaping patterns are similar across mothers with different educational attainment at the time of the birth (panels (c) and (d)), and the heap at 1200 grams is not noticeably different than other heaps occurring at round numbers (panels (a) and (b)).[20] Furthermore, the 1200 gram heap is not consistent with manipulation of the running variable, since it occurs just above (rather than just below) the eligibility cutoff. When we check for density manipulation in our sample following Cattaneo et al. (2018), we do not find evidence of a significant jump in density at the 1200 gram threshold. The p-value associated with this density test is 0.3979.

Nonetheless, we further explore the potential role of heaping in our analysis by conducting a robustness test where we omit "heaped" observations. This narrows our sample, and necessarily estimates effects only for infants who are not observed at data heaps, but provides unbiased estimates for non-heaped observations if non-random heaping is present (Barreca et al., 2016). We find very little change in our estimates when these heaped birthweights are omitted (see Appendix Figures A3-A5). The robustness of our results to the removal of heaped observations, the lack of change in demographic characteristics at the cutoff, the lack of evidence of bunching at the cutoff, and the fact that the heaps occurring near the eligibility cutoff appear to be similar to those at other points of the birthweight distribution suggest that these data features do not invalidate our RD approach.

Finally, we note that our research design estimates the impact of SSI eligibility for infants born at the cutoff—that is, those with birthweights very close to 1200 grams. This estimated effect may not apply to infants who are born with much lower or higher birthweights.

5 Results

5.1 First stage

We first evaluate how birthweight affects SSI receipt during childhood. Figure 1 plots the fraction of children who receive any SSI (top row) and the average amount of SSI benefits received (bottom row) at different ages by 15-gram birthweight bins. Note that the average amount of SSI benefits received

[20] Census disclosure rules prohibit us from reporting unrounded samples sizes in our linked data, so we rely on a separate restricted data set to produce these figures.

is inclusive of the $0 benefits received by children who are not enrolled in the program. The size of the points is proportional to the number of observations in each of these bins and the vertical line denotes the 1200 gram eligibility cutoff. In some cases, bins are omitted if they do not exceed Census disclosure thresholds.

Panels (a)-(c) show large jumps in the probability that a child receives any SSI benefit, and panels (e)-(g) in the dollar amount received, at the 1200 gram threshold early in a child's life, with noticeable jumps during infancy, at ages 1-2, and at ages 3-10. By ages 11-17 (panels (d) and (h)), we no longer observe noticeable differences in the fraction of children who receive SSI, nor the amount they receive, at the birthweight threshold. These reductions in the size of the discontinuity across ages likely reflect infants losing SSI eligibility as they get older and their impairments are re-assessed, or as their families gain resources. Previous work using SSA data has also found a steep drop off in benefits received as low birthweight infants age. Of children awarded SSI for low birthweight in 2001, 65.8 percent received benefits at their first birthday, and 22.9 percent still received benefits by their fifth birthday (Guldi et al., 2024).

Table 2 shows the regression discontinuity estimates associated with this figure. The average of the outcome variable for infants who are just above the eligibility cutoff (weighing 1200 to 1250 grams) is also reported to provide a baseline comparison. We report estimates by age, although it is important to note that older ages also correspond to earlier cohorts given the years we observe the SSA data.

We find that infants in our sample with birthweights just below the 1200 gram cutoff are 18.5 percentage points more likely to receive SSI benefits in infancy compared to infants with birthweights just above the threshold, nearly a 200 percent increase in participation. This increase in SSI participation continues throughout middle childhood with a 19.5 percentage point increase at ages 1 and 2, and a 4.5 percentage point increase at ages 3 to 10. These estimates are statistically significant at the 0.01 level. On average, infants with birthweights just below the threshold receive $146 in additional SSI benefits per month during their first year of life, or $1,752 per year. This represents a transfer equal to about 27 percent of families' average pre-birth income ($6,414). At ages 1 and 2, the gain in the average monthly SSI benefit is similar at $141 per month. At ages 3 through 10, the increase in average monthly benefits for infants below the cutoff is lower ($33 per month), but still significantly different than zero. SSI benefits are not statistically different across the threshold at later ages in childhood. Taken together, these estimates imply that low-income children can expect over $8,300 of additional cash benefits before age eleven if their birthweight puts them just below the 1200 gram threshold versus just above it, an amount exceeding their families' average pre-birth annual income.

The estimates above give SSI benefit amounts for all children below the 1200 gram cutoff, regardless of whether they actually participate in the program. For the approximately 18.5 percent who enroll in SSI as a result of this eligibility rule, our estimates imply a gain in annual SSI benefits of $9,470 in the first year of life and $17,354 over the next two years (ages 1-2). Our estimates also suggest that about one-fourth of these children will remain on SSI between the ages of 3 and 10 and receive an additional benefit of $8,800 per year. Altogether, these estimates imply that the total additional expected childhood benefit for a low birthweight infant who enrolled at birth would be $43,931.[21]

In considering the size of the first stage, the receipt of other benefit income could be relevant. During this time period until June 2019, SSI beneficiaries were ineligible for SNAP benefits in California and not included in the calculation of the assistance unit for the purpose of determining household SNAP benefits or eligibility (California Department of Social Services, 2018). By the same measure, SSI income received by the family was not counted by the SNAP program in assessing the family's eligibility. Therefore, families with infants whose birthweight is right above the SSI eligibility cutoff may qualify for greater SNAP benefits per month, because an infant not on SSI "counts" as part of the household size and thus increases the maximum SNAP benefits that the family can receive. In principle, this means that families falling below the cutoff may be getting less in SNAP benefits on average, which may offset some of the benefit of SSI payments. In practice, however, we believe that the likely effect per month is very small. While we do not observe SNAP benefits in our data, we estimate that this would–at most–reduce the benefit amount reported in Table 2 by just under $30.[22] This calculation gives an upper bound for foregone SNAP benefits since it assumes that all families induced into participating in SSI (1) are also SNAP recipient families, and (2) would receive the maximum SNAP benefit amount. For example, if we assumed that SSI eligible families had SNAP take-up rates that were similar to other poor families in California (59%, see U.S. Department of Agriculture, nd), the expected loss of SNAP benefit income is only $17 per month.

We also examine how Medicaid enrollment in childhood varies across the cutoff, since SSI also provides eligibility and automatic enrollment in the Medicaid program in the state of California (Rupp

[21]This calculation considers the $26,824 accumulated benefit through age 2 for those enrollees who exit the program at later years and the additional $70,400 accumulated benefit for those who stay enrolled through age 10, as well as the 24.3 percent likelihood of being in the latter category.

[22]Considering the case of a household that is growing in size from a 2 to 3 person household with the addition of an SSI-eligible infant, the difference in maximum monthly household SNAP benefit amounts in 2017-18 was $152 per month; the difference in maximum monthly SNAP benefit amounts are similar for other household size changes (Legislative Analyst's Office, 2018). Given the 19 percentage point increase in SSI participation at the cutoff, this implies an expected maximum average loss in monthly SNAP benefits at the cutoff of $29.

and Riley, 2016). In Figure 2, we plot the fraction of children enrolled in Medicaid by 15-gram bin. We observe higher rates of Medicaid enrollment in childhood for children born just under the 1200 gram cutoff relative to those born just above it. Table 2 shows that children whose birthweight puts them immediately below the cutoff are 5.1 percentage points more likely to enroll in infancy (about 10.3 percent relative to the baseline mean), 2.5 percentage points more likely to enroll at ages 1 and 2 (3.4 percent), 3.5 percentage points more likely to enroll between the ages 3 and 10 (5.3 percent), and about 4.8 percentage points more likely to enroll at ages 11 to 17 (8.5 percent). It is interesting that we see a larger discontinuity in Medicaid enrollment during the adolescent years, despite no significant difference in SSI benefit receipt at the cutoff. This suggests that some child SSI enrollees continue to participate in Medicaid when they discontinue SSI participation. Notably, eligibility criteria for childhood Medicaid coverage tend to include higher family income levels than SSI and do not require the presence of a disability.

These results demonstrate that infants with birthweights just below the 1200 gram cutoff receive substantially higher benefits through the SSI program that, given recent evidence on cash assistance (e.g. Barr et al., 2022), might reasonably be expected to generate short- and long-term changes in these children's outcomes.

5.2 Health and health care utilization in infancy

We next examine whether increased SSI eligibility translated into short-term differences in health and health care utilization. Figure 3 plots mortality, hospital use, and ED visits during the first year of life by birthweight. In contrast to the patterns shown in Figures 1 and 2, we do not see clear evidence of a jump or break at the 1200 gram cutoff for most outcomes. There is some evidence, however, that infants just below the cutoff had more days in the hospital at birth (panel b).[23] Corresponding RD estimates are presented in Table 3. We do estimate a significant difference at the birthweight cutoff in the length of initial hospitalization, indicating that infants with birthweights below the cutoff stay in the hospital at birth for about 2 more days than infants with birthweights just above the cutoff, an increase of about 4.4 percent relative to the baseline mean. One potential explanation for this finding is if hospitals provide more care due to the Medicaid benefit that accompanies SSI receipt. As described earlier, infants can enroll in the program during their initial hospital stay, do not need to meet financial test requirements, and receive a small monetary SSI benefit, as well as Medicaid. There is at least some anecdotal evidence that hospitals assist in connecting families to these benefits

[23] Note that this measure of hospitalization at birth includes only days at the hospital at which the birth occurs.

(Hemmeter and Davies, 2019; Lakshmanan et al., 2022).

We find no change in inpatient days that occur after the initial hospital stay for the birth (column 2), nor do we find any difference in the number of emergency department visits during the first year. We also find no significant effect on infant mortality. Although our confidence intervals do include meaningfully-sized effects, our point estimates are generally small when compared to baseline means and are not in a consistent direction.

5.3 Educational outcomes

Next we consider outcomes related to educational performance in high school, shown in Figure 4. We do not provide a figure for enrollment in gifted and talented programs because Census disclosure rules required us to censor many observations. For other outcomes that we include in our summary index, there is no obvious discontinuity at the 1200 gram cutoff, nor do we observe a discontinuity in the index itself. Not included in the summary index is an indicator that the child has an IEP (panel g). This outcome does appear to be discontinuously higher at the 1200 gram cutoff, with those who received SSI eligibility under the cutoff showing a higher likelihood of having an IEP.

The RD estimates reported in Table 4 confirm these visual patterns. We do not find a significant difference in the summary index or its component outcomes across the cutoff. For most outcomes, the point estimate indicates that, if anything, those who gained SSI eligibility as the result of the cutoff have somewhat worse outcomes. For example, those who fall just below the cutoff appear to take slightly fewer AP courses in high school, although the coefficient is only suggestive (p-value=0.125).

With a two-sided test, we can rule out improvements in our high school index greater than about 0.036 standard deviations (0.027 with a one-sided test). The precision of our other estimates varies across components. A two-sided test is able to rule out quite modest improvements in taking a math class in a given year (2.4 percent over baseline, or 1.7 percent with a one-sided test) or overall GPA (3.6 percent over baseline, or 3.0 percent with a one-sided test), but unable to rule out large reductions in the probability of repeating a grade (only estimates larger than 36 percent over baseline, 31 percent with a one-sided test) or participation in gifted and talented programs (estimates larger than 80 percent over baseline, or 69 percent with a one-sided test).

Receipt of an IEP (not included in the summary index) is significantly higher for individuals just meeting the SSI eligibility cutoff, with an increase of 2.8 percentage points, or 40 percent over baseline. Higher rates of enrollment in special education or related services could have a variety of implications for the well-being of the student. If SSI helps students get an IEP that provides accommodations and a more targeted selection of courses, the students may be better off. However, the increase in the likelihood of benefiting from an IEP, combined with the suggestive (although not significant) negative effect of SSI eligibility on taking more difficult classes, could reflect a labeling or stigma effect associated with early life SSI eligibility. If child enrollment in SSI results in students being "tracked" into less rigorous courses or limiting exposure to certain peers, students may be worse off (e.g. in Dudovitz et al., 2023). Such an effect could dampen any beneficial educational effects of the cash transfer aspect of the program. As we demonstrate below, it does not appear that the 1200 gram cutoff had a meaningful impact on college attendance or degree attainment, or labor market outcomes in early adulthood.

Given that fewer relevant outcomes are collected for earlier grades, we report results for elementary and middle school in the Appendix in Tables A12 and A13. In both cases, we find no evidence that early childhood SSI eligibility results in improved educational outcomes in these earlier grades. Of interest, we do not find similar evidence of increased participation in IEPs at the eligibility cutoff in either elementary or middle school. This may reflect the incomplete coverage of this variable (see discussion in Section 3), although results are similar if we restrict our sample to schools that report at least one student received an IEP (see Appendix Tables A9-A11).

We next examine how early life eligibility for SSI affects college and other post-secondary school attendance and degree attainment. These outcomes are plotted in Figure 5. Mirroring our results for high school, we find no differences in post-secondary outcomes at the cutoff. Table 5 reports the estimated coefficients. Our point estimates are small, indicating about a 1.5 percentage point difference in post-secondary school attendance (about 2.9 percent compared to the baseline) and a 0.3 percentage point difference in degree attainment (about 2.8 percent), although the confidence intervals include meaningfully sized estimates, allowing us to reject increases for the SSI eligible of more than 11 percent and 32 percent, respectively.

5.4 Labor market and program participation

Next, we examine labor market outcomes and use of public programs for young adults ages 19 to 29. Figure 6 shows patterns for a summary index (panel a), whether the individual had any earnings and the amount of earnings (as measured on form W2) (panels b and c), whether the individual was enrolled in SSI and the average amount of SSI received (panels d and e), whether the individual was enrolled in Medicaid (panel f), and the amount of federal EITC received by the individual's household as measured by the tax form 1040 (panel g). We also examine whether the individual died after infancy; however, due to the low rate of mortality for this sample we were unable to disclose the corresponding mortality figure. For the most part, these outcomes do not appear to change discontinuously at the cutoff.

Table 6 reports the corresponding RD estimates. Consistent with the visual evidence presented in Figure 6, we find no significant effect of early life SSI eligibility on adult labor market outcomes or program participation. With a two-sided test we can rule out improvements in our index of labor market and program participation outcomes larger than about 0.04 standard deviations. A two-sided test can rule out improvements in any wages and total earnings of 3.6 and 4.8 percent respectively, when compared to baseline means; a one-sided test can rule out 2.9 and 3.5 percent improvements. However, when examining outcomes related to use of public programs, our confidence intervals are generally not precise enough to rule out moderate to large changes among individuals who gain SSI eligibility at the cutoff, with a two-sided test able to rule out reduced use of these programs ranging from 6.2 percent (Medicaid) to 32 percent (SSI benefit amount). In all cases, the direction of the point estimates tend to suggest worse outcomes in adulthood for the individuals who gained SSI eligibility. The confidence intervals, therefore, include even larger estimates for decreases in earnings and greater reliance on public support programs.

We also examine whether the results change when we restrict to those age 22 to 29, rather than 19 to 29. This age restriction removes individuals who may still be in school and not yet in the labor market, and may therefore better capture the impact of the early life payments on labor market outcomes. These results are reported in the first panel of Appendix Table A14. We do not find any change in labor market or program participation at the cutoff, and are able to rule out improvements in the index larger than about 0.044 standard deviations, increases in any earnings of about 3 percent, and increases in earning amounts of about 4 percent. As with younger ages, our estimates of the impact of the cutoff on program use is noisier, and we are able to rule out reductions in program use of greater than 29 percent (Medicaid) and 45 percent (SSI benefit amount). Similar to the analysis above, the point estimates suggest worse labor market outcomes for the SSI birthweight eligible. In an additional analysis, we examine whether there are earnings effects when we restrict the sample to ages 26 and greater. As seen in the second panel of Appendix Table A14, we continue to find no evidence of positive earnings effects, although the confidence intervals are wider due to the smaller sample size.

Regardless, this analysis suggests that there are unlikely to be longer-term effects on earnings given the high correlation between earnings at these ages and future earnings (e.g. Chetty et al., 2011; Barr et al., 2022).

Finally, we examine whether children who became eligible for SSI at the birthweight cutoff had different mortality rates. We consider this as a separate outcome, not included in the economic self-sufficiency index. We do not find evidence that mortality changed at the SSI eligibility cutoff, although we cannot rule out decreases in mortality less than 53%.

5.5 Robustness to alternative samples and specifications

We conduct several analyses to assess how robust our results are to alternative specifications and sample definitions. First, we conduct all analyses using a parametric linear model as described in equation (1). Second, we re-estimate our model but drop all observations occurring at "heaps." Heaps appear to occur both at round numbers and at grams that correspond to pounds and ounces. We use an expansive definition of heaping by defining heaps as any gram that is either a multiple of 100 or that corresponds to an ounce.[24] Third, we examine the sensitivity of our estimates to controls for baseline characteristics. In this analysis, we include all of the baseline maternal and infant health characteristics used in our placebo tests (Appendix Table A3), with the exception of the 5-minute Apgar score, which is unavailable for some cohorts.

We report estimates from these alternative specifications with corresponding 95 percent confidence intervals in Appendix Figures A3-A5. Our main estimate is reported in these figures in red to facilitate comparison across the models. In general, we note that our results are fairly similar across these alternative specifications, with a small number of exceptions. We find a smaller and not significant increase in Medicaid coverage in later ages of childhood (age 3-10 and 11-17) in the specification that removes observations occurring at "heaped" birthweights. We also do not find a statistically significant increase in the probability an individual has an IEP in high school at the cutoff in the models that rely on non-heaped data and that include baseline control variables, although in the latter case the point estimate is very similar to what we observe in our main specification.

In addition to these alternative specifications, we also re-construct our sample using mothers' education, instead of income, to identify low-income infants. We restrict the sample to infants whose mother reports having less than a high school degree in educational attainment on the birth certificate. Using maternal education, instead of income, may be preferable since we know certain types of in-

[24]For example, 42 ounces is equal to 1190.68 grams and 1191 grams would be considered heaped.

come are not captured in our data. For example, we do not observe income reported on form 1099 and other non-wage income for non-filers, and, for our earliest cohorts, we are relying on data reported to states' UI systems, which is not as comprehensive as tax data. Using maternal education information from the birth certificate provides us with an alternative way to identify a targeted sample most likely to meet the SSI financial eligibility rules.

We report the first stage for this sample in Appendix Table A4, and later life outcomes in Appendix Tables A5-A7. While we find a similarly-sized first stage as compared to our main analysis, we continue to find null results for other outcomes measured in infancy, childhood, and young adulthood.

Overall, these analyses show that our results and conclusions do not appear to be sensitive to modeling choices or decisions around the construction of our sample.

5.6 Subgroup analyses

We next examine the impact of birthweight under the 1200 gram eligibility cutoff for several subgroups based on demographic characteristics. Specifically, we examine how the effects vary by maternal race and ethnicity (non-Hispanic Black, non-Hispanic white, non-Hispanic Asian, and Hispanic), and sex assigned at birth. Recent research suggests that interventions and access to resources early in life may be more beneficial for disadvantaged males than females (e.g. Bertrand and Pan, 2013; Conti et al., 2016; Autor et al., 2019; Barr et al., 2022). We also examine effects for the subgroup of births who are the first in the family given prior evidence that increased liquidity during the transition to parenthood can lead to persistent increases in family income (Barr et al., 2022).

We then examine whether effects were different for a somewhat later cohort (those born in 1997 and later). These later cohorts may be differentially affected by SSI eligibility. For example, these later cohorts may have experienced a greater increase in SSI enrollment at the cutoff because they were born several years after the SSI birthweight eligibility rule was put into place, when there may have been greater awareness of and use of the rule as a result.[25] Additionally, technological and medical progress in the care and treatment of low birthweight infants, such as the introduction of the drug surfactant, increased rapidly in the 1990s (Bharadwaj et al., 2013). If these technological advancements alter the health and economic trajectories of the infants who receive them, they may also alter the return to any

[25]With our current data, we are unable to verify whether the first stage is larger or smaller in more recent years compared to the mid-1990s. However, our analysis of public reports on the aggregate number of awards made on the basis of low birthweight suggests that differential enrollment at the cutoff could be closer to 15 percentage points in 1997, somewhat smaller than the 18.5 percentage points we observe in our individual data. See Appendix Section C for more details on this back-of-the-envelope calculation.

additional investments made early in life.

