Health Outcomes and Cash Transfers: Evidence from Progresa in Urban Mexico

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Abstract

This paper studies the impact of Progresa program on urban areas and children's health anthropometric measures in Mexico. Using a differences-in-differences design by a locality's first year of enrollment and the children's age at first exposure to treatment, I estimate the intent-to-treat effects of receiving one additional year of Progresa between 11 and 14 years old. My findings show that, per year of treatment, boys gain 0.38 centimeters (cm) more height than their counterparts who did not receive the intervention. Furthermore, my analysis underscores some unintended effects of the program on adolescent's health such as an increase in the prevalence of overweight and obesity, particularly among girls (2.6 and 3.7 percentage points, respectively). While these have been observed among the adult population from the RCT, my findings suggest urban poor experience these risks at younger ages. Further research is needed to understand the households' incentives to spend their CT on healthy food, given the increasing availability of cheap ultra-processed food in urban areas.

In the late 1990s, Mexico launched Progresa, a conditional cash transfer (CCT) program, widely known for its experimental design and rigorous evaluations. The randomized control trial (RCT) assigned 506 rural localities[1] into treatment and control groups, where eligible families in the treated group received all benefits earlier than eligible control families (Levy, 2006). Using this variation, researchers have found evidence of the positive impacts of Progresa on children's health outcomes, such as height, weight, and health status.[2] Afterwards, Progresa was scaled up nationally under the assumption that its effects could be extrapolated elsewhere. However, given the program was designed to compensate for the opportunity cost of child labor by increasing school attendance in rural areas, these findings might not be the best guide for understanding Progresa's impacts in urban Mexico.

This paper provides novel causal estimates of Progresa's impacts on children's health anthropometric measures after its expansion to urban localities. I exploit the program rollout in urban localities between 2000 and 2006 derived from a major political change in Mexico. Similar to Duflo (2001)'s work in Indonesia, I use a difference-in-differences design by a locality's first year of treatment and the children's age at first exposure to the intervention. I estimate the effects of receiving one additional year of Progresa during early adolescence on height, weight, and body mass index (BMI).

The data in this paper comes from two main sources. First, I use administrative records on Progresa beneficiaries' enrollment by locality between 1999 and 2012. Second, I use the National Health and Nutrition Survey (ENSA 2000; ENSANUT 2006) to construct a repeated cross-section database by cohort of birth and locality of residence, which I link to Progresa's enrollment data. My sample includes individuals born between 1983 and 1989 who were eligible to receive the education cash transfer between 2000 and 2006.[3] Following previous studies on the effectiveness of nutrition interventions, and given the biological differences observed in the children's growth trajectories, I set 14 years old as the maximum age for an individual to be effectively exposed to Progresa. This way, my treatment corresponds to the number of years an individual was exposed to the intervention before age fourteen.

[1] Mexico is composed of 32 states, which are divided into municipalities, and these into localities.

[2] See Parker and Todd (2017) for a literature review of Progresa's findings throughout the years.

[3] Unfortunately, the ENSA 2000 only has data on health biomarkers for children over 10 years old, which restricts the implementation of a differences-in-differences strategy for younger cohorts.

Using before and after treatment data, my DiD research design models the change in children's health trajectory –as they age– that can be causally attributed to the intervention. To do this, I focus the analysis on urban localities not treated by 2000 (before only 10% of urban localities were treated), and I estimate Progresa's intent-to-treat (ITT) effects for children living in the intervened localities. Then, using the take-up rate of the program observed in 2006, I calculate the local average treatment effect (LATE) among households in the lowest socioeconomic status (SES) tercile and compare my results to the treatment effects found using the RCT sample.

My identification strategy relies on three main assumptions. First, the parallel trend (PT) evolution on average children's health outcomes between localities' treatment adoption groups for staggered settings. Unfortunately, before 2000, Mexico did not have any other disaggregated data on children's health metrics. Instead, I test this assumption using three different proxies for children's health outcomes: locality fertility rates (1990-2012), and locality infant and neonatal mortality rates (1998-2012). I implement an event study analysis (Callaway and Sant'Anna, 2021), where I do not find any pre-trends on fertility rates. Moreover, consistent with Barham (2011), I find neither significant effects of Progresa on infant mortality in urban areas nor on neonatal mortality rates. A second assumption refers to no anticipatory effects. Given my period of interest, my design exploits the program roll-out derived from a major political change in Mexico, which is very unlikely to have been anticipated. Still, if the time of treatment is correlated with a locality's characteristics, my estimates would be biased if these characteristics are also affecting my main outcomes. Using multiple administrative data sources, I show that a locality's roll-out year is unrelated to geographic, demographic, and socioeconomic variables (this is not true for rural areas).[4] Finally, a third assumption is about exclusion.

I find that receiving Progresa before 14 years old significantly increases urban children's height. My results show that, per year of treatment, boys gain 0.38 centimeters (cm) more height than their counterparts who did not receive the intervention by age fourteen. This corresponds to a 1.3% increase in their height after receiving five years of treatment, reaching

[4]From government documents, it is unclear the selection criteria for new entering localities –other than emphasizing marginality and adjacency to localities already enrolled (Progresa, 2000).

up to a 2.1% increase for boys with low SES. In the case of girls, consistent with their growth period concluding earlier, I find positive but imprecise effects on height (0.16 cm per year of treatment). A rough translation of these intention-to-treat effects into local effects on the treated implies that receiving Progresa for one year during early adolescence (11 to 14 years old) increased boys' height between 1.9 to 2.3 cm, and 1 cm for girls.

Further, I find positive and significant effects on weight for both sexes, an effect consistently larger for children in the lowest SES tercile. Urban children receiving Progresa before age fourteen gain around 0.6 kilograms (kg) more weight per year of treatment. These ITT effects represent an average local effect on the treated between of 3.3 kg more weight per one more year of exposure to treatment. Nonetheless, the latter increases do not necessarily imply a positive effect of Progresa on children's health, as more weight could be correlated with higher rates of overweight and obesity. For example, recent literature has emphasized a higher risk of a simultaneous manifestation of both undernutrition and overweight and obesity –also known as the double burden of malnutrition– among the urban poorest in low and middle-income countries (Popkin et al., 2020).

