

Research Statement

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Over the last 30 years, income inequality in the United States has increased substantially. One policy avenue to address income inequality is by providing social services, cash transfers, social pensions, public health insurance, and/or nutritional assistance to low-income families through anti-poverty programs. Such means-tested programs in the U.S. serve nearly 22 percent of households each year and currently account for over \$700 billion in federal spending. Given the size and scope of safety net programs, it is critical for policymaking, but often difficult, to fully measure the direct and indirect costs and benefits of such programs. In particular, if existing research does not take into account the full effects of in-kind or cash transfers on participant health and economic outcomes, or the potential spillovers on their children and neighbors, scholars and policymakers will maintain an incomplete understanding of the true total effects of the safety net on inequality.

My existing and proposed future work has one common thread: estimating the effects on government transfer programs in a causal framework. Much of my work focuses on two main areas. In one research branch, I study the causal impact of publicly funded women's health clinic access on contraception use, fertility, and sexual health. In three published papers, I show that improved access to Title X clinics leads to greater uptake in highly effective contraceptives and decreases in teen pregnancy and abortion rates. In another related research branch, I study the effects of nutritional assistance benefit receipt on theft, domestic violence, and academic outcomes. Additionally, I have a growing research branch using individual-level administrative linked data from Austria. In these working papers, I analyze the effects of changes in income replacement programs like Unemployment Insurance and Disability Insurance on worker's health outcomes.

In my future and ongoing work, I will combine several novel linked individual-level administrative data sets with empirical research approaches to analyze three main safety net programs and their effects on health, crime, and labor market outcomes. In particular, the proposed research pipeline consists of a series of empirical studies on causal effects of expanding access to highly effective contraceptives through publicly funded family planning clinics (Title X), public health insurance (Medicaid), and universal basic income (UBI) (Alaska Public Fund Dividend). The aim of each project component is to leverage new administrative datasets created by linking hospitalization records, criminal records, and tax records across state agencies. Moreover, these projects will better inform how to reduce barriers for low-income individuals to access social services and increase participation rates in existing anti-poverty programs.

My main contributions in the field of public and labor economics are a direct result of my ability to build unique linked datasets at the individual level to better understand effects of program participation at a household level. These efforts include bridging datasets across state government entities that do not currently interact on a regular basis. This work will not only contribute new estimates of interest for public economists, but by linking datasets across state agencies, other researchers will also be able to use these data to push the boundaries of the research frontier in political

science, psychology, education, and sociology, among other fields. These findings will inform public policy debates on the total benefits of family planning clinics, public health insurance, and UBI programs, and, in turn, can address ways to improve lives of millions of individuals who rely on government assistance. Below I provide a detailed description of my completed research projects, works in progress, and future pipeline.

Contraception access, sex education, and teen pregnancy

Kelly, Andrea, Jason M. Lindo, and Analisa Packham. “The Power of the IUD: Effects of Expanding Access to Contraception Through Title X Clinics,” *Journal of Public Economics*, 192, 2020, 1-29.

Packham, Analisa. “Family Planning Funding Cuts and Teen Childbearing,” *Journal of Health Economics*, 55(1), 2017, 168-185.

Lindo, Jason M. and Analisa Packham. “How Much Can Expanding Access to Long-Acting-Reversible Contraceptives Reduce Teen Birth Rates?,” *American Economic Journal: Economic Policy*, 9(3), 2017, 348-376.

Carr, Jillian B. and Analisa Packham. “The Effects of State-Level Abstinence-Based Sex Education Mandates on Teen Health Outcomes,” *Health Economics*, 26(4), 2017, 403-420.

Even though more U.S. women are using contraception today than at any other point in history, there is reason to believe that access and information barriers may still play an important role in reducing unintended pregnancies. Nearly half of today’s pregnancies are unintended, and one-third of unintended pregnancies are to women using some form of contraception. Therefore, there may be some scope for government information interventions or initiatives promoting highly effective contraceptives to further reduce unplanned pregnancies, especially for teenagers.