We also examine whether effects of SSI eligibility may differ based on individual likelihood of long-term disability estimated using characteristics observed at birth. To investigate this, we predict adult SSI receipt using a probit model and the sample of low birthweight infants who were between 1200 and 1499 grams (i.e. those who fell above the eligibility cutoff) and for whom we observe SSI enrollment or non-enrollment for at least one year in adulthood. To predict adult SSI enrollment, we use information observed at birth on the sample's health (birthweight, weeks of gestation, number of prenatal visits, any and number of abnormal conditions, neo-natal intensive care unit admission) and maternal demographic and economic characteristics (age and age squared, prenatal care and labor/delivery payer, race, ethnicity, county of residence, and pre-birth income). The dependent variable equals 1 if we observe SSI enrollment in adulthood, and 0 otherwise. We use this model to generate a predicted likelihood of adult SSI variable for the entire sample, and then split the sample by individuals with above or below median predicted values for adult SSI receipt. This measure of predicted adult SSI receipt seems to do a reasonable job in identifying those who are more likely to be economically disadvantaged in adulthood on several dimensions (see Appendix Table A15). Given that SSI requires beneficiaries be both disabled and low-income, this measure captures the probability that an individual continues to be disadvantaged on both of these dimensions in adulthood.

Finally, we examine whether effects may be larger among infants born in hospitals that better facilitated SSI receipt among eligible families. To implement this analysis, we first estimate the change in SSI participation at the cutoff for each individual hospital.[26] We then construct a subgroup comprised of infants born in hospitals with an above median first stage estimate, which was an 18.1 percentage point change in SSI enrollment at the birthweight cutoff.

Outcomes related to the first stage are reported for each of theses subgroups in Appendix Table A4. We find significant increases in the probability an infant receives any SSI early in life for those falling just below the cutoff for all groups. The magnitude of the effect varies across demographic groups, however, with non-Hispanic Black children seeing the greatest increase in SSI participation below the eligibility cutoff, particularly for ages 0 (a 33 percentage point change) and 1-2 (32 percentage points). This group also experiences the largest increase in average SSI benefits in early childhood, with an increase of \$280 per month in infancy and \$271 per month at ages 1-2. Non-Hispanic white and Hispanic children experience somewhat smaller than average changes in SSI benefit amounts and

[26] Approximately 7 percent of births were in hospitals without enough sample observations to estimate a first stage and were excluded from this analysis.

participation at the cutoff. Meanwhile, Asian children experience much larger increases in Medicaid participation (21 percentage points at age 0 and 13 percentage points at ages 1-2) than children from other racial groups. Female children appear to have slightly larger changes in SSI enrollment and benefit amounts at the cutoff than male children. First-born children also have slightly larger changes in SSI and Medicaid participation at the cutoff than observed in our main analysis sample. Essentially all groups, however, appear to be affected by the SSI birthweight eligibility policy.

We also see evidence of differences in SSI receipt among infants with higher and lower likelihoods of long-term disability, as measured by predicted SSI receipt in adulthood. Of interest, we find a smaller increase in participation at the birthweight cutoff among infants that we predict are more likely to receive SSI as adults (a 14 percentage point change vs. a 23 percentage point change among infants with lower predicted values). We also find smaller changes in Medicaid enrollment for this group. One potential explanation for this pattern might be that infants with a higher likelihood of long-term disability are also more likely to qualify and enroll in SSI as infants regardless of the birthweight eligibility rule. Note that we observe higher baseline participation for both SSI and Medicaid for the infants with high predicted values for adult disability.

Finally, we unsurprisingly find a large first stage for the subsample of infants born in high take-up hospitals with an almost 34 percentage point increase in SSI participation at age 0 at the cutoff and a 36 percentage point increase at ages 1-2. The average monthly increase in SSI benefits during these years is close to $280 among infants born at high take-up hospitals.

Appendix Tables A5-A7 show heterogeneity in the effects of SSI eligibility on infant, childhood, and early adult outcomes. For the most part, we do not detect statistically significant effects of early life SSI eligibility on later life outcomes. A small number of estimates appear statistically significant at the 5% level but indicate that SSI eligibility is associated with worse, rather than better, outcomes in adulthood. There also does not appear to be a systematic relationship between the size of the first stage reported in Appendix Table A4 and the size or direction of the point estimates reported in Appendix Tables A5-A7. For example, infants born in high first-stage hospitals experience an increase in infant SSI enrollment at the cutoff of over 33 percentage points, more than 80 percent larger than the effect estimated in the full sample. But, we do not find improvements in long-run outcomes for this group, and for many outcomes our confidence intervals allow us to rule out moderately-sized effects. For example, a two-sided test allows us to rule out improvements in the high school index of 0.10 standard deviations and in our adult economic self-sufficiency index of 0.06 standard deviations for this group.

5.7 Ruling out counterfactual discontinuities

One potential threat to the interpretation of null findings would be the existence of discontinuities in short- and long-term health and economic outcomes at the 1200 gram cutoff in the absence of the SSI eligibility policy. For instance, if infants below the cutoff are discontinuously more likely to have poor long-term outcomes, then any positive SSI effect may serve only to close this pre-existing discontinuity and, therefore, present itself as "no effect" in our analyses of program impact. Such patterns may emerge due to, for example, non-random heaping in the birthweight variable that results in less healthy infants being inadvertently placed on one side of the eligibility cutoff. Analyses presented in Section 4 demonstrated the absence of discontinuities at the SSI eligibility cutoff on a number of baseline characteristics of infants and their families, suggesting that this type of baseline discontinuity in long-term outcomes is unlikely.

However, to further examine the possibility of counterfactual discontinuities in long-term outcomes, we conduct several additional tests. First, we test for discontinuous values of the predicted likelihood of adult SSI receipt, a measure of long-term disadvantage based on baseline health and economic characteristics that was described above in Section 5.6. We run the RD analysis using this predicted likelihood of adult disadvantage as the outcome for each of our main analytic samples. As seen in the first column of Appendix Table A16, we find no evidence of discontinuities in the likelihood of long-term disadvantage at the eligibility cutoff.

Next, we examine whether there are discontinuities in outcomes at the 1200 gram cutoff for two different placebo samples. First, we conduct the regression discontinuity analysis for infants who meet a similar sample definition criteria, mothers with less than a high school degree,[27] but who were born in 1989 and 1990, predating the use of the low birthweight rule for SSI eligibility. Second, we conduct the analysis for infants born in 1993-2019 who meet our main sample definition criteria except that their pre-birth family income exceeds the SSI eligibility income threshold. Both of these analyses provide an opportunity to test for discontinuities in long-term outcomes for children who are largely unaffected by the low birthweight eligibility rule.[28] The results from these analyses are

[27] We are not able to attach incomes to births prior to 1992, so we use mothers' education instead, motivated by the similar first stage results to our main sample restrictions.

[28] In the case of the high-income sample, these infants technically are eligible for a small monthly SSI payment of $30 during their hospital stay following birth and after, if in another medical institution. In addition, these infants may actually be eligible for SSI to the extent that we mismeasure income. As might be expected, we find a small but statistically significant first stage for this group; see Appendix Table A17.

reported in the second and third columns of Appendix Table A16. We find no evidence that infants just below the birthweight cutoff are discontinuously worse off in terms of their long-term outcomes in the absence of the SSI birthweight eligibility rule. In both samples, the direction of the coefficients are inconsistent and close to zero.

5.8 Sibling spillover effects

The SSI transfers may have affected household members other than the beneficiary themself. We therefore consider what effect SSI eligibility may have had on the older siblings of the focal child. Siblings may have indirectly benefited from the additional resources available to the household, or via knowledge spillovers that may have increased their own enrollment in programs for which they were already eligible. The long-term effects of these cash transfers on siblings also have the potential to be quite different than those experienced by the focal child. Siblings may be less likely to experience a "labeling" effect or to be stigmatized by the SSI receipt and are unlikely to form expectations about future SSI benefits (which could in turn affect human capital investments) based on their siblings' experiences. Siblings also have a higher average birthweight than the focal child, and the marginal benefit of additional cash resources may be different as a result.

To examine these hypotheses, we present RD results for siblings where the running variable is the birthweight of the focal child. That is, we compare individuals whose younger sibling's birthweight fell on either side of the cutoff. We first examine changes in siblings' use of programs during childhood. We consider only the ages at which we observe older siblings after the birth of the focal child. Because of this restriction, we have relatively few observations of older siblings at very young ages, since this requires a close birth spacing between the older sibling and the focal child. For this reason, we examine first stage outcomes for the older sibling starting at age 3.

The results are presented in Tables 7-9. While we find large changes in SSI receipt for the low birthweight child, we do not find that older siblings' use of the program or enrollment in Medicaid during childhood changes at the younger sibling's birthweight cutoff (Table 7). The coefficient estimates are both not statistically significant and small in size, with confidence intervals allowing us to rule out increases in participation of between 1 percentage point (SSI) to 5 percentage points (Medicaid). This result indicates that any potential spillover effects on program participation–due to increased awareness or knowledge about the application process–are limited.

Next, we examine whether siblings had different outcomes later in life due to their younger sibling's SSI eligibility. Table 8 shows estimates for the older sibling's educational outcomes. We do not find any evidence that siblings had different outcomes in high school (as measured with our summary index of high school performance) depending on whether or not their younger sibling medically qualified for SSI on the basis of birthweight and our confidence intervals allow us to rule out an increase larger than 0.033 standard deviations with a two-sided test. We also do not find statistically significant differences in college or post-secondary school attendance or the likelihood of obtaining a bachelor's degree or higher; our confidence intervals, however, can only rule out improvements in these outcomes of larger than 13 and 21 percent, respectively.

Table 9 shows RD estimates for siblings' self-sufficiency outcomes measured in young adulthood. We do not find any evidence that outcomes related to earnings or program participation changed for individuals with a younger sibling whose birthweight fell under the SSI eligibility cutoff. With a two-sided test, we can rule out positive spillover effects on our composite index larger than about 0.02 standard deviations (about 0.01 standard deviations for a one-sided test).

While we find no difference in siblings' outcomes overall, it is possible that the effect of SSI eligibility may vary based on the age of the sibling at the time of the eligible infant's birth. We examine this dimension of heterogeneity in Appendix Table A18. This table reports the effect of a younger sibling's SSI eligibility for older siblings who were between ages 1 to 5, 6 to 10, or 11 to 17 at the birth of that child, as indicated by the columns. For the most part, we do not find substantial heterogeneity by age, with a small number of exceptions: siblings who were older at the birth of the SSI-eligible child are more likely to attend post-secondary school and obtain a college degree, while those who were younger have worse economic outcomes (as measured via the summary index) and higher mortality. However, given that we examine a large number of hypotheses, that these estimates are only significant at the 5 percent level, and that there is no consistent direction of the estimates across subgroups, we believe these effects should be interpreted with caution.

5.9 Family resources

Previous research has found large effects of early life interventions, including cash transfer payments, on later life outcomes. It may, therefore, be surprising that we do not detect any improvement in outcomes across a number of measures.

One explanation may be that families reduced their labor supply, or their reliance on other kinds of social support, when their child medically qualified for SSI. While reduced parental labor supply may still generate improvements in a child's well-being and development (e.g., because it allows the parent to provide more support and care to the child), it may also have adverse effects, especially if the parent's long-term job prospects are harmed by their reduced engagement with the job market. We test this hypothesis directly by constructing a monthly measure of total household resources based on what we observe in our data. This includes total household and labor market income (observed in either W2, LEHD, or 1040 sources),[29] EITC receipt (derived from 1040s), and SSI benefits. This analysis only includes years when we can observe SSI receipt. While we cannot observe receipt of other relevant benefits (e.g. TANF, WIC, child care subsidies), this measure does capture three relevant sources of resources for low-income families. To match the monthly frequency of our first stage analysis, we divide total annual household resources by 12 to arrive at a monthly measure. We winsorize this measure at the 99th percentile because the data contain some large outliers, although results are similar if we do not winsorize. Using this measure, we analyze how household resources change at the cutoff during different ages of childhood by estimating the same RD model with the household resource measure as the dependent variable. We also examine maternal labor supply directly using information on whether the mother had any earnings and the amount of annual earnings observed in each year; previous work has shown that mothers change their labor supply in response to children's low birthweight SSI eligibility (Guldi et al., 2024).

The results are reported in Table 10 with the corresponding figures found in Figure 7. During the early ages of childhood, between infancy and age 2 (inclusive), we see that household resources increase significantly and by approximately the same amount as the focal child's SSI benefits. This suggests that during these critical early years, families have access to more income resources if their infant is SSI birthweight eligible net of any labor supply or other benefit receipt changes. We see family resources at ages 3 to 10 that slightly exceed SSI benefit amounts received, but lower resources at age 11-17, when there is no longer an effect on SSI receipt; however, these estimates are noisy and not statistically significant at conventional levels. Direct analysis of maternal earnings, reported in Appendix Table A19, finds some evidence of reduced extensive margin labor supply of between 2 and 3 percentage points in the earliest and latest years of childhood, and some evidence of reduced earnings when the low birthweight child is between ages 3 and 17, although these effects are only significant at the 10 percent level. Despite these suggestive reductions in maternal labor supply, taken together, our analysis suggests that low birthweight SSI eligibility generated real increases in household income in

[29] Note that we examined whether families with infants below the 1200 gram cutoff were more likely to file taxes after the infant's birth and found no evidence of a discontinuity.

the earliest years of childhood, although the effects at later ages are less clear.

5.10 Comparison to previous estimates

There is little existing research examining the long-term effects of child SSI receipt, and none focusing on receipt in infancy. The few papers examining an expansion in SSI disability qualifying criteria for school-age children with mental disorders find contradictory evidence regarding the effects on economic self-sufficiency in adulthood. Among the cohorts affected, Coe and Rutledge (2013) find evidence of increased labor force attachment and less welfare receipt; Singh (2020) finds no effects on adult income and increased welfare receipt, and Levere (2021) finds negative effects on young adult earnings and increased SSI receipt. Our analyses, which are the first specific to SSI eligibility in infancy, reveal no statistically significant effects of increased eligibility on later life earnings of beneficiaries, nor SSI receipt in adulthood.

How do our results, which examine a transfer to a population that is both low-income and low birthweight, compare to the effects documented among less disadvantaged populations? One prominent recent example is Barr et al. (2022), who study one-time transfers in the first year of life among children born into families eligible for the maximum EITC credit (families with about $49,000 for a single parent family of 3 in 2022). In addition to studying a somewhat higher income sample, Barr et al. (2022) also do not focus on a sample born with disabling health conditions. The authors find an increase in adult annual earnings by about $665.5 between ages 23 and 25 and $687.3 between the ages of 26 and 28 associated with a transfer of $1,801 in infancy.[30] In our setting, we observe that children born directly below the cutoff receive a similar amount during infancy, about $1,752, and also receive transfers at later ages during childhood (ages 1-10). We might, therefore, expect a similar or even larger effect. In contrast, we find no effect on earnings and our confidence intervals allow us to reject similar earnings increases in our main sample (ages 19-29, see Table 6). For our analysis at ages 22 to 29, we can reject these point estimates with a one-sided, but not a two-sided test (Appendix Table A14). It is worth noting, however, that the baseline mean earnings in our sample are substantially lower, likely due to our sample's greater disadvantage, and so the estimated effects represent larger changes in percent terms in our sample than the estimated effects presented in Barr et al. (2022).

We could alternatively consider the total amount received early in childhood (ages 0 to 2) to scale our estimates. We estimate infants born below the cutoff receive $5,136 over this critical period. The

[30] For this comparison, we use their estimates for cohorts born between 1991 and 1992, the latest cohorts reported in their study, to better match our own sample, which begins in 1993. These estimates are reported in Barr et al. (2022) Table IV, Column 3.

estimates in Barr et al. would imply an increase in annual earnings of (5136/1801)*665.5=$1,898 at ages 23 to 25 and $1,960 at ages 26 to 28, well outside of our confidence intervals.[31]

Barr et al. (2022) also report improvements in a composite index of educational outcomes (including math and reading test scores in grades 3-8, high school graduation rates, and school disciplinary actions) of about 0.051 standard deviations and test scores of about 0.046 standard deviations among disadvantaged students. In contrast, we find no effect of a much larger transfer on a composite measure of student outcomes and our confidence intervals are narrow enough to rule out these effect sizes. However, it is important to note that composite measures of student outcomes are constructed with different variables across Barr et al. (2022) and this paper and so they may not be directly comparable, even when standardized.

While the intervention and populations studied across Barr et al. (2022) and this paper differ on a variety of dimensions (including different cohorts, lump-sum vs monthly transfer, national vs California geographic coverage, and different outcomes), an especially salient difference is that we study a population with especially high health needs. This difference in initial health capital may be relevant in explaining the differences across our results and theirs. Further work is needed to trace out the efficacy of cash transfer interventions across populations with varying baseline needs along multiple dimensions (health, financial, educational, etc).

6 Conclusion

This paper examines the short-, medium- and long-term effects of providing low-income families with low birthweight infants additional support through the SSI program, which provides support for about one million children with disabilities. We take advantage of a birthweight cutoff used to determine SSI medical eligibility that results in otherwise similar infants being treated differently for the purpose of SSI eligibility. We find that families of infants born just below this eligibility cutoff experience large increases in cash benefits totaling about 27 percent of family income in the first three years of the infant's life, and persisting in lower amounts through later childhood. Birthweight eligible infants also experience small but statistically significant increases in Medicaid enrollment in childhood. The total amount of the transfer is large, exceeding the average pre-birth annual income of the child's family, and weighted towards the earliest years in childhood, when we think the returns to such an intervention may be highest.

[31] Considering total benefits received throughout childhood (ages 0 to 10), which we estimate at $8,304, would imply even larger increases in annual earnings of $3068 at ages 23 to 25 and $3169 at ages 26 to 28.

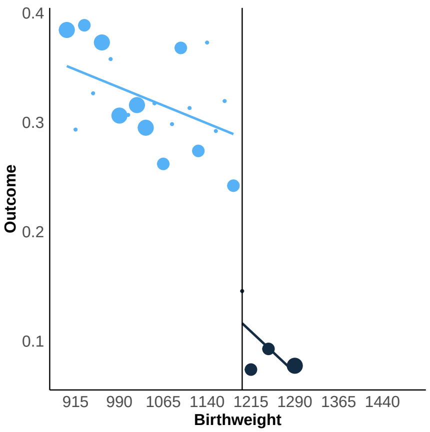
Using a new dataset linking large-scale federal and state administrative data records to birth certificates for infants born in California, we examine the impact of eligibility for this program across a large number of outcomes measured in infancy, childhood, and early adulthood. These outcomes include hospitalization and emergency department utilization for infants, high school performance measures for children, post-secondary school attendance and college degree attainment, earnings, mortality, and use of public programs in young adulthood. Across these measures, we find no evidence that increased SSI support in childhood had discernible effects later in life. These null results persist across many subgroups, including groups that experienced larger changes in SSI payments at the birthweight threshold and groups that previous work suggests should be most responsive to an increase in resources early in life. We also examine the impact of these payments on the older siblings of the focal infant, most of whom do not have a disability and who may have benefited from the increase in household resources during childhood. Among these siblings we also find no consistent evidence of improved outcomes.