To deepen these dynamics, I perform the analysis using BMI ($^{kg}/_{m^2}$), and its standardized weight categories (i.e. underweight, overweight, obese). Two main results arise from this analysis. First, as expected, I find positive and significant effects of the intervention on children's BMI, though smaller and more imprecise for boys.[5] Second, while some of these weight gains are explained by a small decrease in underweight prevalence (not statistically significant), the share of wasted children is relatively small in my sample. Instead, my findings point out a rising concern on the other side of the distribution. On average, the probability of being overweight and obese increases between 0.3 and 2.6 percentage points per year of exposure to treatment. These increments are consistently larger for both sexes in the lowest SES tercile, a 2.9 and 3.7 percentage points increase for boys and girls, respectively. These translate to a LATE of over 10 percentage points increase in overweight and obesity prevalence per one more year of treatment.

[5] This is likely explained by the fact that boys' weight gain is accompanied by an increase in their height, as opposed for girls who already stopped growing.

The main contribution of this paper is to provide –to the best of my knowledge– the first causal estimates of Progresa's impact on health anthropometric measures of *urban* children. Shifting from the RCT's 18 months of exposure to treatment, I estimate the effects of receiving one more additional year of treatment over six years during early adolescence. Compared to the RCT effects on children's health, I find larger effects of Progresa on boys' height (twice as large) but very similar in magnitude for girls (Gertler, 2004; Fernald et al., 2009, 2008b). This can be explained by two factors. First, for very disadvantaged populations, previous studies have shown that health and nutrition interventions during adolescence might still have significant effects on children's height (Georgiadis and Penny, 2017; Leroy et al., 2014). Second, given urban areas have fewer food access issues, urban beneficiary households can spend more money on food consumption (MPC=0.80), which translates into a higher total amount of calories consumed (Angelucci and Attanasio, 2009). However, this increase in food consumption seems to have brought some unintended health effects too.

Similarly to Fernald et al. (2008a), I find a positive and detrimental effect of Progresa on body mass index, but at younger ages. My findings show a significant increase in the prevalence of overweight and obesity, particularly worrisome among girls. Given the increasing availability of cheap ultra-processed food and beverages in urban areas (Popkin et al., 2020), it is likely that Progresa's money was used to buy non-healthy food, especially as beneficiary households did not have any restrictions on how to spend the money. This lack of conditionality from cash transfer programs has been discussed to increase BMI and obesity risk (Levasseur, 2019; Forde et al., 2012), posing new challenges to the design of CCT programs. Further research is needed to understand the dynamics between households' incentives to spend their CT on healthy food, and the disproportionate barriers the urban poor face to access healthy food in low and middle-income countries (Vilar-Compte et al., 2021).

The paper proceeds as follows. Section 1 provides some background on Progresa. Section 2 explains the data and presents descriptive statistics of the sample. Section 3 details the identification strategy, and section 4 shows the results. Finally, section 5 discusses the potential mechanisms driving these results, and section 6 presents some concluding remarks, along with the paper's limitations and future research agenda on the topic.

1 Background

In 1997, following a major economic crisis, the Mexican government launched an innovative strategy to alleviate poverty: Progresa (Schooling, Health and Nutrition Program). It began as a pilot randomized control trial (RCT) in rural Mexico. The RCT selected 506 rural localities from seven states to participate in the program. Localities were randomly assigned into treatment and control groups, where eligible households in the treated group received the benefits 18 months earlier than eligible households in the control group (early 1998 to late 1999). After the RCT concluded, Progresa was expanded to eligible families in highly impoverished rural and semi-urban municipalities in Mexico (Parker and Todd, 2017; Skoufias, 2005).

Later, in 2000, Progresa rapidly escalated to the rest of the country –including urban cities. This expansion followed a big change in Mexico's political environment, when for the first time in over seventy years the incumbent party lost the presidential elections. The program continued functioning and growing through the years, and by 2016 it covered almost one-fourth of the Mexican population. Still, the intensive urban household enrollment peaked between 2001 and 2005, as new localities were incorporated each year (Figure 1). During this period, the program roll-out became less geographically targeted (by marginality classification), and its implementation differed considerably from the former rural-established program.

Originally, eligible families were notified about Progresa after a socioeconomic screening was conducted for all households. After this first screening, eligible families received a home visit to verify their socioeconomic status; and if accepted into Progresa, they remained beneficiaries for the next 3 years, as long as they comply with their co-responsibilities. However, this census became unfeasible in urban localities. Instead, interested families in urban localities needed to attend the register office and respond to the screening questionnaire to corroborate their eligibility. This entrance barrier resulted in self-selection and low take-up rates of the program, as not everyone was aware of their existence (Parker et al., 2005).

Progresa is widely known for its cash transfer (CT) conditional on school attendance. However, its multifactor design enclosed multiple benefits (Levy, 2006). These included a food CT per person, nutritional supplements, and healthcare access for all household members; all conditional on the *beneficiary coresponsibilities*. As part of the conditionality, all beneficiary members were required to attend their periodic healthcare check-ups (based on their age), and one member per household –usually the mother– needed to participate in the health and nutrition workshops offered at their public clinics (every 2 or 3 months). In addition, beneficiary families with children between 3rd and 12th grade of school received the conditional education CT.[6] While the food cash aid was fixed for all beneficiary households, the education grant's amount varied by children's school grade and sex, aiming to compensate for the opportunity cost of staying in school, with a maximum limit per family. The amounts were modified every year, and all monetary transfers were given directly to the female head of the household.