In the projects detailed below, I highlight my work estimating how publicly funded family planning clinic (Title X) funding can affect childbearing, abortion, sexually transmitted diseases, and infant health. Taken together, these findings can better inform what policies are effective (and which are less effective) in improving health outcomes for vulnerable populations.

My first publication is titled, “The Effects of State-Mandated Abstinence-Based Sex Education on Teen Health Outcomes,” and is co-authored with Jillian Carr. In this paper, published in *Health Economics*, we analyze how recent curriculum mandates for abstinence education affect unintended pregnancy and sexually transmitted diseases. In this study, we use the variation in state mandates to estimate the causal effects of state-level sex education policies on teen sexual health outcomes. Using a difference-in-differences approach, we find that abstinence mandates have no effect on teen birth rates or teen abortion rates, although we find that abstinence education increases sexually transmitted disease rates in some states. This result holds even for the youngest group, teens aged 15-17, who were less likely to be sexually active or be exposed to the curricula prior to the state mandate.

While existing work has estimated causal effects of sex education funding or used randomized controlled trials to change information in smaller settings, our work builds on this literature by

focusing on policy language at the state level affecting broad populations of interest. Moreover, this study speaks to the effectiveness of an important policy parameter—state mandates—to better inform the consequences of these laws.

In another paper, coauthored with Jason Lindo, and published in *American Economic Journal: Economic Policy*, I revisit the question, “how can policy address teen pregnancy?” by studying an expansion in Title X services and contraceptive access for low-income women. Given the high typical-use success rate of 99.9%, many state and federal agencies have advocated for long-acting reversible contraceptives (LARCs), which include intrauterine devices and implants, and are more effective at preventing pregnancy than more commonly used contraceptives. In this paper, we analyze Colorado’s Family Planning Initiative (CFPI), the first large-scale policy intervention to promote and improve access to LARCs in the US. After showing large increases in LARC use among teens visiting clinics participating in the CFPI, we estimate the effects of the CFPI on teen birth rates using an array of quasi-experimental identification strategies with different strengths and weaknesses: (1) a difference-in-differences design that compares changes in Colorado counties with Title X clinics to changes observed in other U.S. counties with Title X clinics; (2) a difference-in-differences design that compares changes in Colorado counties with Title X clinics to changes in Colorado counties without such clinics; (3) a triple-differences design that compares changes in Colorado counties with Title X clinics to changes in Colorado counties without such clinics relative to what is observed in other states; and (4) a state-level data-driven synthetic-control design.

Our estimates indicate that the program reduced the teen birth rate by approximately five percent in the four years following its implementation, with these effects concentrated among Colorado counties with higher rates of poverty. In particular, we estimate that the CFPI prevented approximately 1,050 unintended teen births, amounting to \$22,000 per averted birth.

In similar work, Andrea Kelly, Jason Lindo and I go beyond the analysis of teenagers and estimate effects of the CFPI for older women. Whereas the work described above showed that the CFPI reduced the overall teen birth rate for counties with Title X clinics, in this study we leverage more granular data and more recent years of data to answer several new questions: Did the CFPI affect just high-school aged teenagers? Or older teenagers and women in their twenties? Do the effects vary across race and ethnicity? Did the extensive media coverage that began in 2014 alter the reach of the program? Is there any evidence of impacts on newborns’ health outcomes or abortion?

We answer these questions using two separate administrative datasets on contraception use and births. After providing evidence that the initiative led to increases in LARC use by 28,000 women aged 15–29, at least in part due to a reduction in pill use, we estimate the effects on births using a difference-in-differences design that compares changes in births for women in zip codes closest to Title X clinics to changes in births for women in zip codes farther away. We use a non-parametric approach to identify which zip codes were most affected by the initiative and find that the effects are largely concentrated among women in zip codes within 7 miles of Title X clinics. We find that the initiative reduced births by approximately 20 percent for 15–17 year olds and 18–19 year olds living in such zip codes. Averaging across all years, we find no evidence of significant effects on births among older women, or women living in more distant zip codes. On average, these statistics correspond to 6,800 fewer unintended births due to the program.