Previous work in economics, epidemiology, and psychology suggests that early life support may have large effects on later life outcomes. The lack of medium- or long-term effects in our setting is, therefore, surprising. However, we have a few hypotheses for why this increased social support may not have benefited the infants in our study as much as may have been predicted by existing research. First, it may be that the payments and support provided by the SSI program were simply insufficient to generate large improvements in the outcomes we study, and that more generous benefits would have resulted in detectable effects. The infants we study are born into severe disadvantage on both health and economic dimensions, which may require different or even more substantial investments to overcome. More work is needed to document under what circumstances and for which populations cash generates long-run health and economic improvements. Second, it may be the case that other aspects of the program dampened the beneficial effects of cash transfers. The SSI program includes low asset limits and high implicit marginal tax rates in the phase out region of income, which could have reduced families' incentive to earn and save. And, the targeted nature of the program may have generated a stigma or labeling effect as children are labeled early in life as having a disability and being SSI recipients. This may in turn have led parents, teachers, or other adults to lower their expectations or investments in the child and dampen the program's impact on later life outcomes. Such effects are hinted at in our analysis of outcomes in high school, where SSI-eligible students below the cutoff are significantly more likely to have a special education IEP, while the effects of SSI eligibility on taking

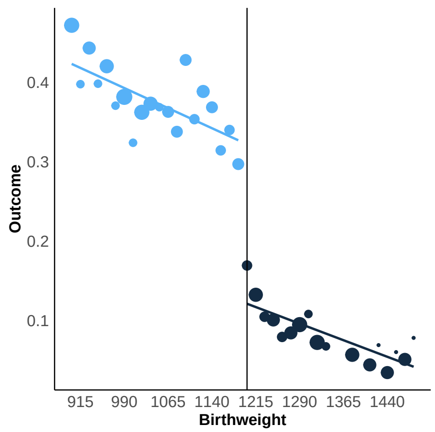
STEM and advanced placement courses are negative (although not significant). Third, it could be the case that SSI eligibility did indeed generate positive effects on beneficiaries or their siblings on the outcomes we study, but that these effects are too small to be detected, despite our large sample size. While we are able to rule out fairly modest improvements in summary indices capturing high school performance and economic outcomes in young adulthood, the confidence intervals on several of the components of the indices are large. For example, we are unable to reject large decreases in mortality or moderately large increases in college degree attainment. This uncertainty is amplified by the fact that we only observe the size of the first stage for some, but not all, of the cohorts we study. And, naturally, the size of the confidence intervals varies across specifications, sample definitions, and subgroups. For example, it is possible that some subgroups experienced beneficial effects that we cannot detect. Fourth, it may be that relevant labor market, educational, or health benefits will emerge, but not until later in life.

It is important to note that while we see no improvements on the outcomes we can measure in administrative records, the program may have still had important, welfare-relevant effects on its recipients. The stated goal of the SSI program for children is to provide monthly cash benefits to aid with the "basic needs" of these children (Social Security Administration, 2001). Food security, stress, subjective well-being or material hardship all may have improved for families that benefited from this program in ways that are not easy to measure in our current data. That is, the SSI program may still be fully successful in fulfilling its stated goal even though we do not detect improvements in the specific long-term outcomes we study. Further, SSI benefits may have improved the functioning of child beneficiaries, another aim of the program (Social Security Administration, 2001), in a manner undetected in the outcomes we study. Finally, we find no evidence of child SSI benefits generating long-term dependence on the program; rather, early life participation phases out following middle childhood.

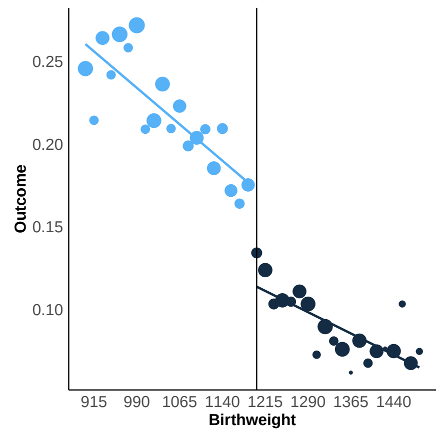
Figure 1: SSI Benefit Receipt and Amounts by Age and Birthweight Bin



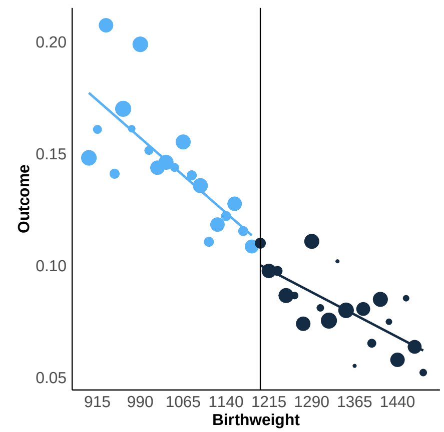
(a) Any SSI Benefits, Infancy



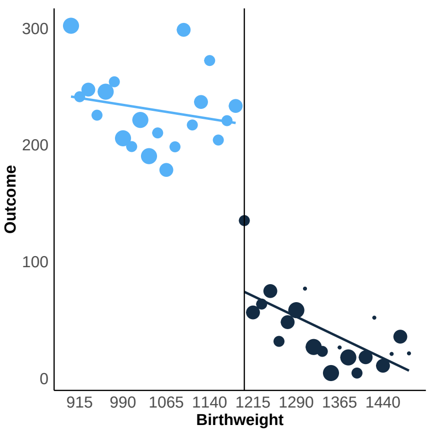
(b) Any SSI Benefits, Ages 1-2



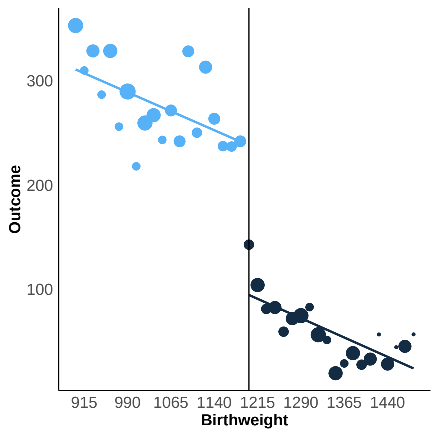
(c) Any SSI Benefits, Ages 3-10



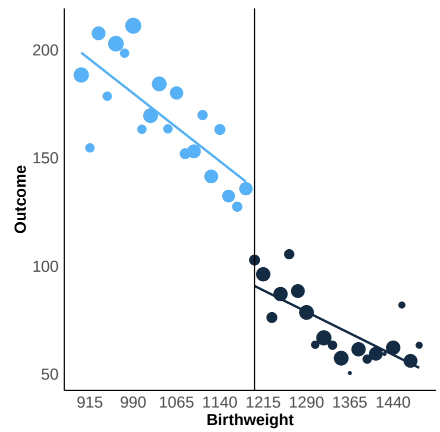
(d) Any SSI Benefits, Ages 11-17



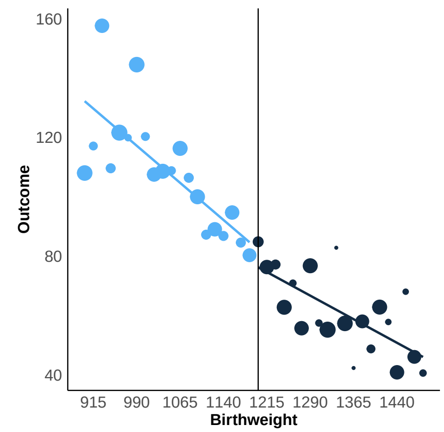
(e) SSI Benefit Amount ($/month), Infancy



(f) SSI Benefit Amount ($/month), Ages 1-2



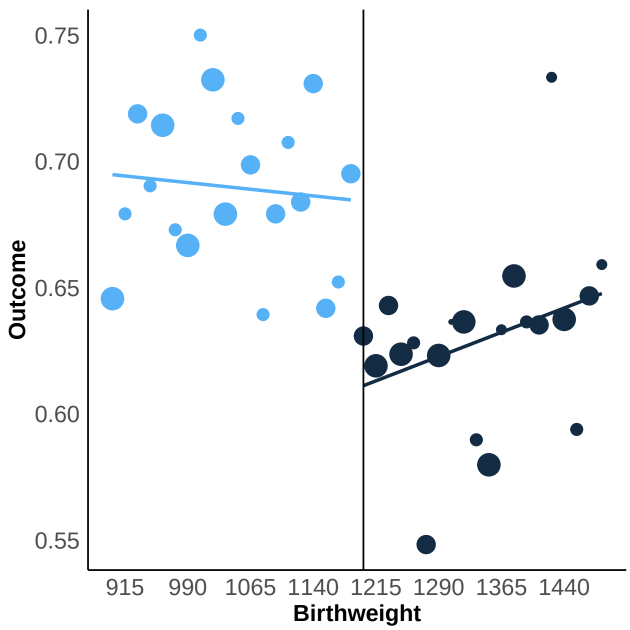
(g) SSI Benefit Amount ($/month), Ages 3-10



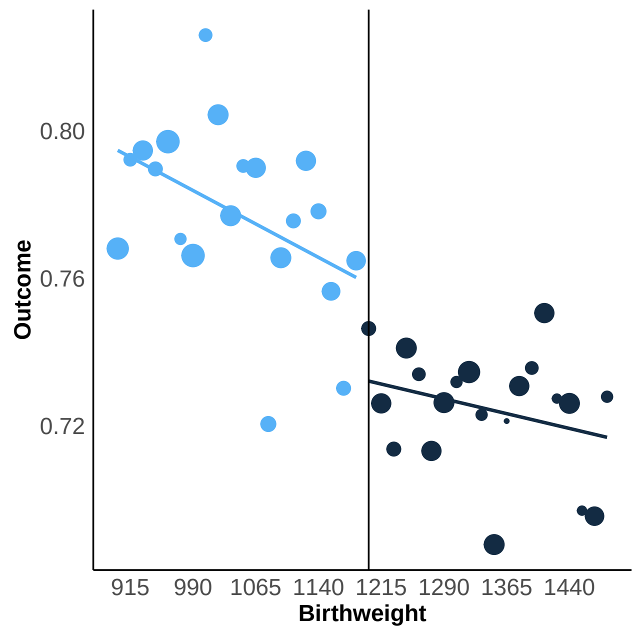
(h) SSI Benefit Amount ($/month), Ages 11-17

Note: All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

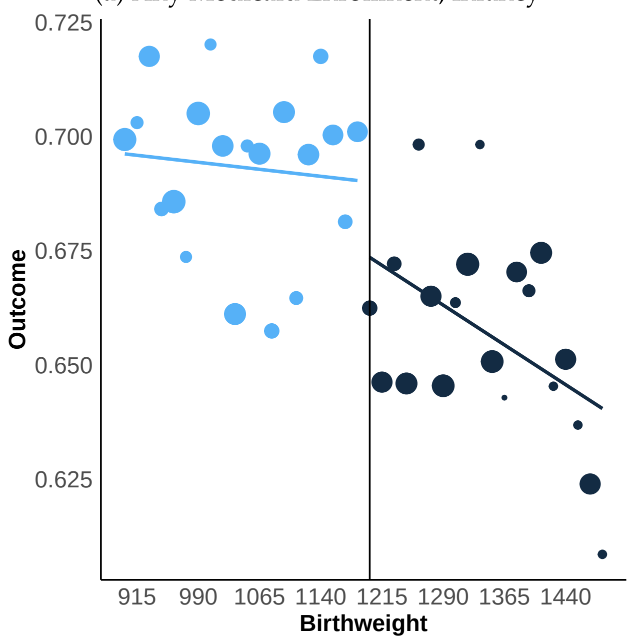
Figure 2: Medicaid Enrollment by Age and Birthweight Bin



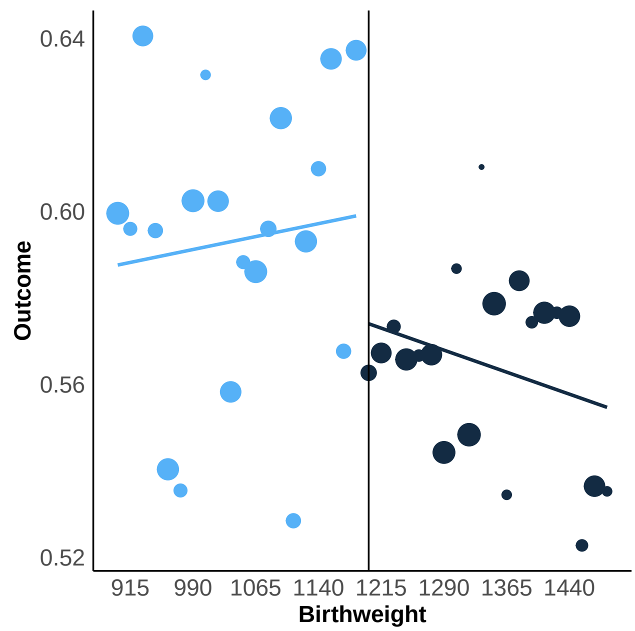
(a) Any Medicaid Enrollment, Infancy



(b) Any Medicaid Enrollment, Ages 1-2



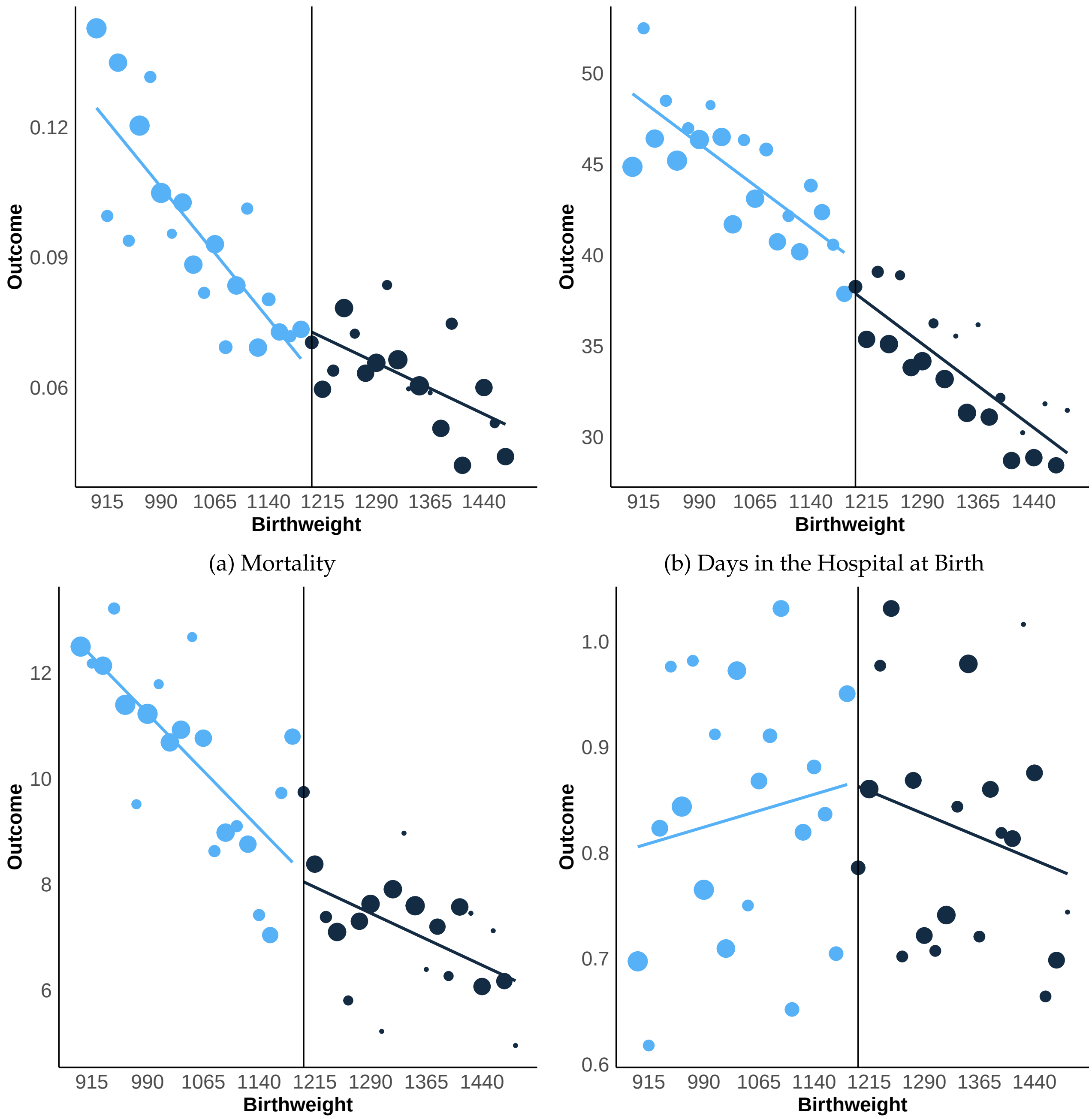
(c) Any Medicaid Enrollment, Ages 3-10



(d) Any Medicaid Enrollment, Ages 11-17

Note: All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

Figure 3: Infant Health and Utilization by Birthweight Bin



(a) Mortality

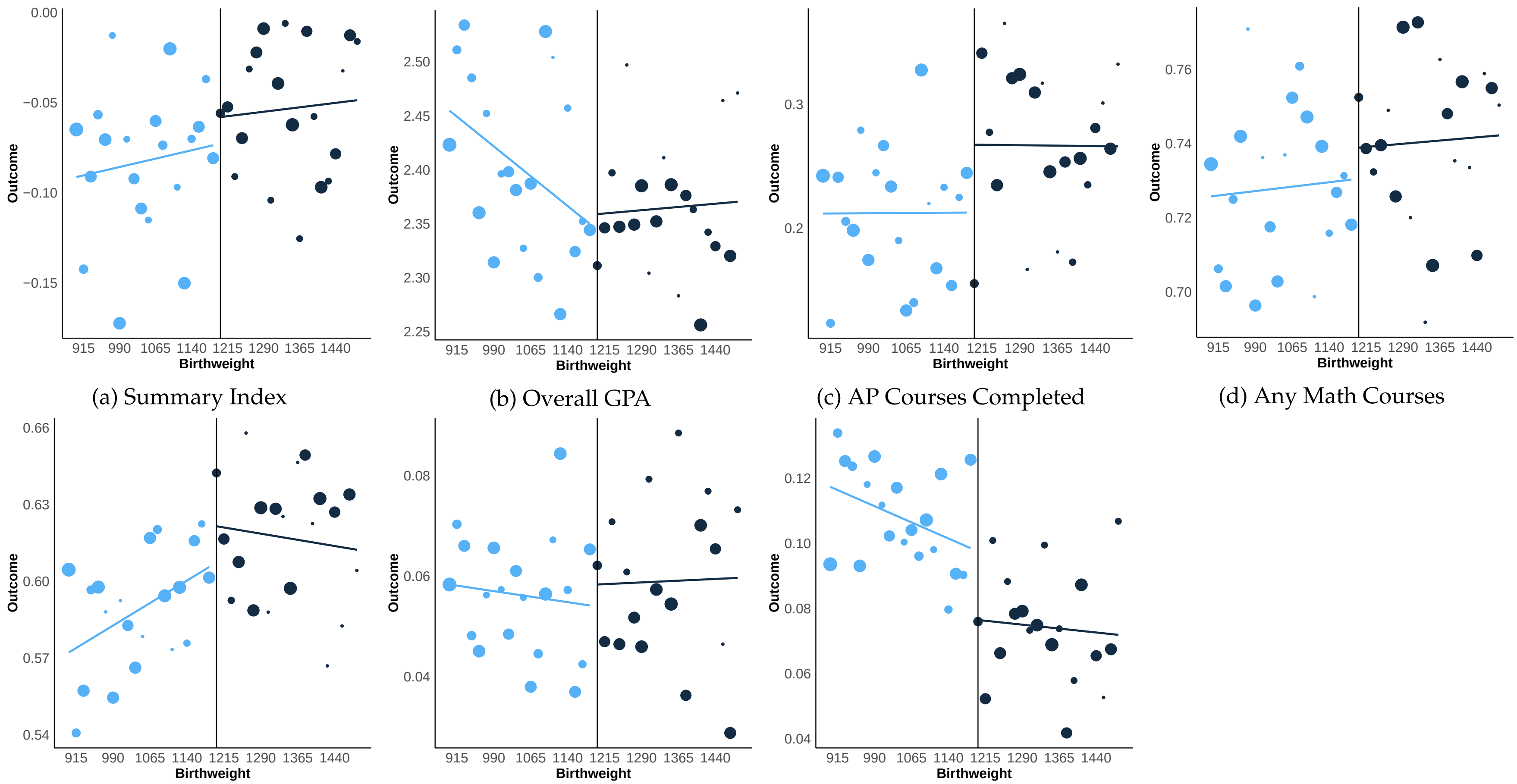
(b) Days in the Hospital at Birth

(c) Days in the Hospital After Birth

(d) Number of ED Visits

Note: All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization numbers CBDRB-FY23-CES021-002 and CBDRB-FY23-0451. Numbers have been rounded to comply with disclosure avoidance guidelines.