2 Data

My data comes from two main sources at the locality level. First, I use administrative records on Progresa beneficiaries' enrollment between 1999 and 2012. These include the total number of families enrolled in the program by locality of residence at the end of each fiscal year. A locality –which is the smallest geographic unit in Mexico– served as the target level to scale up Progresa.[7] I identify the year when a locality enters the intervention using the first time I observe at least one beneficiary family in the data. Following the definition of urban settlements, my sample of interest includes localities with more than 5,000 inhabitants during my period of study. Then, I match this with other available sources on geographic,

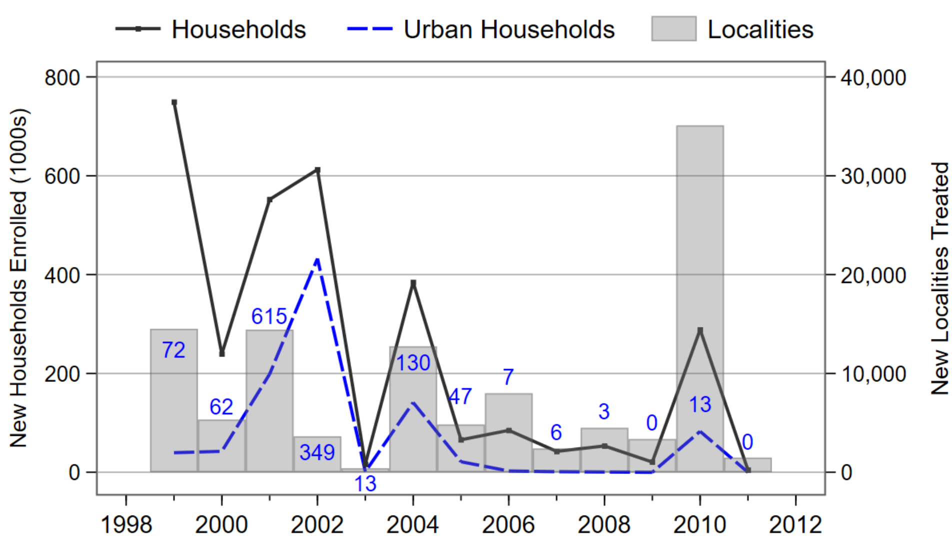
[6]Initially Progresa only covered up to the 9th grade. In 2001, they extended up to the 12th grade, and in 2012 they incorporated the 1st and 2nd grade for the schooling benefits.

[7]Mexico is composed of 32 autonomous states, which are divided into municipalities, and these into localities. Localities have changed throughout the years, but Mexican public records allow me to identify movements and changes in the territorial division using their 9-digit id (INEGI, 2022).

demographic, and socioeconomic characteristics to create a locality panel data between 1995 and 2010 ($N = 1{,}166$).[8]

Figure 1 shows the aggregate number of new households enrolled in Progresa, and the total number of localities newly incorporated between 1999 and 2011. It also includes the new household enrollment in urban areas (dotted line) with the number of new urban localities incorporated each year. As previously mentioned, we observe that the largest expansion in rural areas peaked in 1999, and later in 2010. However, for urban areas, the largest expansion occurs between 2001 and 2004. During this period, over half of the new households enrolled in the program belonged to urban areas. The only exception is 2003, the year of midterm elections, when new enrollment was temporarily suspended.

Figure 1: Progresa New Enrollment by Locality and Households, 1999-2011



Notes: Bars represent all new localities treated each year (right axis), where the number in each bar corresponds to the new urban localities treated. Source: Progresa Administrative Records.

Second, I use the National Health (ENSA, for its acronym in Spanish), and the National Health and Nutrition Survey (ENSANUT) to construct a repeated cross-section data set, representative of Mexican children from rural and urban localities. As the predecessor for the ENSANUT, the ENSA 2000 is the first cross-sectional survey in Mexico to include biological health metrics –such as height and weight. These biomarkers were measured directly on-

[8]These include cartographic data and Population Censuses from the National Institute of Statistics and Geography (INEGI); marginality indexes from the Population National Counsel (CONAPO); Health Resources data from the Ministry of Health (SS),...

site by trained and standardized nurses, following international guidelines. Weight was measured in kilograms (kg) using a calibrated solar scale, and height in centimeters (cm) using a flexometer. While the ENSANUT measures biomarkers for children over 1 year old, the ENSA 2000 only includes them for adults and children over 10 years old (INSP, 2003).

In addition,[9] the ENSANUT includes data on the socioeconomic and demographic characteristics of households' members, such as indigenous language, literacy, schooling, marital status, employment, self-reported income, and government subsidies. It also incorporates information on houses' economic characteristics; for example, ownership, construction materials (i.e. floor, walls, roof), number of rooms, household assets, sanitary conditions (e.g. drinking water, sewage), and access and utilization of healthcare services. With these, I construct a household's socioeconomic status (SES) index –for each year– using principal component analysis (PCA). When comparing the index with Progresa's take up rate in 2006, all beneficiary households lie in the first SES quartile. Thus, I define as low SES those children from households in the lowest SES quartile for each wave, who are more likely to represent Progresa's eligible population. For comparison across years, I transform this index to percentiles.

By matching both datasets, I construct a repeated cross-section database for individuals by cohort of birth and locality of residence. This includes cohorts of birth between 1983 and 1989, who would have been eligible to receive Progresa's education grant (11 to 17 years old) if their locality were treated in 2000 (with available health data in the first wave). My sample includes 11,710 children residing in 427 urban localities. In the next section, I propose and test an identification strategy that allows me to estimate the intent-to-treat (ITT) effect of receiving Progresa during early adolescence.

[9] From now on, I will use ENSANUT to refer to both the ENSA (2000) and ENSANUT surveys.

Table 1: Mean Descriptive Statistics on Urban Households by Socioeconomic Status

	ENSANUT 2000			ENSANUT 2006		
	(1) All	(2) Low SES	(3) High SES	(4) All	(5) Low SES	(6) High SES
Take-up of Progresa (%)	0.0	0.0	0.0	9.8	26.5	0.0
Household size	3.98	4.76	3.67	4.28	4.33	4.28
Health Insurance (prop.)	0.58	0.43	0.65	0.61	0.56	0.64
With children (prop.)	0.68	0.90	0.60	0.69	0.70	0.69
Number of children	1.49	2.43	1.14	1.56	1.73	1.48
With adults over 70y (prop.)	0.13	0.03	0.15	0.15	0.20	0.13
Head of Household						
Age	45.7	36.4	48.0	48.3	49.5	47.7
Female (prop.)	0.04	0.04	0.04	0.22	0.29	0.19
Married (prop.)	0.76	0.88	0.72	0.76	0.69	0.79
Schooling (years)	7.76	6.68	8.21	7.30	5.28	8.58
House characteristics						
Rooms per person	0.61	0.36	0.71	0.58	0.51	0.62
Firm roof (prop.)	0.76	0.54	0.86	0.80	0.51	0.97
Firm floor (prop.)	0.96	0.88	0.99	0.96	0.89	1.00
Firm walls (prop.)	0.97	0.93	0.99	0.93	0.84	0.99
With electricity (prop.)	0.99	0.98	1.00	0.99	0.98	1.00
With sewage (prop.)	0.94	0.85	0.99	0.96	0.89	1.00
With water acces (prop.)	0.97	0.92	0.99	0.98	0.94	1.00
Households (N)	27,981	7,243	17,148	29,349	10,758	16,948

Notes: Sample weighted means. Low SES corresponds to first index tercile; high SES includes second and third index terciles. Sources: ENSANUT.