Moreover, when focusing on the period of time after the initiative received extensive media attention, we observe a trend break in the number of LARC insertions; that the effects on births among 15–17 year olds extend out to those living a greater distance from clinics; and that there are significant effects on births among 20–24 and 25–29 year olds. In other analyses, we also find some evidence that effects vary across zip code characteristics and that the CFPI reduced the number of births that typically involve relatively intensive hospital care. We also conduct an analysis of abortion, which provide suggestive evidence that the initiative also reduced unintended pregnancies among teenagers that otherwise would have ended in abortion.

Together, these papers have several policy implications. First, we provide evidence that proximity to publicly funded family planning clinics matters, and that expanding access to highly effective contraceptives can reduce unintended pregnancies and abortions for low-income women living close to such clinics. These findings build on a policy-relevant literature on the effects of travel distance on health care utilization. In doing so, we provide new insights on the ways in which providing access to previously cost-prohibitive, but highly effective, contraceptives can encourage take up and improve contraception success rates. Considering our effects are largest for teenage women, i.e. those with the highest rates of unintended pregnancies, this initiative could have important implications for individuals' economic and education trajectories. This is especially important in light of the fact that many states have recently proposed cutting funding to family planning clinics that provide low-cost contraceptives.

Indeed, in separate work, titled “Family Planning Funding Cuts and Teen Childbearing,” I estimate how policies *reducing* access to family planning services affects teen health outcomes. Specifically, this paper exploits a policy change in Texas that reduced funding for family planning services by 67 percent and resulted in over 80 clinic closures. Using data from the Texas Department of State Health Services on Title X clinic caseloads and county-level abortion rates, as well as restricted birth certificate data from the CDC, I estimate that reducing funding for family planning services in Texas increased teen birth rates by approximately 4 percent and abortion rates by 3 percent over four years. I find that birth effects are largest for the youngest teens, aged 15-17.

Overall, the results of this analysis show that funding cuts to family planning services can have consequences that increase costs for the public sector. While existing research focuses on the historical rollout of Title X clinics or the results of expanding access to family planning clinics, this paper contributes to a newer literature on the effects of reducing clinic access. As Texas is currently considering new legislation for family planning clinics and abortion providers, it is important for future research to determine to what extent government policies that reduce access to low-cost contraception can influence teen sexual behavior and unintended pregnancy. I note this paper provides important insight on the connection between reductions in family planning funding and teen sexual health outcomes.

Effects of nutritional assistance on crime and education

Bond, Timothy, Jillian B. Carr, Analisa Packham and Jonathan Smith. “Hungry for Success? SNAP Timing, SAT Scores, and College Attendance,” *American Economic Journal: Economic Policy*, paper accepted for publication March 30, 2021

Carr, Jillian B. and Analisa Packham. "SNAP Schedules and Domestic Violence," *Journal of Policy Analysis and Management*, 40(2) 2021, 1-32.

Carr, Jillian B. and Analisa Packham. "SNAP Benefits and Crime: Evidence from Changing Disbursement Schedules," *Review of Economics and Statistics*, 101(2), 2019, 310-325.

It is well-documented that income cycles created by monthly cash transfer programs affect health, mortality, crime, and domestic violence. However, much less is known about how the timing of *in-kind* transfers affect low-income communities. In three separate papers, I test whether the timing of monthly in-kind food vouchers from the Supplemental Nutrition Assistance Program (SNAP) lead to cycles of food insecurity that affect crime and domestic violence. I then, in separate work, test whether the timing of these benefits affects exam performance for high school students.