Figure 4: High School Performance by Birthweight Bin

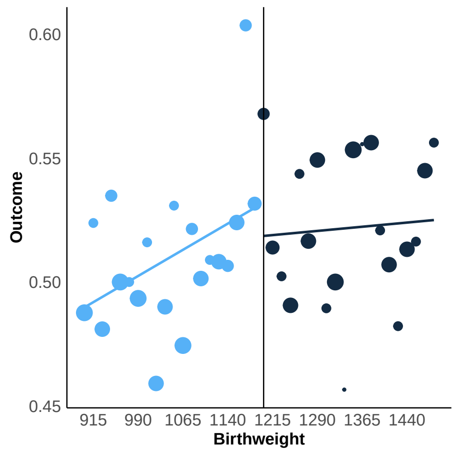


(a) Summary Index (b) Overall GPA (c) AP Courses Completed (d) Any Math Courses

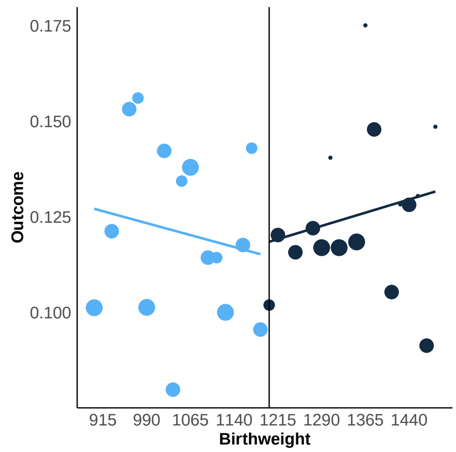
(e) Any Science Courses (f) Repeat a Grade (g) Special Education (IEP)

Note: Summary index includes information on whether the student repeats a grade, whether they are enrolled in a gifted and talented program, the student's overall GPA, the number of AP courses in which the student is enrolled, and whether the student is enrolled in any math or science courses. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002 and CBDRB-FY23-0451. Numbers have been rounded to comply with disclosure avoidance guidelines.

Figure 5: Post-Secondary School Attendance and College Degree Attainment by Birthwieght Bin



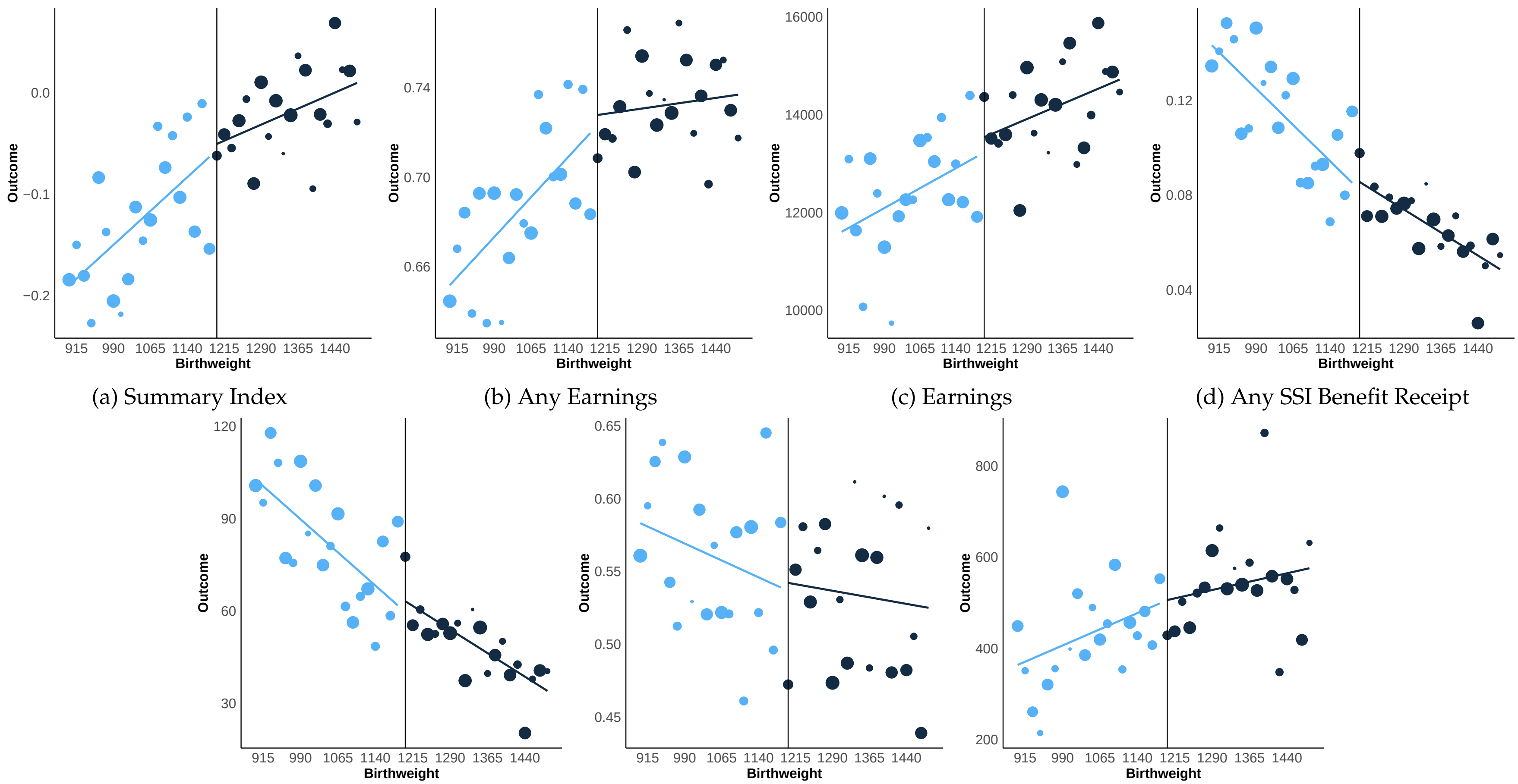
(a) Ever Enrolled in College or Post-Secondary Degree Program



(b) Bachelor's Degree or Higher Degree Obtained

Note: All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

Figure 6: Adult Earnings and Public Assistance Receipt by Birthweight Bin, Ages 19+

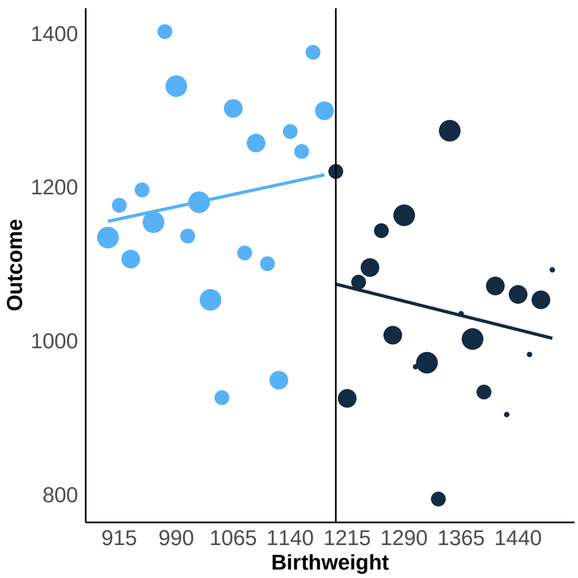


(a) Summary Index (b) Any Earnings (c) Earnings (d) Any SSI Benefit Receipt

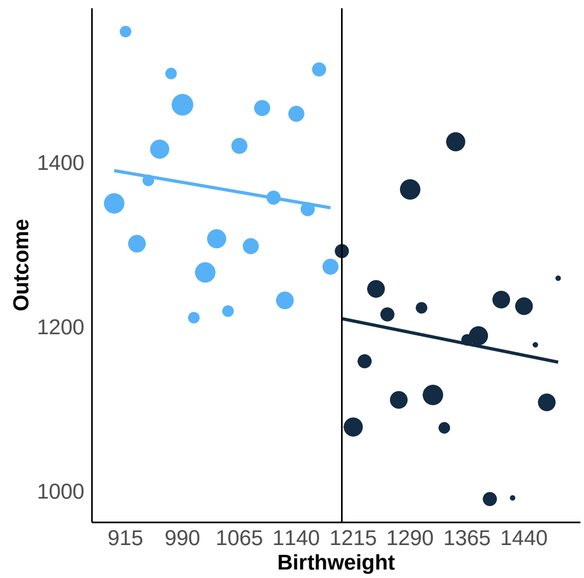
(e) SSI Benefit Amount ($/month) (f) Any Medicaid Enrollment (g) EITC Receipt

Note: All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

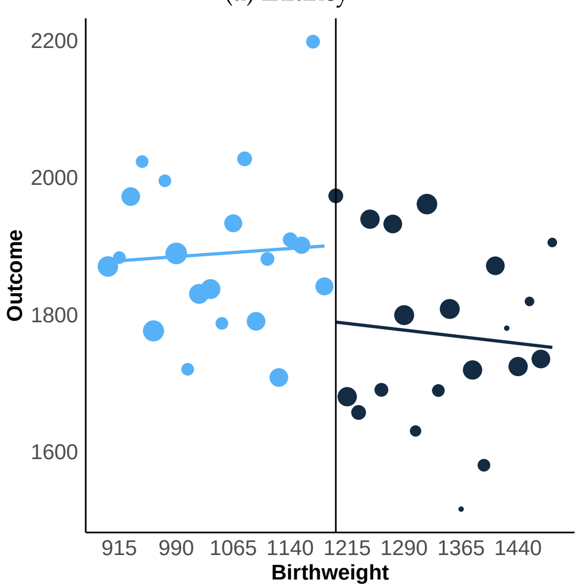
Figure 7: Monthly Household Resources in Childhood by Birthweight Bin



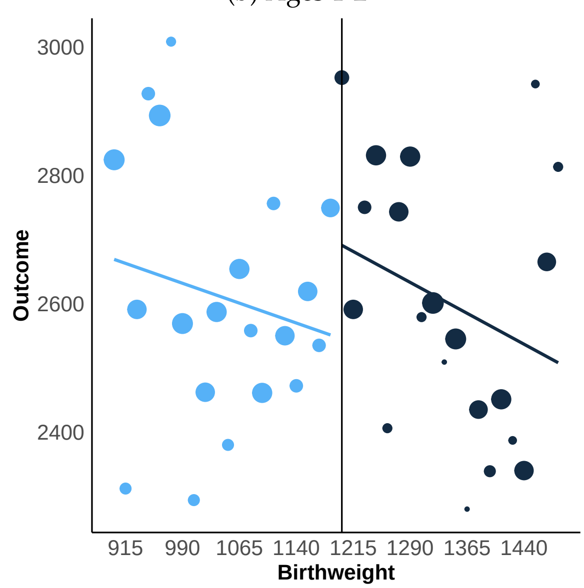
(a) Infancy



(b) Ages 1-2



(c) Ages 3-10



(d) Ages 11-17

Note: All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table 1: Mother and Birth Demographics for Focal Child and Siblings

	All Low Birthweight	Targeted Low-Income, Low Birthweight	Siblings of Low-Income, Low Birthweight
Age	28.80	26.90	23.54
High School	0.7266	0.6049	0.5115
Pre-Birth Income ($)	42770.	6615.	15450
Under FPL	0.5786	0.9309	0.7815
Non-Hispanic White	0.2337	0.1750	0.1586
Non-Hispanic Black	0.1303	0.1483	0.1927
Non-Hispanic Asian	0.1116	0.0696	0.0544
Hispanic	0.4951	0.5784	0.5675
Birthweight (grams)	1188.	1188.	3070.
Birth Number	2.096	2.305	2.21
Female	0.4521	0.4507	0.4853
Prenatal Visits	8.447	7.937	13.9
Prenatal in 1st Tri.	0.8384	0.7841	0.7103
N	47000	29000	20000

Notes: The first column shows descriptive statistics for all births within 900 and 1499 grams and less than 32 weeks gestation. The second column restricted this sample to those with incomes that would qualify for the maximum SSI benefit. The third column presents the older siblings of the infants in the second column. Additional details are provided in the text. All dollar amounts have been inflation-adjusted to 2019 dollars. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table 2: RD Estimates for First Stage Outcomes

	Age in Years During Childhood			
	0	1-2	3-10	11-17
Any SSI benefits				
Effect of SSI Eligibility	.185 (.02)***	.195 (.018)***	.045 (.011)***	.007 (.011)
	[152%, 234%]	[125%, 180%]	[20%, 56%]	[-15%, 29%]
N Individual x Year	7300	16000	69000	59500
N Individual	7300	10500	18000	17500
Baseline	.096	.128	.119	.099
Average monthly SSI benefit ($)				
Effect of SSI Eligibility	146 (22)***	141 (16)***	33 (10)***	3 (8)
	[122%, 225%]	[104%, 164%]	[15%, 58%]	[-17%, 25%]
N Individual x Year	7300	16000	69000	59500
N Individual	7300	10500	18000	17500
Baseline	84	105	91	76
Any Medicaid enrollment				
Effect of SSI Eligibility	.051 (.016)***	.025 (.014)*	.035 (.013)***	.048 (.018)***
	[4%, 17%]	[-0%, 7%]	[1%, 9%]	[2%, 15%]
N Individual x Year	17500	32000	125000	69500
N Individual	17500	17000	20500	12500
Baseline	.493	.731	.655	.567

Notes: Analyses use administrative data on SSI receipt from SSA and Medicaid enrollment from CMS for children born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Coefficients are estimated using local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Tables report implied 95% confidence intervals relative to baseline means. Baseline means are calculated using the average among those born with birthweights between 1200 and 1250 grams. All dollar amounts have been inflation-adjusted to 2019 dollars. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table 3: RD Estimates for Infant Health and Health Care Utilization

	Birth Days	Total Inpatient Days	ED Visits	Mortality
Effect of SSI Eligibility	1.982 (0.9752)**	0.340 (0.679)	-0.003 (0.070)	-0.005 (0.008)
	[0.2%, 9%]	[-12%, 20%]	[-16%, 15%]	[-30%, 15%]
N Individual x Year	21500	22000	8700	21000
N Individual	21500	22000	8700	21000
Baseline	44.9	8.17	0.89	0.068

Notes: Analyses use administrative data from HCAI on hospital and ED use and infant mortality for infants born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Coefficients are estimated using local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Tables report implied 95% confidence intervals relative to baseline means. Baseline means are calculated using the average among those born with birthweights between 1200 and 1250 grams. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002 and CBDRB-FY23-0451. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table 4: RD Estimates for High School Performance

	Summary Index	Gifted & talented	Overall GPA	AP Courses	Any math completed	Any scince courses	Repeat A Grade	Special Education IEP
Effect of SSI Eligibility	-0.018 (0.027)	0.004 (0.007)	-0.009 (0.048)	-0.064 (0.042)	-0.015 (0.017)	-0.009 (0.018)	0.002 (0.009)	0.028 (0.013)**
	[-0.072SD, 0.036SD]	[-47%, 80%]	[-4%, 4%]	[-58%, 7%]	[-6%, 2%]	[-7%, 4%]	[-31%, 36%]	[3%, 75%]
N Individual x Year	20000	20000	16000	16000	18000	18000	20000	20000
N Individual	6800	6800	6300	6300	6600	6600	6800	6800
Baseline	-0.065	0.022	2.343	0.252	0.739	0.616	0.054	0.070

Notes: Analyses use school records provided by Educational Results Partnership for children born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Coefficients are estimated using local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Tables report implied 95% confidence intervals relative to baseline means. Baseline means are calculated using the average among those born with birthweights between 1200 and 1250 grams. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table 5: RD Estimates for Post-Secondary School Enrollment and Degree Attainment

	Ever Enrolled (Ages 18+)	College Degree (Ages 23+)
Effect of SSI Eligibility	0.015 (0.021)	0.003 (0.016)
	[-5%, 11%]	[-27%, 32%]
N Individual x Year	11500	6900
N Individual	11500	6900
Baseline	0.521	0.107

Notes: Analyses use post-secondary enrollment and degree attainment records from the National Student Clearinghouse for those born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Coefficients are estimated using local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Tables report implied 95% confidence intervals relative to baseline means. Baseline means are calculated using the average among those born with birthweights between 1200 and 1250 grams. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table 6: RD Estimates for Adult Self-Sufficiency Outcomes, Ages 19+

		Adult Earning and Public Assistance Receipt							
	Summary Index	Any Earnings	Earnings	Any SSI Receipt	SSI Amount	Any Medicaid	EITC Amount	Mortality
Effect of SSI Eligibility	-0.021 (0.030)	-0.005 (0.016)	-494 (589)	0.003 (0.013)	2 (10)	0.022 (0.028)	13 (62)	-0.001 (0.002)
	[-0.079SD, 0.038SD]	[-5%, 4%]	[-12%, 5%]	[-29%, 36%]	[-32%, 38%]	[-6%, 14%]	[-24%, 30%]	[-53%, 37%]
N Individual x Year	68500	68500	68500	39500	39500	17000	28500	29000
N Individual	10500	10500	10500	9800	9800	5400	7500	29000
Baseline	-0.043	0.718	13630	0.077	59	0.533	453	0.010

Notes: Analyses use earnings information derived from W2 records and EITC information from 1040 forms, mortality information from the Census Numident file, and program use data from SSA and CMS. Sample includes those born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Coefficients are estimated using local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Tables report implied 95% confidence intervals relative to baseline means. Baseline means are calculated using the average among those born with birthweights between 1200 and 1250 grams. All dollar amounts have been inflation-adjusted to 2019 dollars. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table 7: RD Estimates for Effects on Siblings' Program Use in Childhood

	Age in Years During Childhood	
	3-10	11-17
Any SSI benefits		
Effect of SSI Eligibility	.003 (.009)	.002 (.006)
	[-35%, 49%]	[-30%, 43%]
N Individual x Year	45000	148000
N Individual	13500	20000
Baseline	.042	.032
Average monthly SSI benefit ($)		
Effect of SSI Eligibility	3 (7)	1 (5)
	[-32%, 49%]	[-33%, 40%]
N Individual x Year	45000	148000
N Individual	13500	20000
Baseline	34	27
Any Medicaid enrollment		
Effect of SSI Eligibility	.007 (.021)	-.001 (.018)
	[-5%, 7%]	[-5%, 5%]
N Individual x Year	73000	190000
N Individual	14000	17500
Baseline	.681	.661

Notes: Analyses use program use records from SSA and CMS for older siblings of those born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Coefficients are estimated using local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Tables report implied 95% confidence intervals relative to baseline means. Baseline means are calculated using the average among those whose younger sibling was born with a birthweight between 1200 and 1250 grams. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table 8: RD Estimates for Effects on Siblings' Educational Performance

	High School Index	Ever Enrolled Post-Secondary (Ages 18+)	College Degree (Ages 23+)
Effect of SSI Eligibility	-0.019 (0.027)	0.026 (0.022)	-0.008 (0.015)
	[-0.072SD, 0.033SD]	[-3%, 13%]	[-38%, 21%]
N Individual x Year	22000	13000	8900
N Individual	8200	13000	8900
Baseline	-0.056	0.530	0.097

Notes: Analyses use school records provided by Educational Results Partnership and post-secondary school enrollment and degree attainment from the National Student Clearinghouse for older siblings of those born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Coefficients are estimated using local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Tables report implied 95% confidence intervals relative to baseline means. Baseline means are calculated using the average among those whose younger sibling was born with a birthweight between 1200 and 1250 grams. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table 9: RD Estimates for Effects on Siblings' Adult Self-Sufficiency, Ages 19+

		Adult Earning and Public Assistance Receipt						
	Summary Index	Any Earnings	Earnings	Any SSI Receipt	SSI Amount	Any Medicaid	EITC amount	Mortality
Effect of SSI Eligibility	-0.034 (0.028)	0.001 (0.015)	-884 (815)	0.004 (0.008)	3 (6)	0.024 (0.025)	143 (94)	0.007 (0.004)*
	[-0.089SD, 0.021SD]	[-4%, 4%]	[-15%, 4%]	[-40%, 68%]	[-49%, 82%]	[-5%, 15%]	[-3%, 25%]	[-9%, 135%]
N Individual x Year	109000	109000	109000	65000	65000	45500	50000	20000
N Individual	12500	12500	12500	12000	12000	8000	10500	20000
Baseline	-0.006	0.738	16440	0.029	18	0.475	1319	0.0110

Notes: Analyses use earnings information derived from W2 records and EITC information from 1040 forms, mortality information from the Census Numident file, and program use data from SSA and CMS for older siblings of those born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Coefficients are estimated using local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Tables report implied 95% confidence intervals relative to baseline means. Baseline means are calculated using the average among those whose younger sibling was born with a birthweight between 1200 and 1250 grams. All dollar amounts have been inflation-adjusted to 2019 dollars. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table 10: RD Estimates for Effects on Household Resources

	Monthly Household Resources, by Age			
	0	1-2	3-10	11-17
RD Estimate	159 (85)*	160 (74)**	88 (79)	-213 (111)*
	[-1%, 31%]	[1%, 26%]	[-4%, 14%]	[-16%, 0%]
N Individual x Year	7300	16000	69000	59500
N Individuals	7300	10500	18000	17500
Baseline	1041.	1162.	1794.	2760.