Table 2: Descriptive Statistics on Anthropometric Measures

	Male			Female		
	ENSANUT 2000	ENSANUT 2006	p-value	ENSANUT 2000	ENSANUT 2006	p-value
Adults						
Height (cm)	166.9	166.9	0.929	154.3	154.2	0.287
Weight (kg)	77.2	78.2	0.002	67.8	69.2	0.000
BMI	27.5	27.9	0.000	28.3	29.0	0.000
Underweight (%)	0.8	0.8	0.963	0.9	0.7	0.098
Overweight (%)	46.1	46.2	0.875	39.0	38.1	0.250
Obesity (%)	25.7	28.2	0.012	33.5	38.5	0.000
Observations	3,684	4,527	8,211	7,858	7,193	15,051
Cohorts: 1983-1989						
Height (cm)	153.9	168.8	0.000	150.9	156.6	0.000
Weight (kg)	50.2	69.3	0.000	49.6	59.4	0.000
BMI	20.8	24.3	0.000	21.5	24.1	0.000
Underweight (%)	5.7	6.2	0.479	5.8	5.4	0.544
Overweight (%)	20.5	24.8	0.000	23.8	24.4	0.633
Obesity (%)	9.2	11.1	0.021	8.7	9.0	0.647
Observations	3,108	2,414	5,522	3,335	2,853	6,188

Notes: Sample weighted means. Adults includes individuals between 25 to 49 years old. Sources: ENSANUT.

3 Identification Strategy

My identification strategy exploits the temporal variation in Progresa's roll-out at the locality level and age at first exposure to the program. For each locality ℓ, I observe the year when they receive the program for the first time. I focus the analysis to urban localities receiving Progresa between 2001 and 2005, which I define as the treatment adoption group G_ℓ. Note, this excludes 17 localities treated later in time, which are also very different from those treated during my period of interest (see Table 3).

However, not all children exposed to the intervention will be potentially affected. Progresa can only affect children's health biomarkers if it occurs during a period of biological growth. For the same treatment adoption group G_ℓ, the individual's exposure to treatment will vary by cohort of birth. For each cohort of birth j, I calculate the age at first exposure to Progresa based on their locality's treatment adoption group as: $\tilde{a}_0 = G_\ell - j$. Following Parker and Vogl (2023), I set fourteen as the maximum age of effective exposure to Progresa.[10] I define my treatment as a continuous variable which accounts the total years of treatment received before (or equal) 14 years old in 2006. Based on this definition, children have to be younger than 14 years old in 2000. Furthermore, given I only observe health outcomes of children over 10 years old at baseline, my analysis focuses on children born between 1987 and 1989, who were 11 to 13 years old in 2000 and 17 to 19 years old in 2006.

Similar to Duflo (2001) analysis in Indonesia, I employ a differences-in-differences (DiD) design with repeated cross-sectional data. In addition to the standard DiD estimation, I include a vector of cohort of birth by time fixed effects that controls for the stage in their growth trajectory. I estimate my model using the following equation:

$$Y_{ij\ell st} \;=\; \beta\, YearsTreated_{j\ell t} \,+\, \alpha_t \times \phi_j \,+\, \theta_{g(\ell)} + \mathbb{X}'_{i\ell}\Gamma \,+\, \eta_s \,+\, \varepsilon_{ij\ell st} \tag{1}$$

where, $Y_{ij\ell st}$ is the health outcome for individual i from cohort of birth j in locality ℓ in state s at year t; $YearsTreated_{j\ell t}$ is the total years of treatment received before 14 years old

[10] This threshold is also illustrated in Figure ??, where growth stabilizes around fourteen years old for girls, and around fifteen years for boys.

in 2006; $\theta_{g(\ell)}$ corresponds to treatment adoption group fixed effects; α_t are time fixed effects; ϕ_j are cohort of birth fixed effects (1987-1989) $\mathbb{X}_{i\ell}$ is a vector of individual and locality covariates; η_s are state fixed effects; and $\varepsilon_{i\ell sct}$ is an error term. I cluster my standard errors by locality. Given I cannot observe who was eligible to receive the program before it began, my analysis reflects an intent-to-treat (ITT) approach, rather than a treatment effect on the treated.

My identification strategy requires three main assumptions. First, it relies on the abrupt transition of urban localities into receiving Progresa. As mentioned before, given the most impoverished municipalities received the intervention earlier, the second phase of Progresa's scale-up was less economic and geographically targeted. While the municipality marginality index was the main criteria to incorporate new localities, there are no records of a clear threshold used to decide the incorporation of new urban localities. By definition, urban localities have a lower marginality index than rural areas. Still, if initial poverty determines a locality's year of enrollment, my estimates will be biased. I test this by regressing a locality's transition year with a vector of pre-treatment demographic, socioeconomic, and geographic characteristics. Table 3 shows the descriptive statistics *pre*–intervention by treatment adoption group, along with the OLS coefficients. Despite the differences in levels, I do not find any evidence suggesting a correlation between the time of treatment and important economic determinants (columns 7 and 8). Another reason for this could be the closeness between urban centers, as proximity within treated localities was also an incorporation criteria to avoid migration between localities.