In two published research papers, I, along with Jillian Carr, analyze the effects of SNAP timing on criminal behavior. Two main economic arguments support the notion that monthly SNAP payments affect crime. The first is based on the idea that large, lump sum payments to beneficiaries constitute income shocks, which can increase consumption of complements to crime, such as leisure, or illicit drugs and alcohol. Accordingly, distributing SNAP benefits later in the month has the potential to shift crimes away from the first of the month to later dates. Given that a primary justification for implementing in-kind transfers is to target aid and reduce perceived fungibility, determining whether in-kind transfers avoid some of the adverse consequences of cash transfers is of utmost importance.

The second argument posits that, unless recipients are fully smoothing their consumption of benefits, they may face the need to reduce food intake at the end of the month due to financial stress and may engage in criminal behavior to obtain resources and/or food in response. While standard economic models of behavior imply that SNAP recipients ration benefits throughout the month to avoid shortages at the end of the benefits cycle, many studies have shown that recipients often run out of food in just 2-3 weeks.

Even though SNAP is an entitlement program administered and funded by the United States Department of Agriculture, benefits are issued by states, and states have the authority to tailor rules for eligibility and implementation. This authority extends to the organization and timing of benefits, and as a result, there is significant variation in state SNAP disbursement schedules. For example, while many states use case ID numbers to determine the monthly disbursement date, some use the first letter of a family's surname. For each household, benefits are issued on the same day each month, and no household currently receives SNAP benefits more than once per month. In each of the papers described below, I use this *variation* in SNAP schedules across households to analyze how issuance dates affect behavior.

In our first paper, published in the *Review of Economics and Statistics*, we estimate how in-kind transfers affect criminal behavior by analyzing how nutritional assistance disbursement dates affect shocks to crime levels. Specifically, we study the effects of the timing of aid disbursement on crime, focusing on two separate methodologies to analyze levels of crime and victimization. To do so, we first study a policy change in Illinois that increased the number of SNAP distribution days from one to twelve and find that staggering the distribution of benefits throughout the month leads to a 13 percent decrease in theft, driven by a 21 percent decrease in grocery store theft. Additionally, we analyze individual-level arrest data for Indiana, a state which distributes SNAP benefits based on last name, to observe

if the recipients are the victims or the perpetrators of these crimes. We find that recipients are most likely to commit crimes right before benefit receipt, when resources are the scarcest.

In a related paper, “SNAP Schedules and Domestic Violence,” Jillian Carr and I analyze the effect of nutritional assistance payments on instances of domestic abuse and child maltreatment. To do so, we again exploit the aforementioned 2010 policy change in Illinois that shifted SNAP benefit issuance later in the month to evaluate the argument that income shocks can lead to more within-household violence. We find that shifting benefit dates later in the month increased instances of domestic abuse and child maltreatment, by 7 and 30 percent, respectively, driven by increases in crimes in the last three weeks of the month. Effects are short-lived, suggesting that families may have difficulty transitioning to a new SNAP issuance date. These findings combined with our other findings on theft and grocery crimes suggest that although staggering SNAP benefits can allow families to better smooth consumption, the reduction in scarcity at the end of the month does lead to less conflict between partners. While we cannot speak to the psychological motivators in this paper, previous studies have shown that the timing of SNAP benefits is tied to patterns in alcohol purchases and drunk driving. Taken together, our results from Illinois provide new evidence that there are adverse consequences when implementing staggered SNAP issuance schedules, and policymakers must consider tradeoffs between consumption smoothing and within household violence when making decisions about the timing of government transfer payments.

Along with Timothy Bond, Jillian Carr and Jonathan Smith, I also estimate the effects of SNAP issuance timing on SAT performance for high school seniors. Given the large body of research that shows that a majority of SNAP recipients exhaust all of their monthly benefits in two weeks, it is possible that students that take the SAT near the end of their benefit cycle fare much worse academically than those receiving benefits right before the test. To estimate the effects of benefits timing, we use a large, administrative dataset from The College Board, matched with data from National Student Clearinghouse, which contains individual-level information on student high school records, SAT, AP, and PSAT test scores, and college attendance. We limit our sample to analyze students in 7 states and Washington DC that stagger the distribution of SNAP benefits by the first letter of the recipient's last name to estimate the causal effects of SNAP receipt on test scores. Since the SAT date varies from year to year, we are able to measure effects of SNAP benefit disbursement across cohorts, states, and years. Estimates indicate that students in low-income households that take the SAT in the two weeks after benefit receipt score 6 points, or 0.06 standard deviations, worse on the math exam and are 0.7 percentage points less likely to attend a 4-year college. These estimates are larger for students living in areas with high SNAP participation and those attending schools with a relatively large amount of other low-income students. We estimate that this relative performance loss due to SNAP timing results in over 1,150 students not enrolling in a 4-year college.