Notes: Analyses use income records from W2 and 1040 filings, imputed EITC receipt from 1040 filings for households that file, and SSI receipt amounts from SSA data; see text for more specific sample information. Coefficients are estimated using local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Tables report implied 95% confidence intervals relative to baseline means. Baseline means are calculated using the average among those born with a birthweight between 1200 and 1250 grams. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

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The Long-Term Effects of Income for At-Risk Infants: Evidence from Supplemental Security Income

Appendix

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A Other SSI Eligibility Cutoffs

Guidelines for SSI eligibility allow for higher birthweight cutoffs for infants of gestational ages 32 weeks or greater. These cutoffs operationalize the definition of "small-for-gestational-age" (SGA) for infants with birth weight between 1200 and 2000 grams, which since 1991 has been considered "functionally equivalent" to meeting a Childhood Listing and therefore having a qualifying disability for SSI (Social Security Administration, 1991). Documents from the time indicate that the way this rule was operationalized was with the birthweight grid that specified different cutoffs for each gestational age as meeting this criteria (see, for example 1995 guidance for establishing presumptive eligibility for the Medi-Cal program, https://www.dhcs.ca.gov/services/medi-cal/eligibility/Documents/c151.pdf). In June of 2015, low birthweight became its own Childhood Listing, which specifies conditions considered to cause "marked and severe functional limitation," and can be found in the Blue Book https://www.ssa.gov/disability/professionals/bluebook. Specifically, low birthweight disability is determined as either for infants less than 1200 grams or the following: for infants at the gestational age of 32 weeks, the cutoff is less than or equal to 1250 grams; for infants at 33 weeks, the cutoff is less than or equal to 1325 grams; for infants at 34 weeks, the cutoff is less than or equal to 1500 grams; for infants at 35 weeks, the cutoff is less than or equal to 1700 grams; for infants at 36 weeks, the cutoff is less than or equal to 1875 grams; and for infants at 37-40 weeks, the cutoff is less than or equal to 2000 grams.[32]

To investigate whether SSI receipt changes discontinuously at these higher birthweight cutoffs, we replicate our first stage analysis using these additional cutoffs for each relevant gestational age. We focus on SSI benefits received at ages 1 and 2, where we found the largest change in SSI receipt among our sample of focal children born around the 1200 gram cutoff and under 32 weeks of age. If

[32] Cutoffs retrieved from https://www.ssa.gov/disability/professionals/bluebook/100.00-GrowthImpairment-Childhood.htm on 8/1/2023.

SSI enrollment is also changing at these higher birthweight cutoffs, we would expect to see the largest effects for the same age group.

We report the results in panel 1 of Appendix Table A20. While we see a large and statistically significant jump in monthly SSI benefits at the 1200 gram cutoff among infants under 32 gestational weeks at birth, we do not detect statistically significant jumps at these other cutoffs for the relevant gestational ages. In addition, the point estimates are small, often indicating well less than a 5 percentage point increase in SSI enrollment at the various cutoffs. Furthermore, our analysis of a restricted use version of the Current Population Survey linked to national respondents' SSI histories from the Supplemental Security Record suggests that 87.5% of children nationally who receive SSI on the basis of low birthweight were assigned an impairment code based on the 1200 gram cutoff, rather than these higher cutoff rules. These results suggest that these gestational-age specific cutoffs were not being widely used during our study period to determine SSI medical eligibility, and supports our decision to focus on the 1200 gram cutoff in our main analysis.

While we conduct this analysis for all cohorts born in 1993 and later, following the approach taken in our main analyses, it is possible that the higher birthweight cutoffs became more salient and widely used when they officially became a listing in June 2015. To explore this possibility, we re-ran our analysis using data on SSI enrollment from 2016 and later (panel 2 of Appendix Table A20). We find marginally significant evidence of an enrollment effect at the 1250 gram cutoff for infants at 32 weeks gestation and some suggestion of increased enrollment at the 1325 gram cutoff for infants at 33 weeks gestation, although the estimates are noisy likely due to small sample sizes. For birthweight specific cutoffs at 34 and 35 weeks gestation, the point estimates suggest an increase in SSI enrollment but they are very small in size (1-2 percentage points). Meanwhile, the estimates for cutoff induced enrollment at gestational ages 36 and 37-40 weeks are very close to zero. We hope that this information will help researchers and policymakers better understand how these different thresholds were used in practice and how this has evolved over time.

B SSI Eligibility Calculation

We calculate the estimated monthly SSI payments assuming the parents and siblings living with the focal child are SSI-ineligible. The estimated payment is equal to the max payment for that year (the annual federal benefit rate) less deemed parental income. Deemed income is calculated as monthly earned income less an allowance for each ineligible child, which we assume to be all previous children, and a small exclusion for earned and unearned income; we assume no unearned income above the disregard is available for deeming. Deemed income is this number divided by two and then reduced by a federal benefit rate allowance based on the year and number of parents living in the household (Hemmeter, 2015). The allowances for ineligible parents and ineligible children are set each year and are indexed to inflation. For all low birthweight children with deemed parental income at or below zero, we estimate the payment to be the max payment.

Note that we do not have access to information on family assets in our data and we are, therefore, unable to apply SSI asset limit rules when considering a family's likely financial eligibility for SSI. It is likely that some families in our targeted sample would not qualify on the basis of these rules, but unlikely that pre-birth family assets jump discontinuously at the birthweight cutoff.

C When Was the Cutoff Used?

Our analysis relies on individual-level SSI participation data for the years 2010-2014, 2016, and 2019-2021, but in our analysis, we consider all cohorts for which SSA rules ensured presumptive eligibility for infants born below the birthweight cutoff. Since we do not observe SSI data for every cohort, we cannot directly verify that the rules were being faithfully implemented. This could be a particular concern for the earliest cohorts in the sample, if, for example, knowledge about the rule was not widely disseminated. Furthermore, historical data on enrollment counts have been difficult to find since, for the earliest years of our sample, SSA reports low birthweight infants grouped into a broad "other" category in aggregated data.

Despite this limitation, we have a few reasons to believe the rule was being actively used even in our earliest cohort (1993). First, the birthweight cutoff rule was already in place in 1991, two years prior to the first included cohort. So, there had been two years for information about this cutoff to disseminate. Second, we located pieces of historical evidence suggesting that low birthweight was being used for SSI medical eligibility in the earliest years of our sample and that it was being used in California in particular. And, knowledge of this cutoff seems to have been widespread among relevant parties like doctors and those who worked with Medicaid enrollees. For example:

- In 1993, the first cohort included in our analysis, the American Academy of Pediatrics published a piece in its monthly newsletter, AAP news, alerting its members to the fact that infants with birthweights under 1200 grams were eligible for SSI and suggesting that they encourage families of these infants to apply for these benefits. See Figure A6.

- In 1993, the chief of the eligibility branch of California's Medicaid program, Medi-Cal, sent a letter to all California county welfare directors, administrative officers, and Medi-Cal program specialists and liaisons alerting them to the change in the SSI presumptive eligibility rule for low birthweight infants and instructing them to apply the same type of presumptive eligibility for Medi-Cal. The letter also informs these officers that families with these infants may wish to apply for SSI. This correspondence indicates to us that not only was the infant birthweight rule being used at this period, but it was being used in California and the information regarding SSI eligibility was being disseminated to relevant parties in the state. See Figure A7.

- The Medi-Cal handbook in 1994 instructs administrators of the Medi-Cal program that infants born under 1200 grams are presumed disabled for the purpose of SSI eligibility. See `https://www.dhcs.ca.gov/services/medi-cal/eligibility/Documents/c132.pdf`, last accessed 05/22/2024.

- In 1995, the LA Times published an opinion piece citing, among other things, "low birthweight infants" as a contributing factor to increased SSI costs, consistent with this eligibility criteria being used in California specifically. See `https://www.latimes.com/archives/la-xpm-1995-02-21-me-34278-story.html`, last accessed 05/22/2024.

Finally, an audit report by the Office of the Inspector General (1997) concludes using 1995 data: "Our sampling of LBW cases showed that SSA's operating policies and procedures for determining SSI eligibility for LBW children were generally effective." The report also provides statistics regarding the agencies efforts to reduce the backlog of continuing disability reviews for this eligibility category in 1993, 1994, and 1995.

Taken together, this record suggests that the 1200 gram birthweight rule was being used in California even in the earliest cohorts we study, and that knowledge of the rule was sufficiently widespread that we expect infants born below the cutoff during these years had higher rates of SSI enrollment.

Finally, we can use public reports for a back-of-the-envelope calculation on the potential size of the first stage in 1997, the earliest year this information is available (to our knowledge). First, we estimate our first stage using 2010 and 2011, the earliest years available in our linked data, and find a 20.5 percentage point increase in SSI enrollment at the cutoff in infancy. Then, we compare this estimate to information published in SSA reports. Hemmeter et al. (2021) report that there were 10,485 first-time awardees on the basis of low birthweight in 1997. In the same year, there were 37,208 total low birthweight infants,[33] implying that 28.2 percent of these infants enrolled in the SSI program. Hemmeter et al. (2021) report analogous numbers for 2007 and 2012, with 15,378 and 14,776 awardees enrolling on the basis of low birthweight in each year, respectively. Comparing again to the national birth records, these enrollment figures imply a take-up rate of 35.8 and 39.5 percent, respectively. Therefore, the take-up rate in 1997 is about 75 percent the average take-up rate observed in these two later years. If we assume that the first stage increases or decreases proportional to this take-up rate, we might expect the 1997 first stage to be 75% the size of the first stage observed in 2010 and 2011, which would equal about 15.4 percentage points (0.75×20.5).

[33] Authors' calculation from national vital statistics records.

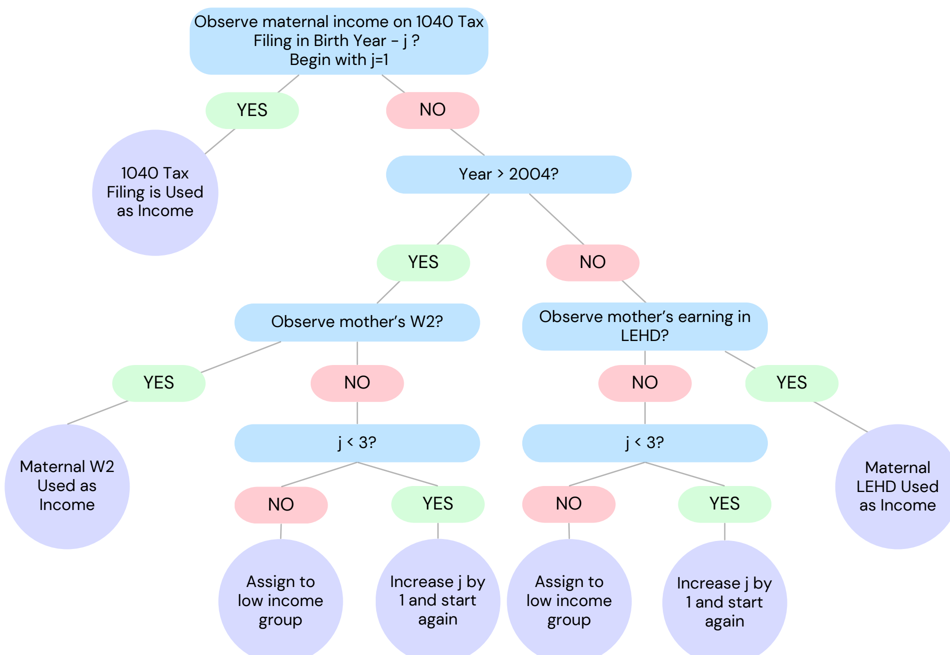
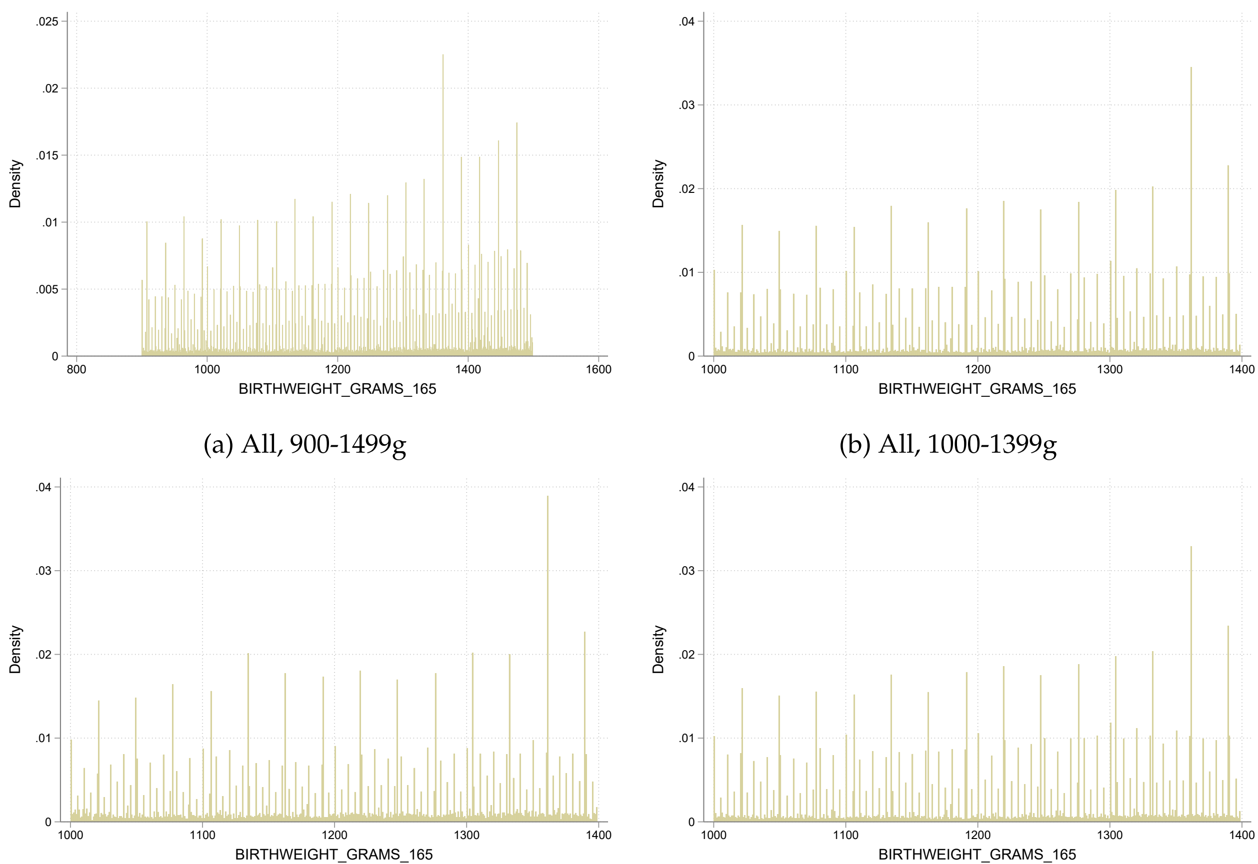