The second assumption refers to the parallel trends (PT) premise. My strategy assumes if treatment had not occurred, the average outcomes for all adoption groups g_ℓ would have evolved in parallel.[11] Ideally, I would test for pre-trends in my main outcomes between treatment and control groups. However, before 2000, Mexico did not have any other disaggregated data on children's health biomarkers. Instead, I use three different outcomes as proxies for children's health, which the literature has evidenced in their correlation with health biomarkers. Following Callaway and Sant'Anna (2021), I implement an event-study

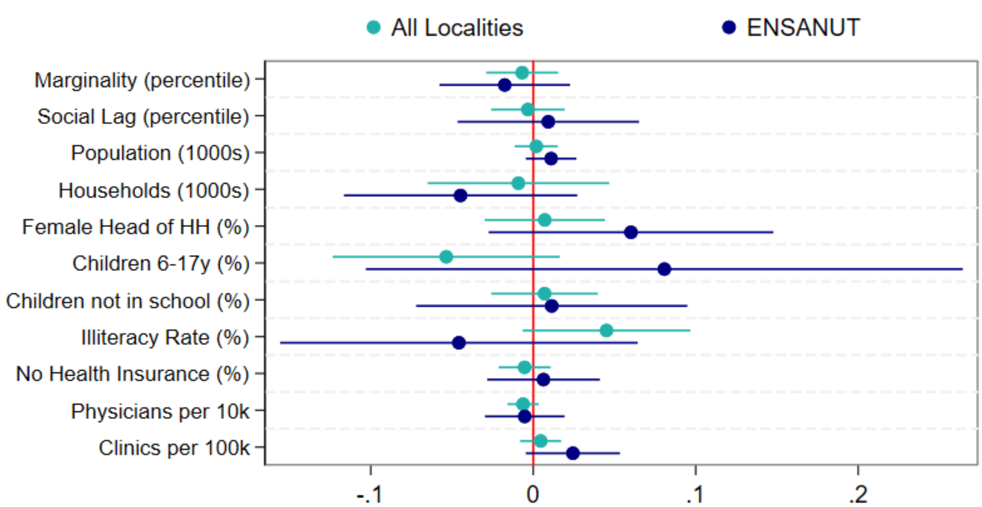
[11] For all $t \neq t'$ and $g \neq g'$: $\mathbb{E}\left[Y_{\ell,t}(0) - Y_{\ell,t'}(0) \mid G_\ell = g \right] = \mathbb{E}\left[Y_{\ell,t}(0) - Y_{\ell,t'}(0) \mid G_\ell = g' \right]$

Table 3: Baseline Characteristics for Urban Localities by Treatment Adoption Group

	Means in 2000 by Year of First Treatment					
	(1) 2001	(2) 2002	(3) 2003	(4) 2004	(5) 2005	(6) After
Marginality (percentile)	59.3	42.5	32.7	37.1	37.4	18.3
Social Lag (percentile)	58.1	43.8	34.8	40.3	42.8	19.7
Population (1000s)	14.3	75.2	9.7	159.1	45.8	409.5
Households (1000s)	3.3	18.2	2.2	36.4	10.7	104.9
Female Head of HH (%)	18.5	18.1	15.9	16.1	14.9	20.8
Children 6-17y (%)	27.8	26.6	26.2	26.2	25.5	21.0
Children not in school (%)	17.3	14.9	14.9	15.4	13.1	15.7
Illiteracy Rate (%)	10.6	7.8	6.6	6.8	5.6	5.7
No Health Insurance (%)	65.4	55.6	52.1	57.0	61.8	54.0
Physicians per 10k	8.8	6.6	3.9	5.7	5.8	9.3
Clinics per 100k	12.2	8.0	12.2	8.2	8.4	2.4
Localities $(N = 1,166)$	615	349	13	130	47	17

Notes: Sample restricted to urban localities treated after 2000. Sources: CONAPO, INEGI, Progresa Administrative Records, Ministry of Health.

Figure 2: Predicting a Locality's Year of First Treatment (2001-2012)

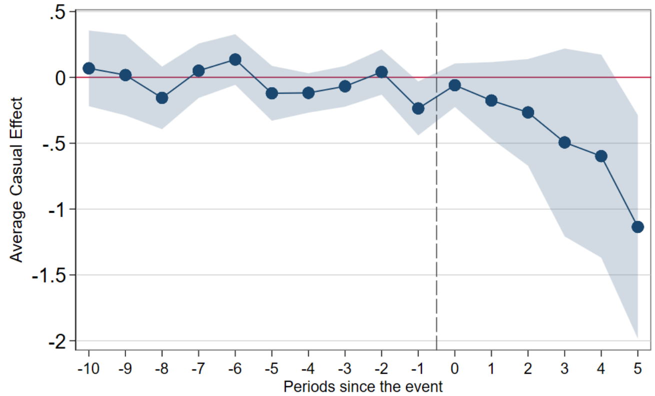


Notes: $Year_{\ell m} = \alpha + \mathbb{X}_{\ell}'\beta + \eta_m + \varepsilon_{\ell m}$ for locality ℓ in municipality m. OLS coefficients with 95% confidence intervals (intercept omitted). Standard errors clustered by locality, with population weights. Sample restricted to urban localities treated after 2000. Sources: CONAPO, INEGI, Progresa Administrative Records, Ministry of Health, ENSANUT.

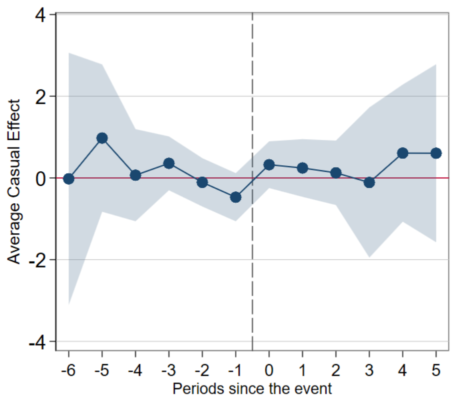
analysis by year when a locality first receives the program using annual fertility rates, and infant and neonatal mortality rates for urban localities (Figure 3). Consistent with previous work by Barham (2011), I find no significant effects of Progresa on infant mortality in urban areas, also true for neonatal mortality rates. Regarding fertility rates, I observe a significant decrease after the intervention. However, given my sample was at least ten years old at the time of the intervention, this does not affect my analysis.