Altogether, these three papers shed new light on the choices that families in poverty face in response to the timing of government transfers. We note that scheduling the delivery of benefits so that families receive smaller transfers more frequently over the course of the month could benefit families and communities, more broadly. Careful scheduling of other transfers in conjunction with SNAP (e.g. payments from Temporary Assistance for Needy Families) could also help to alleviate consumption shocks.

Unintended consequences of public health interventions

Bullinger, Lindsey R., Jillian B. Carr, and Analisa Packham. "COVID-19 and Crime: Effects of Stay-at-Home Orders on Domestic Violence," *American Journal of Health Economics*, 7(3), 2021, 249-280.

Packham, Analisa and Brittany Street. "The Effects of Physical Education on Student Fitness, Achievement, and Behavior," *Economics of Education Review*, 72, 2019, 1-18.

Packham, Analisa. "Syringe Exchange Programs and Harm Reduction: New Evidence in the Wake of the Opioid Epidemic," *Journal of Public Economics*, 215, 2022, 104733.

Additionally, I have three other published papers related to public health interventions and their effects on crime and education. The first paper, joint with Lindsey Bullinger and Jillian Carr, asks whether COVID-19 lockdown policies affected domestic violence-related calls for police service, reported crimes, or arrests in 2020, relative to trends the year prior. Using cell phone activity tracking data as well as detailed case- and call-level data from the city of Chicago, we find that the Stay-at-Home ordinance increased time spent at home and increased domestic-related calls for police service. Alternatively, official reports by police officers and arrests for domestic crimes fell during this time. We estimate an 11 percent decrease in otherwise expected reports of domestic violence in March-April 2020, and posit that this wedge between calls for police service and reports expanded due to attempts of policy to maintain social distancing and/or changes in the nature and severity of calls.

Brittany Street and I use fitness and education data from Texas to estimate the effects of Texas Fitness Now, a physical education intervention for low-income Texas middle schools. In this paper, we exploit a discontinuity in program eligibility to examine students' responses to increasing the number of hours that students spent in physical education (PE) class. We find that while child body mass index, overall fitness levels and student test scores seem unresponsive to investments in physical education, school attendance rates drop by nearly 1 full school day per student, and disciplinary incidences increase by 14 percent. Moreover, we consider differential effects on gender and find that increasing time in PE class reduces attendance rates for males as well as economically disadvantaged students by nearly twice that of other students. We posit that middle-school students have strong preferences against PE and are more likely to skip school and/or experience bullying when schools implement daily PE mandates.

Finally, in "Syringe Exchange Programs and Harm Reduction: New Evidence in the Wake of the Opioid Epidemic," I analyze to what extent syringe exchange programs (SEPs) reduce bloodborne illness through syringe sharing. Using handcollected data on syringe exchange program opening dates combined with administrative data on HIV rates and mortality, I compare counties with SEP openings to other counties with existing SEPs from 2008-2016. I find that the introduction of a SEP reduces HIV rates by 11.3 percent, resulting in 12 fewer cases of HIV per county per year. However, I also find that SEPs generate moral hazard; in particular, estimates indicate that a SEP opening leads to an increase in drug- and opioid-related mortality by 12.2 and 13.5 percent, respectively. I also present new evidence that SEPs increase emergency room visits and drug-related crime, suggesting that while such programs are successful at reducing disease, they impose large unintended consequences.