Figure A1: Decision tree for assigning family income

Figure A2: Distribution of Birthweight, 1993-2019 CA Birth Records



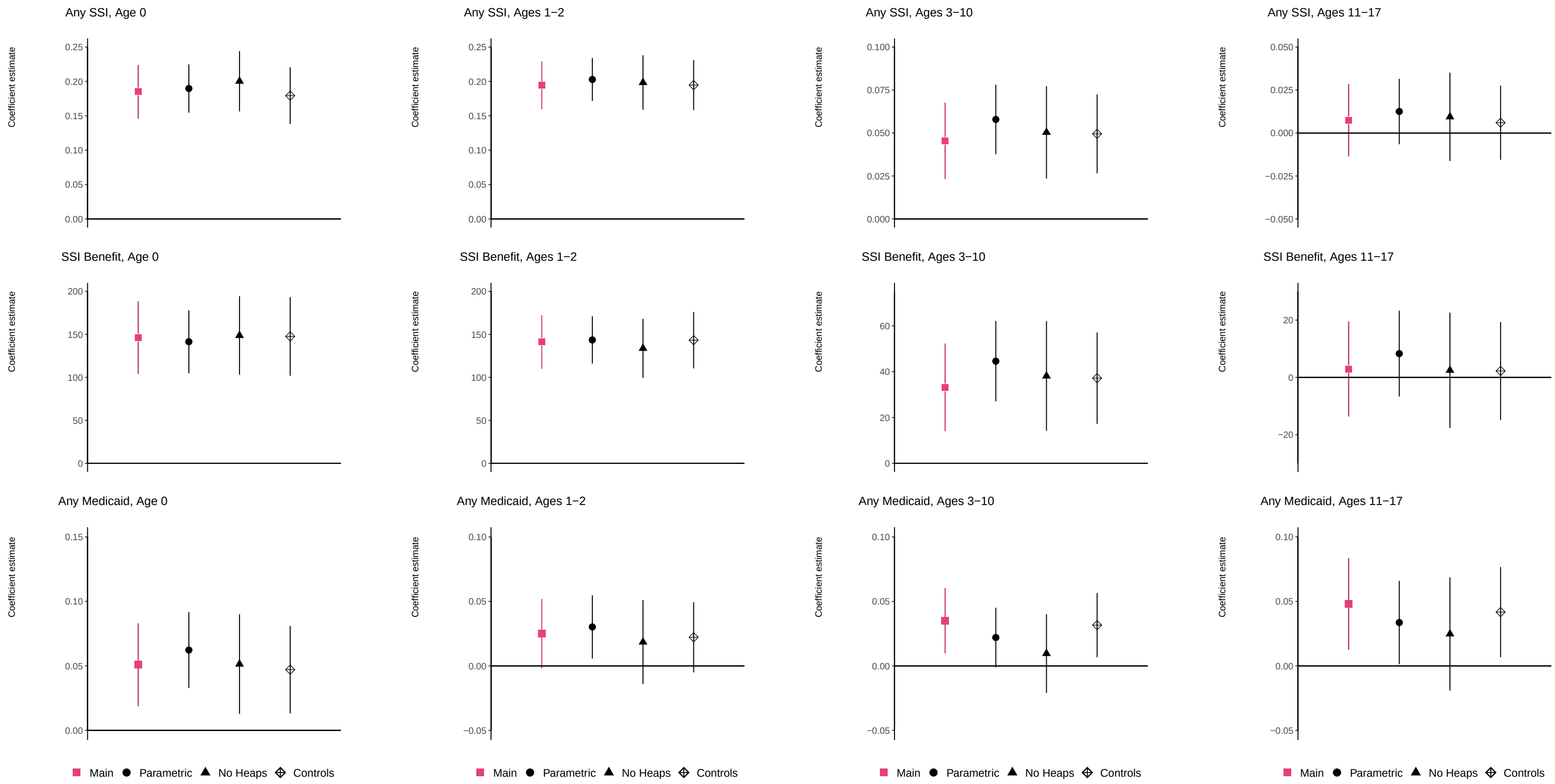
(a) All, 900-1499g

(b) All, 1000-1399g

(c) Mother less than high school

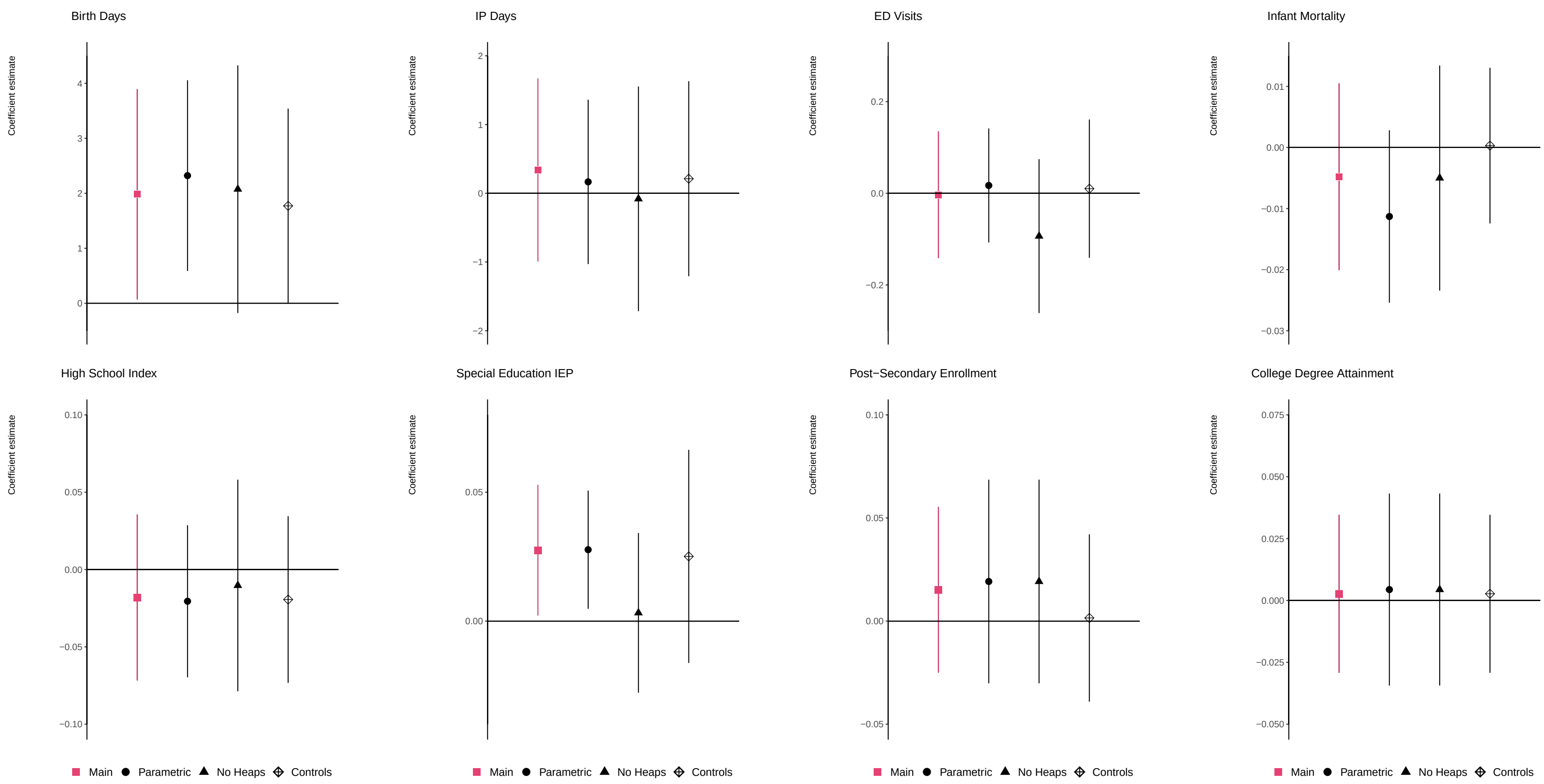
(d) Mother high school or greater

Figure A3: Alternative Specifications for First Stage Outcomes



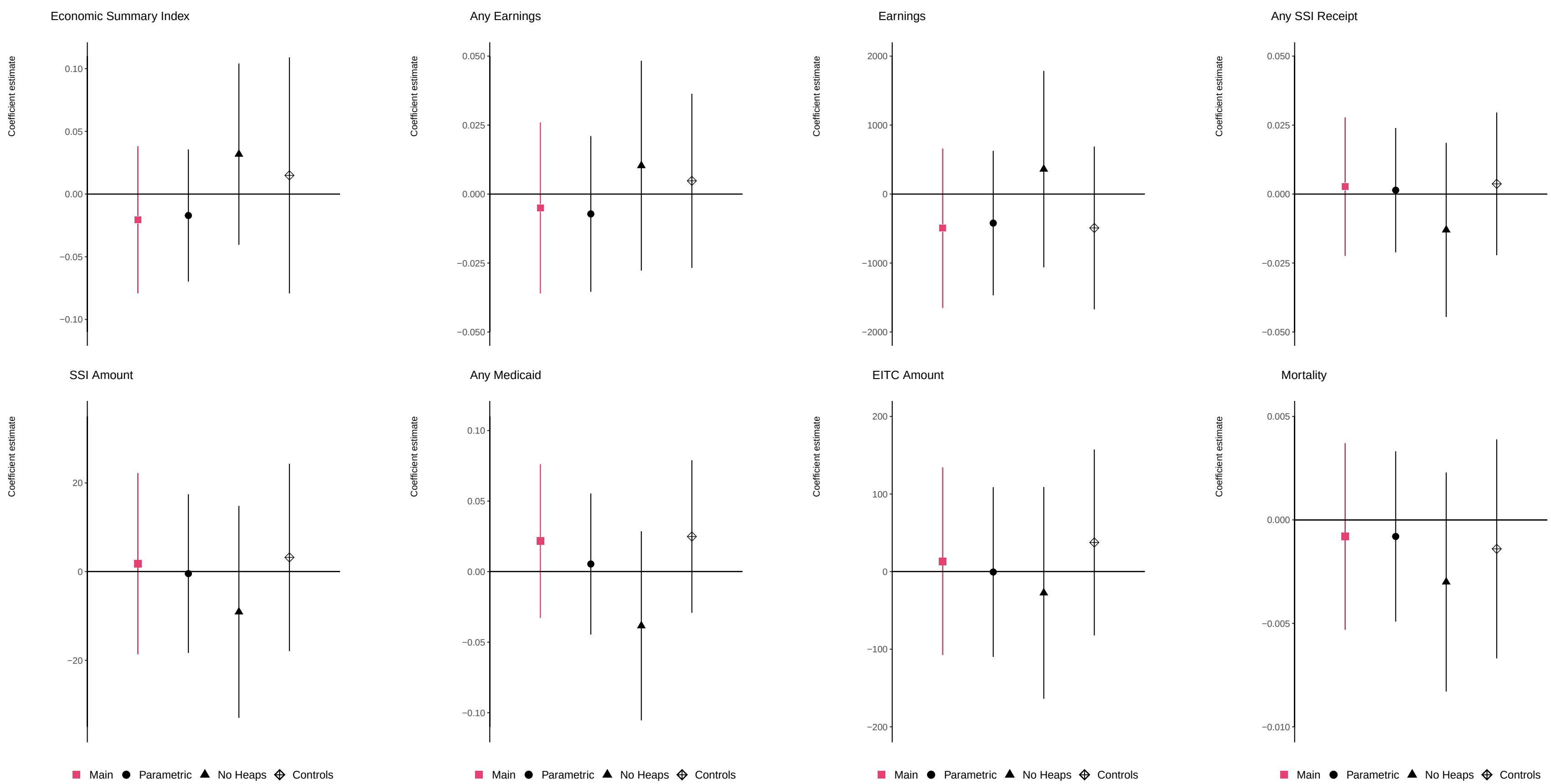
Notes: Analyses use administrative data on SSI receipt from SSA and Medicaid enrollment from CMS for children born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Additional details on alternative specifications may be found in the text. Significance levels: *=10%, **=5%, ***=1%. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization numbers CBDRB-FY23-CES021-002 and CBDRB-FY24-0335. Numbers have been rounded to comply with disclosure avoidance guidelines.

Figure A4: Alternative Specifications for Infant Health and Education Outcomes



Notes: Analyses use administrative data from HCAI on hospital and ED use and infant mortality, school records provided by Educational Results Partnership, and post-secondary enrollment and degree attainment records from the National Student Clearinghouse for infants born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Additional details on alternative specifications may be found in the text. Significance levels: *=10%, **=5%, ***=1%. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization numbers CBDRB-FY23-CES021-002, CBDRB-FY23-0451, and CBDRB-FY24-0335. Numbers have been rounded to comply with disclosure avoidance guidelines.

Figure A5: Alternative Specifications for Economic Self-Sufficiency and Mortality Outcomes



Analyses use earnings information derived from W2 records and EITC information from 1040 forms, mortality information from the Census Numident file, and program use data from SSA and CMS. Sample includes those born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Additional details on alternative specifications may be found in text. Significance levels: *=10%, **=5%, ***=1%. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization numbers CBDRB-FY23-CES021-002 and CBDRB-FY24-0335. Numbers have been rounded to comply with disclosure avoidance guidelines.

Figure A6: Excerpt from October 1993 American Academy of Pediatrics News

Low birth-weight babies may receive government funds

by JOSEPH MURRAY
Public Affairs Specialist
U.S. Social Security Administration

Many infants with very low birth weight may be eligible for SSI (Supplemental Security Income) based on disability. If an infant's birth weight falls below 1,200 grams, or if birth weight is at least 1,200 but less than 2,000 grams and the infant is small for gestational age, the U.S. Social Security Administration (SSA)considers the infant to be disabled. Infants who meet either criterion continue to be "disabled" until at least age 1 year.

SSI is a "needs-based" program, meaning that a person's income and resources must meet specific federal guidelines in order to qualify. Normally, parental income and resources affect a child's eligibility for SSI as well as the child's SSI payment amount.

While an infant remains hospitalized after birth, parental income and resources are not considered. This is because a child must first be "living with" the parents for their income and resources to affect the child's eligibility. When the newborn goes home, eligibility may continue if parental income and resources meet federal guidelines. More than half of infants who become entitled to SSI while hospitalized continue to be eligible after discharge.

Parents of infants who may qualify for SSI should be advised to call Social Security as soon as possible after the infant's birth. They should clearly state that they want an appointment to file an application for SSI for their infant son or daughter. This phone call will establish the filing date for SSI payments. The caller should make a note of the date and time of the call, and the name and location of the SSA contact person.

Social Security regulations covering SSI eligibility for low birth weight infants while hospitalized are explained in Social Security's operations manuals, sections DI25216.001B, SI00520.020, SI01320.001, and SI01330.001. Each Social Security office maintains a set of these manuals.

Editor's note: AAP News *has published this article as a service to patients and the Social Security Administration. Questions regarding SSI benefits should be directed to: Joseph Murray, South Carolina Area Director's Office, U.S. Social Security Administration, PO Box 1180, Columbia, SC 29202; (803) 765-5648; or to: Ken McGill, Office of Disability, U.S. Social Security Administration, Room 545 Altmeyer, Baltimore, MD 21235; (410) 965-3988.*

Figure A7: Medi-Cal Letter on SSI Low Birthweight Presumptive Eligibility Rule

STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY PETE WILSON, Governor

DEPARTMENT OF HEALTH SERVICES
714/744 P STREET
. BOX 942732
MENTO, CA 94234-7320
(91 657-2941

December 30, 1993

To: All County Welfare Directors
All County Administrative Officers
All County Medi-Cal Program Specialist/Liaisons

Letter No.: 93-87

CHANGE IN LONG-TERM CARE (LTC) STATUS FOR DISABLED NEWBORNS

The purpose of this letter is to inform you that effective no later than March 1, 1994 a disabled or presumptively disabled premature newborn who is born in a facility and remains an inpatient for the remainder of the month is in his/her own Medi-Cal Family Budget Unit (MFBU) beginning with the month of birth rather than in the following month. This policy coincides with current Supplemental Security Income (SSI) rules which do not determine a disabled newborn to be a member of the mother's household until the month after the month he/she is discharged from the hospital.

Conversely, a newborn who does not meet the presumptive disability criteria, is not deemed disabled (Section 50223), or who is released to the home and is later hospitalized during the same month of birth would be in the parent's MFBU as outlined in Sections 50373 and 50377.

For example, a premature baby boy was born April 15 and weighed 2 pounds therefore meeting presumptive disability criteria based on low birth weight. He remained in the hospital until August 17 when he was discharged to his home. The county would determine his eligibility for the month of birth until the month after his release to the home based only on his own income and resources (April-August). In September he would be in the same MFBU with his parent(s) or caretaker relative and their income and resources would be included in the determination. Prior to this policy change, the newborn would have been in the MFBU with his parents during the month of April since he would not meet the definition of LTC status until May (Section 50056).

Counties may apply this change retroactively if it is brought to your attention. The family may also wish to apply for SSI; however, this is not a retroactive benefit.

Information regarding the presumptively disabled premature newborn will be published in a future provider bulletin. A copy will be sent to the Medi-Cal liaisons. Counties may also review Medi-Cal Manual Letter No. 120, dated November 2, 1993.

If you have any questions regarding MFBU, please contact Ms. Margie Buzdas at (916) 657-0726. For questions regarding disability issues, please contact Ms. RaNae Dunne at (916) 657-0714.

Sincerely,

ORIGINAL SIGNED BY

Frank S. Martucci, Chief
Medi-Cal Eligibility Branch

Table A1: Baseline means (1200-1250 grams) for low-income sample and population means estimated from the American Community Survey

Variable	Baseline in Analysis Sample	US Population mean mean from ACS
Age 19-29		
Any earnings	0.718	0.663
Annual earnings	$13,630	$18,574
Adult SSI receipt	0.077	0.017
Any post-secondary schooling	0.521	0.612
Age 23-29		
College degree	0.107	0.343

Notes: Table provides baseline means of infants born with 1200 to 1250 grams birthweight and less than 32 weeks gestation to households with low or missing income data. Analyses use earnings information derived from W2 records, program use data from SSA, and college degree attainment information from NSC. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines. For comparison, means are also provided for the corresponding age groups and birth cohorts from the 2001-2022 American Community Survey and 2000 decennial Census survey data.

Table A2: Self-Reported Difficulty Rates, by Age

	Low Income, Low Birthweight				**US Population, Same Age Range**			
	Any Difficulty	Physical	Cognitive	Sensory	Any Difficulty	Physical	Cognitive	Sensory
Child	0.0949	0.0357	0.0888	0.0233	0.0549	0.007	0.044	0.013
Adult	0.1143	0.0286	0.0898	0.0449	0.0662	0.010	0.049	0.019
All	0.098	0.0343	0.0890	0.0268	0.0575	0.008	0.045	0.015

Notes: For first four columns, analyses use 2001-2022 American Community Survey and 2000 Census survey data. Sample includes those with birthweights between 900-1499 grams and less than 32 weeks gestation born to households with low or missing income. For next four columns, analyses use the 2006-2022 American Community Survey and 2000 Census survey data and restricts sample to those under age 30 and born in 1993 and later. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY24-0296. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A3: Test for Differences in Characteristics Across the Cutoff

	Age	Mother High School Graduate	Pre-Birth Income	Female	Mother Non-Hispanic White	Mother Non-Hispanic Black	Mother Non-Hispanic Asian	Mother Hispanic
RD Estimate	-0.1253	0.0046	-162.1	0.0012	0.0145	0.0028	0.0048	-0.0298**
	(0.1781)	(0.0128)	(242.2)	(0.0128)	(0.0097)	(0.0089)	(0.0065)	(0.0128)
N	29000	28000	29000	29000	29000	29000	29000	28500
Baseline	26.73	0.5980	6414	0.4380	0.1840	0.1450	0.0670	0.5650

	Number Prenatal Visits	Gestational Length (Weeks)	Abnormal Newborn Conditions	Apgar Score (5 Minutes)	Predicted Adult SSI Receipt	Matched to ERP Records (Any Grade)	Matched to ERP Records (in HS)	PIK Assigned
RD Estimate	-0.4170	-0.0268	0.0672	-0.0439	0.0017	0.0002	0.0011	-0.0074
	(0.4097)	(0.0494)	(0.0332)	(0.0673)	(0.0015)	(0.0151)	(0.0195)	(0.0060)
N	29000	29000	29000	13500	26000	20500	12500	29000
Baseline	10.48	28.97	1.442	7.639	0.1040	0.5830	0.5710	0.940

Notes: Analyses present characteristics from the birth certificate records, match rates to educational records, and information on PIK assignment for children born to families with low or missing income information with birthweight between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Coefficients are estimated using local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Baseline means are calculated using the average among those whose younger sibling was born with a birthweight between 1200 and 1250 grams. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization numbers CBDRB-FY23-CES021-002 and CBDRB-FY24-0296. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A4: Heterogeneity Analyses for First Stage Outcomes

	Any SSI benefits, by age				Average monthly SSI benefit, by age				Any Medicaid enrollment, by age			
	0	1-2	3-10	11-17	0	1-2	3-10	11-17	0	1-2	3-10	11-17
Mom Less Than	.153 (.035)***	.195 (.03)***	.025 (.018)	-.015 (.016)	128 (38)***	145 (27)***	14 (16)	-15 (12)	.021 (.025)	-.018 (.019)	.006 (.017)	-.015 (.025)
High School	[74%, 194%]	[104%, 194%]	[-8%, 47%]	[-42%, 15%]	[54%, 205%]	[87%, 187%]	[-18%, 46%]	[-45%, 10%]	[-5%, 12%]	[-7%, 2%]	[-4%, 5%]	[-10%, 5%]
N	2500	5600	30000	29000	2500	5600	30000	29000	7600	14500	60000	33000
Baseline	0.1140	0.1310	0.1290	0.1110	99.03	105.8	98.94	85.81	0.5600	0.7920	0.7320	0.6700
Non-Hispanic White	.161 (.05)***	.167 (.045)***	.052 (.029)*	.024 (.023)	112 (43)***	118 (39)***	41 (25)	16 (18)	.067 (.042)	.039 (.039)	.061 (.033)*	.055 (.042)
	[72%, 298%]	[69%, 224%]	[-5%, 118%]	[-32%, 106%]	[37%, 262%]	[43%, 200%]	[-11%, 125%]	[-43%, 114%]	[-4%, 35%]	[-6%, 18%]	[-1%, 25%]	[-6%, 31%]
N	1100	2300	9900	10500	1100	2300	9900	10500	2700	4800	21500	14000
Baseline	0.0870	0.1140	0.0920	0.0650	74.79	96.68	72.09	45.46	0.4220	0.6310	0.5060	0.4390
Non-Hispanic Black	.334 (.064)***	.321 (.053)***	.048 (.036)	.018 (.034)	281 (63)***	271 (44)***	31 (30)	17 (28)	.066 (.044)	-.013 (.031)	-.017 (.029)	.017 (.042)
	[107%, 236%]	[102%, 199%]	[-11%, 60%]	[-30%, 53%]	[127%, 326%]	[135%, 261%]	[-18%, 58%]	[-30%, 57%]	[-3%, 26%]	[-9%, 6%]	[-9%, 5%]	[-9%, 14%]
N	950	2100	9200	9300	950	2100	9200	9300	2400	4600	19000	11500
Baseline	0.1950	0.2130	0.1970	0.1610	124.2	137.1	155.7	126.3	0.5840	0.8340	0.8000	0.7150
Hispanic	.15 (.025)***	.187 (.023)***	.045 (.014)***	-.01 (.014)	114 (27)***	126 (20)***	31 (13)**	-13 (11)	.018 (.021)	.005 (.017)	.028 (.016)*	.044 (.024)*
	[112%, 221%]	[120%, 197%]	[15%, 61%]	[-35%, 16%]	[68%, 185%]	[83%, 157%]	[6%, 63%]	[-42%, 10%]	[-4%, 11%]	[-4%, 5%]	[-0%, 9%]	[-0%, 15%]
N	4300	9400	41500	34000	4300	9400	41500	34000	10500	19000	71500	37500
Baseline	0.0900	0.1180	0.1180	0.1060	89.88	105.3	89.52	82.12	0.5210	0.7710	0.6930	0.6010
Non-Hispanic	.222 (.068)***	.126 (.059)**	.043 (.034)	.051 (.03)*	232 (118)**	121 (67)*	35 (27)	42 (25)*	.205 (.061)***	.13 (.061)**	.027 (.053)	.028 (.067)
Asian	NA	[16%, 384%]	[-42%, 196%]	[-21%, 289%]	[4%, 2438%]	[-18%, 451%]	[-42%, 204%]	[-41%, 535%]	[29%, 110%]	[2%, 52%]	[-17%, 30%]	[-28%, 43%]
N	500	1100	4600	4200	500	1100	4600	4200	1200	2200	8700	4900
Baseline	D	0.0630	0.0560	0.0380	18.62	56.16	42.74	16.88	0.2960	0.4800	0.4400	0.3730
Female	.204 (.029)***	.223 (.026)***	.055 (.015)***	-.006 (.014)	175 (34)***	162 (24)***	42 (13)***	-5 (10)	.039 (.024)	.027 (.021)	.046 (.019)**	.048 (.027)*
	[147%, 261%]	[143%, 228%]	[31%, 103%]	[-46%, 30%]	[126%, 281%]	[107%, 195%]	[27%, 109%]	[-44%, 26%]	[-2%, 17%]	[-2%, 9%]	[1%, 13%]	[-1%, 18%]
N	3300	7300	31500	27500	3300	7300	31500	27500	8000	14500	57000	32000
Baseline	0.1000	0.1200	0.0820	0.0720	86.19	107.0	61.57	55.84	0.5080	0.7320	0.6470	0.5470
Male	.168 (.027)***	.171 (.024)***	.04 (.017)**	.018 (.016)	120 (27)***	123 (21)***	27 (14)*	9 (13)	.062 (.022)***	.024 (.018)	.025 (.018)	.047 (.024)*
	[124%, 238%]	[93%, 163%]	[5%, 50%]	[-11%, 41%]	[83%, 213%]	[79%, 158%]	[-0%, 47%]	[-18%, 37%]	[4%, 22%]	[-2%, 8%]	[-2%, 9%]	[-0%, 16%]
N	4000	8800	37500	32500	4000	8800	37500	32500	9700	17500	67500	37500
Baseline	0.0930	0.1340	0.1470	0.1200	81.46	103.9	114.8	92.91	0.4820	0.7310	0.6620	0.5840
First Born	.222 (.031)***	.198 (.027)***	.042 (.016)***	.006 (.016)	155 (30)***	126 (23)***	26 (13)**	2 (12)	.079 (.025)***	.061 (.021)***	.042 (.02)**	.059 (.028)**
	[221%, 387%]	[133%, 230%]	[11%, 73%]	[-28%, 42%]	[163%, 362%]	[85%, 180%]	[1%, 68%]	[-32%, 38%]	[6%, 28%]	[3%, 15%]	[0%, 13%]	[1%, 22%]
N	3000	6700	29500	26000	3000	6700	29500	26000	7500	14000	54000	29500
Baseline	0.0730	0.1090	0.1010	0.0890	59.22	95.09	76.36	68.09	0.4650	0.7030	0.6250	0.5190
Low Pred. Adult Disability	.228 (.031)***	.224 (.026)***	.064 (.015)***	.003 (.012)	166 (34)***	159 (24)***	53 (12)***	1 (9)	.066 (.025)***	.04 (.021)*	.051 (.02)**	.073 (.027)***
	[194%, 336%]	[159%, 252%]	[42%, 114%]	[-34%, 44%]	[123%, 287%]	[117%, 215%]	[50%, 130%]	[-36%, 41%]	[4%, 24%]	[-0%, 12%]	[2%, 16%]	[4%, 27%]
N	3500	7600	33000	28500	3500	7600	33000	28500	8000	15500	59500	33000
Baseline	0.0860	0.1090	0.0820	0.0600	80.88	96.10	58.96	46.05	0.4790	0.6770	0.5760	0.4620
High Pred. Adult Disability	.142 (.031)***	.173 (.028)***	.035 (.019)*	.005 (.019)	141 (33)***	139 (24)***	19 (17)	-2 (15)	.021 (.025)	-.003 (.019)	.005 (.018)	-.002 (.025)
	[67%, 166%]	[75%, 145%]	[-1%, 44%]	[-21%, 28%]	[77%, 208%]	[76%, 154%]	[-11%, 40%]	[-27%, 23%]	[-5%, 12%]	[-5%, 4%]	[-4%, 5%]	[-7%, 7%]
N	3200	7100	31500	28500	3200	7100	31500	28500	7800	15000	59500	33500
Baseline	0.1220	0.1570	0.1660	0.1510	98.57	120.7	132.3	117.2	0.5820	0.8090	0.7590	0.6980
High FS Hospital	.337 (.03)***	.357 (.026)***	.086 (.016)***	-.013 (.015)	284 (36)***	273 (24)***	70 (14)***	-16 (12)	.07 (.023)***	.028 (.019)	.037 (.018)**	.055 (.026)**
	[275%, 392%]	[262%, 349%]	[44%, 95%]	[-38%, 15%]	[243%, 403%]	[233%, 330%]	[45%, 104%]	[-46%, 9%]	[5%, 21%]	[-1%, 8%]	[0%, 11%]	[1%, 18%]
N	3800	8400	35000	29000	3800	8400	35000	29000	8900	16500	61000	32500
Baseline	0.1010	0.1170	0.1240	0.1120	87.82	97.22	94.12	85.43	0.5370	0.7690	0.6790	0.5800