Figure 3: Event-Study Analysis for Pre-Trends in Health Outcomes

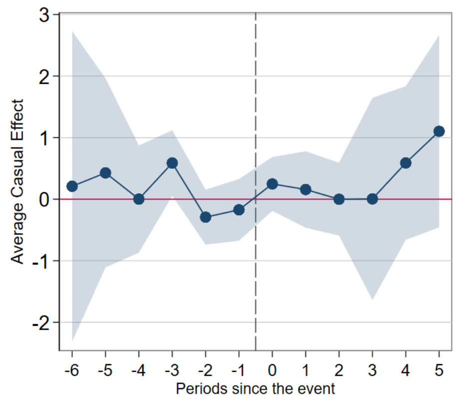
(a) Fertility Rate: 1990-2006



(b) Infant Mortality Rate: 1998-2006



(c) Neonatal Mortality Rate: 1998-2006



Notes: Callaway and Sant'Anna (2021) estimator with 95% confidence intervals (CI). Infant Mortality Rate equals number of deaths in children under one year old per 1,000 births. Neonatal Mortality Rate equals number of deaths in children under one month old per 1,000 births. Fertility Rate equals total births per 1,000 inhabitants. All rates are annual by urban locality of residence, weighted by population. H_0: $\boldsymbol{\beta}^{PRE} = 0$, $p-$value: (a) 0.500, (b) 0.883, (c) 0.837. Sources: Natality records, Mortality records, Population Censuses (1990, 1995, 2000, 2005, 2010).

4 Results

Table 4: Intent-to-Treat Effects on Anthropometric Measures

	Height (cm)		Weight (kg)		BMI	
	(1) Boys	(2) Girls	(3) Boys	(4) Girls	(5) Boys	(6) Girls
Years Treated	0.384**	0.168	0.601**	0.664**	0.128	0.329***
	(0.167)	(0.151)	(0.258)	(0.284)	(0.089)	(0.107)
SES Index	0.049***	0.021***	0.042***	0.023*	0.005	0.004
(percentile)	(0.008)	(0.006)	(0.011)	(0.014)	(0.004)	(0.005)
Age	1.201**	1.402***	1.526*	0.905	0.380	0.132
	(0.488)	(0.372)	(0.859)	(0.601)	(0.286)	(0.250)
Locality Controls						
Marginality	0.034**	-0.041***	0.033	-0.004	0.007	0.013
(percentile)	(0.017)	(0.015)	(0.025)	(0.024)	(0.008)	(0.009)
Children 6-17y (%)	-0.441***	-0.080	-0.265	-0.297	-0.032	-0.155
	(0.155)	(0.145)	(0.207)	(0.278)	(0.074)	(0.101)
Physicians per 1000s	0.449	-0.143	0.285	0.530	0.028	0.282**
	(0.368)	(0.289)	(0.314)	(0.388)	(0.116)	(0.120)
State FE	yes	yes	yes	yes	yes	yes
Cohort × Time FE	yes	yes	yes	yes	yes	yes
Mean DV	144.1	145.3	41.7	42.9	19.8	20.0
Observations	2,702	2,960	2,726	2,929	2,697	2,907
R^2	0.766	0.512	0.555	0.371	0.215	0.219

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table 5: Intent-to-Treat Effects on Standardized Anthropometric Measures

	Height-for-Age		Weight-for-Age		BMI-for-Age	
	(1) Boys	(2) Girls	(3) Boys	(4) Girls	(5) Boys	(6) Girls
Years Treated	0.052**	0.015	0.052**	0.075***	0.026	0.068***
	(0.023)	(0.023)	(0.026)	(0.028)	(0.024)	(0.025)
SES Index	0.007***	0.003***	0.004***	0.003**	0.001	0.001
(percentile)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Age	-0.114*	-0.055	-0.095	-0.018	-0.058	-0.008
	(0.062)	(0.055)	(0.078)	(0.059)	(0.074)	(0.057)
Locality Controls						
Marginality	0.005**	-0.006***	0.005*	0.001	0.003	0.003
(percentile)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)
Children 6-17y (%)	-0.067***	-0.016	-0.044*	-0.058***	-0.011	-0.045**
	(0.021)	(0.022)	(0.023)	(0.022)	(0.021)	(0.019)
Physicians per 1000s	0.058	-0.026	0.039	0.040	0.010	0.052*
	(0.042)	(0.043)	(0.029)	(0.037)	(0.039)	(0.027)
State FE	yes	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes
Mean DV	-0.34	-0.31	0.14	0.13	0.47	0.42
Observations	2,702	2,960	2,700	2,909	2,697	2,907
R^2	0.169	0.206	0.067	0.089	0.035	0.061

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table 6: Intent-to-Treat Effects on BMI Categories