Working Papers

Health effects of income replacement programs

Ahammer, Alexander and Analisa Packham. "Effects of Unemployment Insurance Duration on Mental and Physical Health," revisions requested at *Journal of Public Economics*.

Ahammer, Alexander and Analisa Packham. "Disability Insurance Screening and Worker Outcomes."

This project makes use of detailed, individual-level data from Austria and marks the first of three future projects with my coauthor, Alexander Ahammer. In our first paper, which is currently resubmitted at *Journal of Public Economics*, we test whether extensions in unemployment insurance (UI) leads to changes in worker health using administrative, individual-level data for a large sample of Austrian workers. To do so, we exploit a policy in Austria that extends UI benefits for workers aged 40 and older by 9 weeks. We first show that more generous UI time limits lead to increases in unemployment duration, and that employers do not strategically hire or fire employees just before they reach the eligibility threshold. Then, using linked administrative data on hospitalizations and drug prescriptions for workers, we estimate the extent to which unemployment affects health and risky behaviors. We find that extending unemployment benefits imposes significant health consequences that vary by gender, mirrored by gender differences in time unemployed. In particular, we find that female workers remain unemployed 3 times longer than men but match to a job with higher wages. Moreover, we find that joblessness creates a positive health shock for women and a negative health shock for men. Our first estimates indicate that female workers are less likely to be prescribed opioids within one year of unemployment, less likely to be prescribed antidepressants, and that these effects have positive health spillovers for their children. For male workers, we find little evidence of health effects of extending UI benefit duration. We show that these differential effects are driven by a combination of income and occupational changes that also vary by gender.

In our second project, and current working paper, we estimate the returns to more targeted disability insurance (DI) programs in terms of labor force participation, program spillovers, and worker health. Although the effects of DI on labor market participation is well-documented, much less is known regarding how screening out marginal workers affects health. To contribute to this literature, we use new data to analyze workers after an acute workplace injury that experience differential levels of application screening. We find that when workers face stricter screening requirements, they are less likely to claim disability and are more likely to remain in the labor force. We observe no differences in any physical or mental health outcomes. Our findings imply that imposing stricter DI screening has large fiscal benefits but does not yield any detectable health costs, on the margin.

Future research and works in progress

I also have several upcoming projects related to the effects of anti-poverty programs in various stages of completion. One ongoing project is a third paper using individual-level Austrian data, with Alexander Ahammer and Jonathan Smith. We analyze the role that firms play in affecting worker health and health care utilization. To do so, we estimate an AKM model to decompose health expenses into worker and firm effects. We use the latter to identify "healthy" and "unhealthy" firms, which may be distinct in their offered amenities, job demands, or physical environment. Using newly linked

individual-level data on Upper Austrian workers, their spouses, and their children from 1998-2018, our preliminary findings indicate that firms serve as an important input to individual health. The next steps are to explain what determines these firm effects, look more broadly at different health outcomes, and to study spillover effects on household members. For example, in future iterations of the project, we hope to address several previously understudied questions, such as: (i) How much do healthcare expenditures change for workers moving between healthy and unhealthy firms?; (ii) What is the correlation between firm health and wages, and how much do changes in wages for movers explain gains in physical and mental health?; and (iii) Do children (or spouses) benefit from parents (or partners) working in healthy firms?

Lastly, in the upcoming few years, I will use several novel linked individual-level administrative data sets with empirical research approaches to analyze three main safety net programs and their effects on health, crime, and labor market outcomes. In particular, my proposed research pipeline consists of a series of empirical studies on causal effects of expanding access to highly effective contraceptives through publicly funded family planning clinics (Title X), access to public health insurance (Medicaid), and universal basic income benefits (Alaska Public Fund Dividend). The aim of each project component is to leverage new administrative datasets created by linking hospitalization records, criminal records, and tax records across state agencies. Moreover, these projects will better inform how to reduce barriers for low-income individuals to access social services and increase participation rates in existing anti-poverty programs.