Notes: Analyses use administrative data on SSI receipt from SSA and Medicaid enrollment from CMS. Sample includes those born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation who fall in the subgroups described in the table, with the exception of the "mom less than high school" sample which does not apply the income criteria for sample inclusion. See text for more specific sample information. Coefficients are estimated using using a local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Baseline means are calculated using the average of the outcome for observations with birthweight falling between 1200 and 1250 (i.e., 50 grams above the cutoff) for most outcomes and subgroups. However, the outcome "Any SSI Benefits" required larger bins to meet Census disclosure rules for the non-Hispanic Asian subgroup at age 1-2 (1200-1349 used for baseline mean) and age 11-17 (1200-1299 used) and for the non-Hispanic white subgroup at age 0 (1200-1299 used). A baseline mean of "D" indicates that the baseline mean was not able to be reported due to disclosure rules even when using all observations within the bandwidth above the cutoff. All results were approved for release by the U.S. Census Bureau under DMS number 7523114 and CBDRB-FY24-0296, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A5: Heterogeneity Analyses for Infant Health and Health Care Utilization

	Birth Days	IP Days	ED Visits	Mortality
Mom Less Than	0.942 (1.395)	-0.290 (0.891)	-0.180 (0.109)*	-0.007 (0.012)
High School	[-4%, 8%]	[-25%, 18%]	[-37%, 3%]	[-40%, 21%]
N	10000	10500	3900	9900
Baseline	44.34	8.043	1.056	0.075
Non-Hispanic White	3.532 (2.318)	2.201 (1.570)	-0.060 (0.147)	-0.016 (0.019)
	[-2%, 18%]	[-12%, 73%]	[-67%, 44%]	[-77%, 32%]
N	3700	3900	1300	3800
Baseline	44.53	7.219	0.521	0.070
Non-Hispanic Black	4.022 (2.901)	2.929 (2.114)	0.208 (0.209)	-0.011 (0.019)
	[-4%, 21%]	[-15%, 89%]	[-19%, 57%]	[-68%, 38%]
N	3200	3400	1200	3200
Baseline	46.08	7.962	1.092	0.069
Hispanic	0.942 (1.226)	-0.424 (0.847)	-0.020 (0.094)	0.002 (0.010)
	[-3%, 8%]	[-26%, 15%]	[-21%, 17%]	[-29%, 35%]
N	12000	12500	5200	12000
Baseline	44.3	8.172	0.971	0.063
Non-Hispanic	5.817 (3.597)	1.036 (2.427)	-0.120 (0.210)	-0.032 (0.031)
Asian	[-3%, 28%]	[-46%, 72%]	[-103%, 56%]	[-84%, 26%]
N	1400	1500	550	1400
Baseline	45.96	8.028	0.517	0.110
Female	3.72 (1.301)***	0.291 (0.947)	0.073 (0.104)	-0.005 (0.011)
	[3%, 15%]	[-22%, 30%]	[-16%, 34%]	[-49%, 29%]
N	9700	9900	3900	9400
Baseline	41.42	7.169	0.808	0.054
Male	0.5437 (1.413)	0.349 (0.959)	-0.066 (0.096)	-0.004 (0.011)
	[-5%, 7%]	[-17%, 25%]	[-27%, 13%]	[-33%, 23%]
N	11500	12000	4700	11500
Baseline	47.62	8.969	0.947	0.078
Birth Cohort 1997+	2.031 (1.113)*	0.003 (0.768)	-0.003 (0.070)	-0.004 (0.009)
	[-0.3%, 9%]	[-18%, 18%]	[-16%, 15%]	[-34%, 22%]
N	16500	16500	8700	15500
Baseline	45.720	8.289	0.888	0.061
First Born	0.796 (1.295)	0.773 (1.014)	0.259 (0.103)**	0.026 (0.011)**
	[-5%, 9%]	[-16%, 36%]	[7%, 58%]	[8%, 107%]
N	9000	9300	3700	8900
Baseline	37.160	7.666	0.787	0.045
Low Pred. Adult Disability	2.753 (1.209)**	0.092 (0.951)	0.165 (0.105)	0.008 (0.009)
	[1%, 14%]	[-22%, 24%]	[-5%, 48%]	[-33%, 88%]
N	9400	9600	3800	9100
Baseline	36.750	8.123	0.776	0.028
High Pred. Adult Disability	0.487 (1.405)	-0.052 (1.080)	-0.199 (0.121)	-0.011 (0.011)
	[-6%, 8%]	[-24%, 22%]	[-38%, 3%]	[-56%, 18%]
N	9700	10000	3900	9500
Baseline	39.200	9.220	1.147	0.056
High FS Hospital	1.359 (1.176)	-0.328 (0.837)	-0.051 (0.100)	-0.013 (0.011)
	[-2%, 9%]	[-29%, 19%]	[-25%, 15%]	[-50%, 13%]
N	10500	10500	4500	10000
Baseline	41.450	6.846	0.977	0.068

Notes: Analyses use administrative data from HCAI on hospital and ED use and infant mortality. Sample includes those born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation who fall in the subgroups described in the table, with the exception of the "mom less than high school" sample which does not apply the income criteria for sample inclusion. See text for more specific sample information. Coefficients are estimated using using a local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Baseline means are calculated using the average of the outcome for observations with birthweight falling between 1200 and 1250 (i.e., 50 grams above the cutoff). All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization numbers CBDRB-FY23-CES021-002, CBDRB-FY23-0451, and CBDRB-FY24-0296. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A6: Heterogeneity Analyses for Educational Performance

	High School Index	Ever Enrolled (BA or Higher)	College Degree
Mom Less Than	0.002 (0.038)	0.027 (0.029)	0.017 (0.020)
High School	[-0.07SD, 0.08SD]	[-7%, 19%]	[-36%, 90%]
N	10000	5500	3200
Baseline	-0.114	0.459	0.061
Non-Hispanic White	-0.018 (0.075)	0.015 (0.045)	-0.021 (0.038)
	[-0.17SD, 0.13SD]	[-15%, 21%]	[-57%, 32%]
N	3100	2300	1600
Baseline	-0.033	0.502	0.167
Non-Hispanic Black	0.036 (0.059)	0.035 (0.051)	0.053 (0.033)
	[-0.08SD, 0.15SD]	[-13%, 26%]	[-18%, 189%]
N	3400	1900	1200
Baseline	-0.171	0.508	0.062
Hispanic	-0.014 (0.035)	0.017 (0.028)	0.001 (0.020)
	[-0.08SD, 0.05SD]	[-7%, 14%]	[-45%, 48%]
N	12000	6200	3600
Baseline	-0.078	0.514	0.084
Non-Hispanic	-0.129 (0.114)	-0.036 (0.069)	-0.080 (0.089)
Asian	[-0.35SD, 0.09SD]	[-24%, 14%]	[-78%, 29%]
N	1400	800	500
Baseline	0.245	0.704	0.324
Female	0.021 (0.042)	0.015 (0.030)	-0.017 (0.029)
	[-0.06SD, 0.10SD]	[-8%, 13%]	[-41%, 22%]
N	8900	5200	3100
Baseline	0.000	0.583	0.180
Male	-0.045 (0.035)	0.021 (0.028)	0.026 (0.017)
	[-0.11SD, 0.02SD]	[-7%, 16%]	[-16%, 136%]
N	11000	6200	3800
Baseline	-0.114	0.470	0.044
First Born	-0.069 (0.042)*	-0.026 (0.030)	-0.023 (0.025)
	[-0.15SD, 0.01SD]	[-16%, 6%]	[-56%, 20%]
N	8400	5200	3100
Baseline	-0.014	0.533	0.130
Birth Cohort 1997+	-0.003 (0.035)	0.021 (0.027)	0.019 (0.028)
	[-0.07SD, 0.07SD]	[-7%, 15%]	[-42%, 87%]
N	12000	6700	2200
Baseline	-0.016	0.492	0.086
Low Pred. Adult Disability	0.010 (0.044)	-0.004 (0.030)	-0.015 (0.029)
	[-0.08SD, 0.10SD]	[-11%, 9%]	[-43%, 25%]
N	9300	5400	3200
Baseline	-0.006	0.596	0.167
High Pred. Adult Disability	-0.033 (0.037)	0.021 (0.030)	0.021 (0.018)
	[-0.11SD, 0.04SD]	[-9%, 18%]	[-31%, 117%]
N	10000	5600	3500
Baseline	-0.133	0.438	0.048
High FS Hospital	0.015 (0.042)	0.001 (0.029)	-0.005 (0.023)
	[-0.07SD, 0.10SD]	[-11%, 11%]	[-46%, 36%]
N	9200	5700	3400
Baseline	-0.064	0.521	0.112

Notes: Analyses use school records provided by EdResults Partnership and post-secondary enrollment and college degree attainment provided by the National Student Clearinghouse. Sample includes those born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation who fall in the subgroups described in the table, with the exception of the "mom less than high school" sample which does not apply the income criteria for sample inclusion. See text for more specific sample information. Coefficients are estimated using using a local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Baseline means are calculated using the average of the outcome for observations with birthweight falling between 1200 and 1250 (i.e., 50 grams above the cutoff) for most outcomes and subgroups. However, the outcome College Degree required larger bins to meet Census disclosure rules for the non-Hispanic Asian subgroup (1200-1299 used for baseline mean) and the non-Hispanic Black subgroup (1200-1349 used). All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization numbers CBDRB-FY23-CES021-002 and CBDRB-FY24-0296. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A7: Heterogeneity Analyses for Adult Self-Sufficiency Outcomes, Ages 19+

		Adult Earning and Public Assistance Receipt						
	Summary Index	Any Earnings	Earnings	Any SSI	SSI Amount	Any Medicaid	EITC Amount	Mortality
Mom Less Than	-0.005 (0.043)	-0.011 (0.024)	-1055 (865)	-0.009 (0.019)	-8 (15)	0.009 (0.039)	-105 (98)	-0.003 (0.004)
High School	[-0.09SD, 0.08SD]	[-8%, 5%]	[-19%, 5%]	[-54%, 32%]	[-56%, 32%]	[-11%, 14%]	[-49%, 14%]	[-87%, 44%]
N	32500	32500	32500	18500	18500	8100	13500	12500
Baseline	-0.079	0.702	14150	0.086	65	0.620	600	0.012
Non-Hispanic White	0.005 (0.069)	0.033 (0.036)	-205 (1276)	0.006 (0.029)	-2 (23)	0.009 (0.058)	222 (107)**	0.002 (0.006)
	[-0.13SD, 0.14SD]	[-5%, 15%]	[-20%, 17%]	[-70%, 87%]	[-85%, 78%]	[-25%, 30%]	[6%, 208%]	[-161%, 224%]
N	15000	15000	15000	8600	8600	4000	6300	5000
Baseline	-0.037	0.679	13560	0.073	55	0.408	208	0.006
Non-Hispanic Black	-0.011 (0.068)	-0.002 (0.038)	-973 (1241)	-0.007 (0.032)	7 (30)	0.018 (0.063)	-264 (188)	0.003 (0.008)
	[-0.14SD, 0.12SD]	[-11%, 10%]	[-32%, 14%]	[-70%, 56%]	[-66%, 85%]	[-17%, 22%]	[-87%, 14%]	[-116%, 162%]
N	12000	12000	12000	6800	6800	3000	4500	4200
Baseline	-0.145	0.708	10720	0.100	79	0.633	729	0.011
Hispanic	-0.039 (0.041)	-0.023 (0.021)	-858 (777)	0.004 (0.018)	-2 (13)	0.045 (0.038)	15 (86)	-0.002 (0.003)
	[-0.12SD, 0.04SD]	[-9%, 3%]	[-16%, 5%]	[-40%, 49%]	[-48%, 40%]	[-5%, 21%]	[-30%, 36%]	[-77%, 41%]
N	36000	36000	36000	20500	20500	8600	15500	16500
Baseline	-0.016	0.747	14710	0.077	59	0.572	507	0.010
Non-Hispanic	-0.012 (0.107)	0.003 (0.056)	673 (2591)	0.016 (0.041)	33 (35)	-0.068 (0.107)	39 (108)	-0.003 (0.005)
Asian	[-0.22SD, 0.20SD]	[-16%, 17%]	[-33%, 43%]	[-167%, 252%]	[-148%, 417%]	[-62%, 32%]	[-100%, 145%]	[.%, .%]
N	4800	4800	4800	2800	2800	1100	2000	2000
Baseline	-0.008	0.671	13400	0.038	24	0.445	173	.
Female	-0.002 (0.040)	0.013 (0.023)	-336 (741)	-0.003 (0.016)	1 (14)	0.037 (0.042)	3 (98)	0.001 (0.003)
	[-0.08SD, 0.08SD]	[-4%, 8%]	[-14%, 9%]	[-62%, 53%]	[-63%, 69%]	[-8%, 22%]	[-36%, 38%]	[-102%, 134%]
N	31500	31500	31500	18000	18000	7800	14000	13000
Baseline	-0.045	0.719	12480	0.055	42	0.537	520	0.005
Male	-0.035 (0.043)	-0.018 (0.022)	-804 (873)	0.003 (0.019)	-1 (15)	0.019 (0.037)	44 (77)	-0.002 (0.004)
	[-0.12SD, 0.05SD]	[-8%, 4%]	[-17%, 6%]	[-36%, 42%]	[-41%, 39%]	[-10%, 17%]	[-28%, 51%]	[-75%, 40%]
N	37000	37000	37000	21500	21500	9100	15000	16000
Baseline	-0.042	0.717	14640	0.095	74	0.530	387	0.012
First Born	-0.072 (0.045)	-0.027 (0.023)	-736 (901)	0.030 (0.019)	26 (16)*	0.066 (0.042)	-44 (84)	-0.003 (0.004)
	[-0.16SD, 0.02SD]	[-10%, 2%]	[-17%, 7%]	[-12%, 109%]	[-9%, 126%]	[-3%, 29%]	[-45%, 26%]	[-120%, 52%]
N	29000	29000	29000	17000	17000	7100	12500	12000
Baseline	0.016	0.754	14500	0.061	45	0.502	461	0.008
Birth Cohort 1997+	0.040 (0.037)	0.018 (0.021)	280 (702)	-0.021 (0.016)	-20 (11)*	0.063 (0.065)	84 (63)	-0.001 (0.002)
	[-0.03SD, 0.11SD]	[-3%, 8%]	[-9%, 14%]	[-64%, 13%]	[-72%, 4%]	[-11%, 31%]	[-19%, 98%]	[-76%, 41%]
N	26000	26000	26000	15000	15000	1000	10500	24000
Baseline	-0.072	0.716	12100	0.083	57	0.613	212	0.008
Low Pred. Adult Disability	-0.034 (0.039)	0.001 (0.022)	-282 (851)	0.013 (0.015)	13 (13)	0.057 (0.042)	38 (84)	0.002 (0.003)
	[-0.11SD, 0.04SD]	[-6%, 6%]	[-13%, 10%]	[-44%, 114%]	[-47%, 141%]	[-6%, 32%]	[-34%, 54%]	[-64%, 127%]
N	32000	32000	32000	18500	18500	7700	14500	13000
Baseline	0.055	0.753	14520	0.038	28	0.432	375	0.007
High Pred. Adult Disability	0.023 (0.049)	0.008 (0.025)	-657 (905)	-0.021 (0.022)	-19 (18)	-0.035 (0.039)	-49 (100)	-0.005 (0.004)
	[-0.07SD, 0.12SD]	[-6%, 8%]	[-20%, 9%]	[-50%, 18%]	[-55%, 16%]	[-17%, 6%]	[-45%, 27%]	[-76%, 20%]
N	34000	34000	34000	19500	19500	8800	13500	13000
Baseline	-0.168	0.673	12450	0.129	100	0.642	548	0.018
High FS Hospital	-0.020 (0.043)	-0.008 (0.023)	-589 (834)	-0.005 (0.018)	-6 (14)	-0.016 (0.041)	89 (87)	-0.002 (0.003)
	[-0.10SD, 0.06SD]	[-7%, 5%]	[-16%, 8%]	[-57%, 42%]	[-61%, 39%]	[-18%, 12%]	[-20%, 65%]	[-107%, 50%]
N	32000	32000	32000	18500	18500	7800	13500	14000
Baseline	-0.035	0.724	13560	0.073	57	0.546	398	0.008

Notes: Analyses use earnings information derived from W2 records and EITC information from 1040 forms, mortality information from the Census Numident file, and program use data from SSA and CMS. Sample includes those born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation who fall in the subgroups described in the table, with the exception of the "mom less than high school" sample which does not apply the income criteria for sample inclusion. See text for more specific sample information. Coefficients are estimated using using a local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Baseline means are calculated using the average of the outcome for observations with birthweight falling between 1200 and 1250 (i.e., 50 grams above the cutoff). All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization numbers CBDRB-FY23-CES021-002 and CBDRB-FY24-0296. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A8: Years/Cohorts Included by Outcome

Outcome	Years Used	Cohorts
First Stage		
Any SSI	2010-2014, 2016, 2019-2021	1993-2019
SSI Benefits	2010-2014, 2016, 2019-2021	1993-2019
Any Medicaid	2000-2016	1993-2016
Household Income	2010-2014, 2016, 2019-2021	1993-2019
Infant Health and Health Care Utilization		
Days in Hospital at Birth	1993-2012	1993-2012
Inpatient Days	1993-2012	1993-2012
ED Visits	2005-2012	2005-2012
Infant Mortality	1993-2011	1993-2011
High School Outcomes		
All	2007-2018	1993-2004
National Student Clearinghouse		
Ever Enrolled	2010-09/2022	1993-2003
Finished Bachelors	2010-09/2022	1993-1998
Long-Run (Age 19+) Outcomes		
Adult Index	2012-2022	1993-2003
Any Wages	2012-2022	1993-2003
Wages	2012-2022	1993-2003
Any Medicaid	2012-2016	1993-1997
SSI Benefits	2012-2014, 2016, 2019-2021	1993-2002
Fed EITC	2012-2021	1993-2002
Birth	2012-2022	1993-2003
Post-Infancy Mortality		
Post-infant Mortality	1993-2022q3	All

Notes: This table reports the years during which we observe each set of outcomes and the cohorts included in analysis of that outcome.