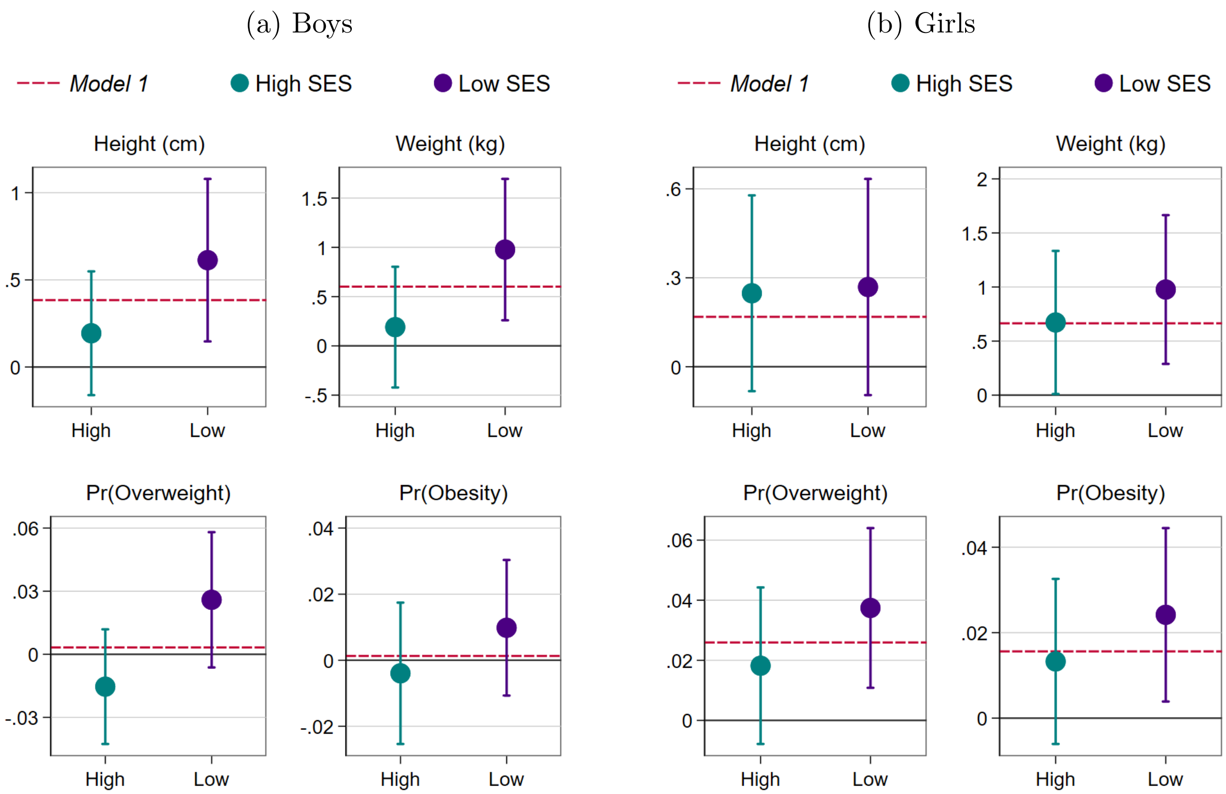
	Underweight		Overweight		Obesity	
	(1) Boys	(2) Girls	(3) Boys	(4) Girls	(5) Boys	(6) Girls
Years Treated	0.0021	-0.0019	0.0033	0.0259**	0.0013	0.0156*
	(0.0082)	(0.0086)	(0.0124)	(0.0113)	(0.0085)	(0.0086)
SES Index	0.0003	0.0000	0.0004	0.0004	0.0009***	0.0004
(percentile)	(0.0005)	(0.0003)	(0.0005)	(0.0005)	(0.0003)	(0.0004)
Age	0.0111	-0.0217	-0.0127	-0.0244	0.0255	-0.0330*
	(0.0208)	(0.0224)	(0.0309)	(0.0281)	(0.0245)	(0.0196)
Locality Controls						
Marginality	-0.0003	-0.0005	0.0015	0.0014	0.0001	0.0006
(percentile)	(0.0008)	(0.0006)	(0.0011)	(0.0010)	(0.0007)	(0.0006)
Children 6-17y (%)	-0.0068	-0.0023	-0.0147	-0.0130*	-0.0028	-0.0071
	(0.0056)	(0.0057)	(0.0094)	(0.0078)	(0.0067)	(0.0069)
Physicians per 1000s	0.0078	-0.0026	0.0130	-0.0042	-0.0002	0.0333***
	(0.0107)	(0.0064)	(0.0173)	(0.0127)	(0.0075)	(0.0118)
State FE	yes	yes	yes	yes	yes	yes
Cohort × Time FE	yes	yes	yes	yes	yes	yes
Mean DV	0.085	0.095	0.265	0.255	0.139	0.115
Observations	1,819	2,012	2,257	2,480	1,927	2,079
R^2	0.050	0.044	0.028	0.041	0.047	0.063

Notes: Comparison group is normal weight. Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p<0.01$, ** $p<0.05$, * $p<0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

4.1 ITT by Socioeconomic Status

$$
\begin{aligned}
Y_{ij\ell st} \; &= \beta_{_L} \, Years\,Treated_{j\ell t} \times Low_{it} \; + \; \beta_{_H} \, Years\,Treated_{j\ell t} \times High_{it} \\
&\quad + \; \alpha_t \times \phi_j \; + \; \theta_{_{g(\ell)}} + \; \mathbb{X}'_{i\ell}\Gamma \; + \; \eta_s \; + \; \varepsilon_{ij\ell st}
\end{aligned} \tag{2}
$$

Figure 4: Intent-to-Treat Effects of Progresa by Sex and Socioeconomic Status



Notes: $\widehat{\beta}$ coefficient with 95% confidence intervals (equation 2). Sample restricted to children born between 1987-1989 from urban localities treated between 2001-2005. Standard errors clustered by locality. See the text for a description of the variables. Sources: ENSANUT, CONAPO, INEGI, Progresa Administrative Records, Ministry of Health.

4.2 Local Average Treatment Effects (LATE)

Then, using the take-up rate of the program observed in 2006, I estimate the Local Average Treatment Effects (LATE) with a Two-Step Least Squares (2SLS) following Angrist and (CITE).

$$Progresa_{ij\ell st} = \gamma \, Years\,Treated_{j\ell t} + \alpha_t \times \phi_j + \theta_{g(\ell)} + \mathbb{X}'_{i\ell}\Gamma + \eta_s + \epsilon_{ij\ell st} \tag{3}$$

$$Y_{ij\ell st} = \beta \, \widehat{Progresa}_{ij\ell st} + \alpha_t \times \phi_j + \theta_{g(\ell)} + \mathbb{X}'_{i\ell}\Gamma + \eta_s + \varepsilon_{ij\ell st} \tag{4}$$

where, $Progresa_{ij\ell st} = 1$ if individual i from cohort of birth j in locality ℓ in state s receives Progresa in 2006.

5 Mechanisms

While this could be derived from receiving the intervention at different growth periods and the biological differences by sexes, for very disadvantaged populations, health and nutrition interventions during adolescence might still have significant effects on children's height (Georgiadis and Penny, 2017; Leroy et al., 2014)

From these seemingly opposite effects, we need to understand first the differences among urban beneficiaries –before evaluating the net effect of Progresa on children's health.