Table A9: RD Estimates for Elementary School Performance, Schools Reporting Special Education Only

	Summary Index	Repeat a grade	Gifted & talented	Special Education IEP
Effect of SSI Eligibility	0.016 (0.02)	-0.003 (0.005)	0.003 (0.004)	0.009 (0.015)
	[-0.02SD, 0.02SD]	[-62%, 36%]	[-76%, 148%]	[-21%, 38%]
N Individual x Year	16000	16000	16000	16000
N Individual	5600	5600	5600	5600
Baseline	0.001	0.020	0.007	0.100

Notes: Analyses use administrative data from ERP for children in families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation attending a school that reports at least one student received an IEP; see text for more specific sample information. Robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Baseline means are calculated using the average among those born with birthweights between 1200 and 1250 grams. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY24-0335. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A10: RD Estimates for Middle School Performance, Schools Reporting Special Education Only

	Summary Index	Repeat a grade	Gifted & talented	Overall GPA	Special Education IEP
Effect of SSI Eligibility	-0.032 (0.038)	0.006 (0.006)	-0.003 (0.009)	-0.043 (0.078)	-0.024 (0.02)
	[-0.11SD, 0.04SD]	[-46%, 130%]	[-94%, 66%]	[-8%, 4%]	[-54%, 12%]
N Individual x Year	7900	7900	7900	4300	7900
N Individual	4000	4000	4000	2800	4000
Baseline	0.078	0.014	0.023	2.450	0.116

Notes: Analyses use administrative data from ERP for children in families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation attending a school that reports at least one student received an IEP; see text for more specific sample information. Robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Baseline means are calculated using the average among those born with birthweights between 1200 and 1250 grams. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY24-0335. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A11: RD Estimates for High School Performance, Schools Reporting Special Education Only

	Summary Index	Gifted & talented	Overall GPA	AP courses	Any math completed	Any science courses	Repeat a grade	Special education IEP
Effect of SSI Eligibility	-0.026 (0.03)	0.007 (0.01)	-0.095 (0.05)*	-0.094 (0.05)*	-0.011 (0.02)	0.005 (0.02)	-0.002 (0.01)	0.034 (0.02)**
	[-0.09SD, 0.04SD]	[-41%, 92%]	[-8%, 0.4%]	[-71%, 1%]	[-6%, 3%]	[-6%, 7%]	[-41%, 33%]	[0.2%, 70%]
N Individual x Year	14500	14500	12000	12000	13500	13500	14500	14500
N Individual	5700	5700	5200	5200	5500	5500	5700	5700
Baseline	-0.0350	0.0270	2.406	0.271	0.748	0.614	0.052	0.096

Notes: Analyses use administrative data from ERP for children in families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation attending a school that reports at least one student received an IEP; see text for more specific sample information. Robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Baseline means are calculated using the average among those born with birthweights between 1200 and 1250 grams. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY24-0335. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A12: RD Estimates for Elementary School Performance

	Summary Index	Repeat a grade	Gifted & talented	Special Education IEP
Effect of SSI Eligibility	0.010 (0.017)	-0.002 (0.046)	0.002 (0.003)	0.002 (0.001)
	[-0.024SD, 0.044SD]	[-51%, 40%]	[-70%, 133%]	[-27%, 33%]
N Individual x Year	20500	20500	20500	20500
N Individual	7000	7000	7000	7000
Baseline	-0.007	0.020	0.006	0.077

Notes: Analyses use school records provided by Educational Results Partnership for children born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Coefficients are estimated using local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Baseline means are calculated using the average among those born with birthweights between 1200 and 1250 grams. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A13: RD Estimates for Middle School Performance

	Summary Index	Repeat a grade	Gifted & talented	Overall GPA	Special Education IEP
Effect of SSI Eligibility	-0.022 (0.026)	0.002 (0.005)	-0.002 (0.006)	-0.064 (0.061)	-0.019 (0.012)
	[-0.074SD, 0.029SD]	[-54%, 74%]	[-99%, 66%]	[-8%, 2%]	[-60%, 7%]
N Individual x Year	13000	13000	13000	7400	13000
N Individual	6000	6000	6000	4400	6000
Baseline	0.033	0.015	0.014	2.410	0.071

Notes: Analyses use school records provided by Educational Results Partnership for children born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Coefficients are estimated using local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Baseline means are calculated using the average among those born with birthweights between 1200 and 1250 grams. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY23-CES021-002. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A14: RD Estimates for Adult Self-Sufficiency Outcomes, Older Ages

	Summary Index	Any Earnings	Earnings	Any SSI Receipt	SSI Amount	Any Medicaid	EITC amount
Subgroup: Ages 22+							
Effect of SSI Eligibility	-0.029 (0.038)	-0.013 (0.019)	-898 (865)	-0.001 (0.015)	-2 (11)	-0.075 (0.045)*	47 (83)
	[-0.103SD, 0.044SD]	[-7%, 3%]	[-14%, 4%]	[-41%, 37%]	[-45%, 37%]	[-29%, 2%]	[-20%, 37%]
N Individual x Year	39000	39000	39000	21500	21500	3600	16500
N Individual	8200	8200	8200	7400	7400	2400	5700
Baseline	0.046	0.756	17890	0.076	54	0.573	573
Subgroup: Ages 26+							
Effect of SSI Eligibility	-0.008 (0.060)	-0.002 (0.028)	-220.6 (1557)	-0.004 (0.023)	-7.387 (16.880)	-43.790 (183)	
	[-0.125SD, 0.109SD]	[-8%, 7%]	[-15%, 13%]	[-61%, 52%]	[-72%, 46%]	[-35%, 28%]	
N Individual x Year	11500	11500	11500	7000	7000	2700	
N Individual	4400	4400	4400	3400	3400	1700	
Baseline	0.123	0.751	21490	0.079	56.010	1139.000	

Notes: Analyses use earnings information derived from W2 records and EITC information from 1040 forms, mortality information from the Census Numident file, and program use data from SSA and CMS. Sample includes those born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Coefficients are estimated using using a local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Baseline means are calculated using the average among those born with birthweights between 1200 and 1250 grams. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization numbers CBDRB-FY23-CES021-002 and CBDRB-FY24-0296. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A15: High vs. Low Likelihood of Persistent Disability

	Above Median	Below Median
Any SSI	0.1253	0.0575
SSI Amount	92.20	40.23
EITC Receipt	549.0	436.3
Medicaid	0.5866	0.4960
Ever Enrolled in Post-Secondary	0.5095	0.6480
Bachelor's Degree	0.0821	0.1701
Adult Economic Index	-0.1545	0.0060
Any Earnings	0.6810	0.7357
Earnings ($)	12370	14140

Notes: Estimates use post-secondary school enrollment and degree attainment from the National Student Clearinghouse, W2 and 1040 IRS records, and program use data from SSA and CMS for infants born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Mean outcomes are estimated for subsamples defined by above and below median predicted values of adult SSI receipt. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY24-0296. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A16: Additional Placebo Tests

	Placebo Outcome	Placebo Samples	
	Predicted Adult Disability	High Income	Pre-Policy Cohorts
Sample/Outcome			
Infant Outcomes			
Hospital Days at Birth	0.002	0.234	NA
	(0.002)	(1.286)	
Total Inpatient Days	0.002	-0.373	NA
	(0.002)	(1.100)	
ED Visits	0.004	0.023	NA
	(0.003)	(0.062)	
Infant Mortality	0.002	-0.006	NA
	(0.002)	(0.010)	
Educational Outcomes			
High School Index	-0.0013	-0.029	-0.090
	(0.0029)	(0.052)	(0.084)
Ever Enrolled in	0.0015	0.001	0.017
Post-Secondary	(0.0023)	(0.031)	(0.061)
Bachelors Degree	0.0017	0.029	-0.006
or Higher	(0.003)	(0.052)	(0.032)
Adult Economic/Health Outcomes			
Adult Economic Index	-0.0001	0.015	0.057
	(0.0023)	(0.048)	(0.090)
Any Earnings	-0.0001	0.034	0.049
	(0.0023)	(0.254)	(0.047)
Annual Earnings ($)	-0.0001	-159.3	-486.2
	(0.0023)	(1386)	(1869)
Any SSI Receipt	-0.0005	0.012	-0.042
	(0.0025)	(0.016)	(0.042)
SSI Amount	-0.0005	13.48	45.43
	(0.0025)	(10.64)	(34.80)
Any Medicaid	0.0004	-0.027	0.003
	(0.0033)	(0.041)	(0.052)
EITC amount	-0.0012	16.59	99.54
	(0.0028)	(20.11)	(256.8)
Post-Infancy Mortality	0.0017	-0.0007	-0.0137
	(0.0015)	(0.0024)	(0.0170)

Notes: Analyses use school records provided by EdResults Partnership and post-secondary enrollment and college degree attainment provided by the National Student Clearinghouse, earnings information derived from W2 records, mortality information from the Census Numident file, and program use data from SSA and CMS. All samples include infants with birthweights between 900-1499 grams and less than 32 weeks gestation. See text for more sample information. Coefficients are estimated using using a local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. NA indicates that the data are not available for the specified analysis. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization numbers CBDRB-FY24-0296 and CBDRB-FY24-0335. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A17: First Stage for High Income Sample

	Age in Years During Childhood			
	0	1-2	3-10	11-17
Any SSI benefits				
Effect of SSI Eligibility	.053 (.019)***	.044 (.014)***	.013 (.005)***	.0001 (.004)
	[30%, 176%]	[49%, 207%]	[26%, 261%]	[-94%, 134%]
N Individual x Year	3600	8100	34500	25000
N Individual	3600	5300	9000	7000
Baseline	.05	.034	.009	.006
Average monthly SSI benefit ($)				
Effect of SSI Eligibility	21 (10)**	25 (8)***	6 (4)*	0 (2)
	[3%, 190%]	[67%, 306%]	[-13%, 198%]	[-283%, 269%]
N Individual x Year	3600	8100	34500	25000
N Individual	3600	5300	9000	7000
Baseline	22	14	7	2
Any Medicaid enrollment				
Effect of SSI Eligibility	.10 (.017)***	.07 (.017)***	.016 (.014)	-.013 (.021)
	[73%, 145%]	[32%, 87%]	[-10%, 38%]	[-38%, 19%]
N Individual x Year	8500	15500	52500	23000
N Individual	8500	8200	8500	4700
Baseline	.091	.121	.114	.142

Notes: Analyses use program use data from SSA and CMS. All samples include infants with birthweights between 900-1499 grams and less than 32 weeks gestation. Coefficients are estimated using using a local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY24-0335. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A18: RD Estimates of SSI Receipt on Siblings by Age at Focal Child's Birth

	Age at Birth of Focal Child		
	1-5	6-10	11-17
Educational Outcomes			
High School Index	-0.002 (0.044)	-0.035 (0.047)	-0.031 (0.042)
	[-0.09SD, 0.08SD]	[-0.13SD, 0.06SD]	[-0.11SD, 0.05SD]
N	9500	7100	6000
Baseline	-0.0160	-0.060	-0.116
Ever Enrolled in Post-Secondary	0.0003 (0.0317)	0.0005 (0.0358)	0.099 (0.041)**
	[-11%, 11%]	[-13%, 13%]	[4%, 39%]
N	5300	4200	3300
Baseline	0.559	0.549	0.461
Bachelor's Degree	-0.0269 (0.0232)	-0.0274 (0.258)	0.046 (0.023)**
	[-60%, 15%]	[-74%, 22%]	[2%, 174%]
N	3700	2900	2300
Baseline	0.121	0.106	0.052
Adult Economic/Health Outcomes			
Adult Economic Index	-0.094 (0.044)**	0.026 (0.044)	-0.020 (0.052)
	[-0.18SD, -0.01SD]	[-0.06SD, 0.11SD]	[-0.12SD, 0.08SD]
N	42500	38000	29000
Baseline	0.053	-0.006	-0.049
Any Earnings	-0.038 (0.022)	0.038 (0.022)*	0.014 (0.028)
	[-11%, 1%]	[-1%, 11%]	[-6%, 9%]
N	42500	38000	29000
Baseline	0.766	0.738	0.737
Earnings	-2454 (1275)*	192.7 (1361)	162.9 (1459)
	[-28%, 0%]	[-15%, 17%]	[-17%, 19%]
N	42500	38000	29000
Baseline	17840	16440	15540
Any SSI	0.0082 (0.0123)	-0.0037 (0.11)	0.0088 (0.0150)
	[-53%, 108%]	[-110%, 78%]	[-61%, 112%]
N	26000	22000	17000
Baseline	0.030	0.023	0.034
SSI Amount	8.78 (9.253)	-1.744 (9.166)	1.694 (12.26)
	[43%, 124%]	[-108%, 89%]	[-76%, 87%]
N	26000	22000	17000
Baseline	21.77	18.18	29.51
Any Medicaid	0.069 (0.037)*	-0.017 (0.039)	0.024 (0.045)
	[-1%, 31%]	[-20%, 12%]	[-12%, 20%]
N	16000	17000	12500
Baseline	0.453	0.475	0.547
EITC	126 (119)	143 (153)	146 (191)
	[-13%, 42%]	[-12%, 34%]	[-16%, 37%]
N	19000	17500	13500
Baseline	856	1319	1421
Mortality	0.0084 (0.0042)**	0.0077 (0.0079)	-0.002 (0.0093)
	[3%, 333%]	[-56%, 166%]	[-115%, 113%]
N	9800	6400	3800
Baseline	0.005	0.014	0.016

Notes: Notes: Analyses use school records provided by Educational Results Partnership, post-secondary school enrollment and degree attainment from the National Student Clearinghouse, W2 records, mortality information from the Census Numident file, and program use data from SSA and CMS for older siblings of those born to families with low or missing income information with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Estimates are provided by age of the sibling at the time of the low birthweight infant's birth. Coefficients are estimated using local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Tables report implied 95% confidence intervals relative to baseline means. Baseline means are calculated using the average among those whose younger sibling was born with a birthweight between 1200 and 1250 grams. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY24-0296. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A19: Effect of SSI Receipt on Maternal Labor Supply Outcomes

	Age of Child			
	0	1-2	3-10	11-17
Any Earnings				
Effect of SSI Eligibility	-.023 (.012)*	-.006 (.012)	-.014 (.011)	-.027 (.015)*
	[-13%, 0%]	[-8%, 5%]	[-8%, 2%]	[-11%, 0%]
N Individual x Year	29000	52500	183000	109000
N Individual	29000	26000	26000	18500
Baseline	.362	.366	.458	.517
Annual Earnings ($)				
Effect of SSI Eligibility	-101 (188)	-256 (258)	-665 (383)*	-1120 (652)*
	[-14%, 8%]	[-15%, 5%]	[-15%, 1%]	[-17%, 1%]
N Individual x Year	29000	52500	183000	109000
N Individual	29000	26000	26000	18500
Baseline	3397	4988	9368	14020

Notes: Analysis uses earnings records derived from the LEHD or W2 records for the mothers of infants born to low or missing income families with birthweights between 900-1499 grams and less than 32 weeks gestation; see text for more specific sample information. Coefficients are estimated using local linear regression; robust standard errors are clustered at the level of the mother. Significance levels: *=10%, **=5%, ***=1%. Tables report implied 95% confidence intervals relative to baseline means. Baseline means are calculated using the average among those born with a birthweight between 1200 and 1250 grams. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization number CBDRB-FY24-0296. Numbers have been rounded to comply with disclosure avoidance guidelines.

Table A20: RD Estimates of Amount of SSI Received at Ages 1-2 at Other Birthweight Cutoffs

	Any SSI benefits, by gestational age							Average monthly SSI benefit, by gestational age						
	<32	32	33	34	35	36	37+	<32	32	33	34	35	36	37+
All SSA Years														
RD Estimate	0.1947***	0.0476	0.0295	0.0025	0.0053	-0.0032	0.0120	141.2***	14.98	11.78	-2.665	0.9989	-6.181	9.682
	(0.0177)	(0.0407)	(0.0426)	(0.0267)	(0.0196)	(0.0135)	(0.0079)	(15.84)	(32.06)	(30.24)	(22.01)	(16.17)	(10.74)	(6.438)
N Individual x Year	16000	2200	2200	3100	4600	7300	28500	16000	2200	2200	3100	4600	7300	28500
N Individual	10500	1400	1400	2000	3000	4800	18500	10500	1400	1400	2000	3000	4800	18500
Baseline	0.1280	0.1430	0.1730	0.0970	D	D	D	105.2	67.61	75.22	51.40	43.11	33.26	20.05
SSA Years 2016 and Later														
RD Estimate	0.1266***	0.1057*	0.1107	0.0144	0.0203	-0.0013	0.0035	92.86***	43.94	65.57	2.075	7.223	-8.491	0.7301
	(0.0242)	(0.0601)	(0.0720)	(0.0379)	(0.0243)	(0.0221)	(0.0108)	(19.34)	(38.58)	(47.68)	(26.33)	(16.54)	(18.69)	(7.534)
N Individual x Year	6300	850	850	1300	1700	2800	11000	6300	850	850	1300	1700	2800	11000
N Individual	4600	600	600	900	1200	2100	8000	4600	600	600	900	1200	2100	8000
Baseline	0.1060	0.1090	0.1720	0.970	D	D	D	75.19	49.00	68.78	27.76	15.00	41.09	14.51
Eligibility cutoff	1200g	1250g	1325g	1500g	1700g	1876g	2000g	1200g	1250g	1325g	1500g	1700g	1876g	2000g

Notes: Analyses use administrative data on SSI receipt from SSA for children born to families with low or missing income information around birthweight cutoffs associated with gestational ages listed in the column headers at ages 1-2; see text for more specific sample information. Coefficient and standard errors are estimated using parametric linear regression with a +/-300 grams around the cutoff included in the analysis. Significance levels: *=10%, **=5%, ***=1%. Baseline means are calculated using the 50 gram bin directly above the eligibility cutoff for gestational ages <32, 32, and 33 and a 150 gram bin for 34. A baseline mean of "D" indicates that the baseline mean was not able to be reported due to disclosure rules even when using all observations within the bandwidth above the cutoff. All results were approved for release by the U.S. Census Bureau under DMS number 7523114, authorization numbers CBDRB-FY22-CES018-009 and CBDRB-FY24-0335. Numbers have been rounded to comply with disclosure avoidance guidelines.