As mentioned before, Progresa was originally designed for rural communities. However, even among low-income population, urban areas have higher schooling rates than rural localities. In this sense, we would expect that the trade-off between receiving Progresa's CCT and keeping children in school to be lower for urban beneficiary families. This has been evidenced in previous studies. For example, Behrman et al. (2012) estimate Progresa's impact on urban school attendance. They find that –for an average treatment of 18 months– secondary school enrollment (12 to 14 years old) increases between 2.7 and 3 percentage points for girls, and between 1 and 1.3 percentage points for boys. In comparison, for the same age bracket using the RCT sample, the effects of receiving the intervention 18 months earlier are significantly

Table 7: LATE Estimates per Year on Anthropometric Measures

	Height (cm)		Weight (kg)		BMI	
	(1) Boys	(2) Girls	(3) Boys	(4) Girls	(5) Boys	(6) Girls
$\widehat{Progresa} = 1$	1.955**	1.006	3.218***	3.375***	0.752*	1.584***
	(0.762)	(0.719)	(1.193)	(1.272)	(0.417)	(0.474)
SES Index	0.078***	0.036***	0.089***	0.072***	0.016**	0.027***
(percentile)	(0.014)	(0.013)	(0.021)	(0.024)	(0.007)	(0.009)
Age	1.060**	1.324***	1.288	0.651	0.322	0.014
	(0.492)	(0.382)	(0.853)	(0.621)	(0.285)	(0.261)
Locality Controls						
Marginality	0.017	-0.050***	0.004	-0.035	0.000	-0.001
(percentile)	(0.018)	(0.015)	(0.027)	(0.025)	(0.009)	(0.009)
Children 6-17y (%)	-0.494***	-0.107	-0.353*	-0.385	-0.053	-0.197*
	(0.153)	(0.147)	(0.207)	(0.284)	(0.074)	(0.103)
Physicians per 1000s	0.642*	-0.045	0.604*	0.859**	0.103	0.437***
	(0.367)	(0.303)	(0.341)	(0.394)	(0.126)	(0.122)
State FE	yes	yes	yes	yes	yes	yes
Cohort × Time FE	yes	yes	yes	yes	yes	yes
Mean DV	144.1	145.3	41.7	42.9	19.8	20.0
Observations	2,702	2,960	2,726	2,929	2,697	2,907
R^2	0.766	0.512	0.555	0.371	0.216	0.219

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

higher, with an average increase of 9 and 6 percentage points in school enrollment among girls and boys, respectively (Schultz, 2004).

The former lower trade-off among urban households can also be interpreted as a higher marginal benefit per dollar of transfer received. Still, given these are very low-income families, it is very likely that they use this extra income mainly on food consumption. Using the same urban sample, Angelucci and Attanasio (2009) find that beneficiary households use 80% of their transfer on food consumption. Their findings show that after 18 months of treatment, beneficiary households increase the total amount of calories consumed between 12 and 17.5%. This compares to an average increase of 7% in total calories among treated households in

Table 8: LATE Estimates per Year on Standardized Anthropometric Measures (z-scores)

	Height-for-Age		Weight-for-Age		BMI-for-Age	
	(1) Boys	(2) Girls	(3) Boys	(4) Girls	(5) Boys	(6) Girls
$\widehat{Progresa} = 1$	0.259**	0.100	0.293**	0.386***	0.167	0.338***
	(0.107)	(0.107)	(0.121)	(0.129)	(0.113)	(0.114)
SES Index (percentile)	0.010***	0.005**	0.009***	0.008***	0.003*	0.006***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Age	-0.133**	-0.063	-0.117	-0.048	-0.072	-0.033
	(0.063)	(0.056)	(0.078)	(0.061)	(0.074)	(0.059)
Locality Controls						
Marginality (percentile)	0.003	-0.007***	0.002	-0.003	0.002	0.000
	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)	(0.002)
Children 6-17y (%)	-0.074***	-0.018	-0.052**	-0.068***	-0.016	-0.054***
	(0.021)	(0.022)	(0.022)	(0.022)	(0.021)	(0.020)
Physicians per 1000s	0.084**	-0.016	0.068**	0.078**	0.027	0.085***
	(0.042)	(0.045)	(0.031)	(0.039)	(0.040)	(0.028)
State FE	yes	yes	yes	yes	yes	yes
Cohort × Time FE	yes	yes	yes	yes	yes	yes
Mean DV	-0.34	-0.31	0.14	0.13	0.47	0.42
Observations	2,702	2,960	2,700	2,909	2,697	2,907
R^2	0.169	0.206	0.068	0.089	0.035	0.062

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

the RCT (Gertler et al., 2012; Hoddinott and Skoufias, 2004). These, combined with the fact that urban areas have less food access issues –consequently, are less likely to go hungry, can explain the larger effects of Progresa on urban children's height.

Two main factors might help explain these unintended effects. First, beneficiary households did not have any restrictions on how to spend the money. This lack of conditionality from cash transfers programs has been discussed to increase BMI and obesity risk (Levasseur, 2019; Forde et al., 2012). In fact, this detrimental effect of Progresa was previously observed by Fernald et al. (2008a) among adults' BMI from the RCT sample.

Second, despite the so called urban advantage, previous literature has evidenced the urban poorest face disproportionate barriers to access healthy food and a higher risk of food insecurity (Vilar-Compte et al., 2021). For example, the urban poor experience higher transportation costs to buy food, limited access to fresh produce, and lack of production for self-consumption (Dutra et al., 2018). These, combined with an increase in the availability of cheap ultra-processed food and beverages in urban areas, poses new challenges for

Table 9: Descriptive Statistics on Progresa's Beneficiary Households

	ENSANUT 2000		ENSANUT 2006				
	Rural		Rural		Urban		Mean
	Mean	SD	Mean	SD	Mean	SD	Differences
Household size	5.06	(2.23)	4.83	(2.14)	5.28	(2.21)	0.458***
With children (prop.)	0.84	(0.37)	0.81	(0.40)	0.88	(0.33)	0.070***
Number of children	2.68	(1.95)	2.33	(1.78)	2.69	(1.73)	0.356***
Head of Household							
Age	45.5	(15.3)	47.9	(15.5)	45.4	(14.4)	-2.456***
Female (prop.)	0.03	(0.18)	0.20	(0.40)	0.24	(0.43)	0.046***
Married (prop.)	0.86	(0.35)	0.83	(0.37)	0.79	(0.41)	-0.047***
Schooling (years)	4.23	(2.78)	4.03	(3.23)	4.63	(3.47)	0.605***
House characteristics							
Rooms per person	0.39	(0.27)	0.43	(0.26)	0.37	(0.21)	-0.059***
Firm roof (prop.)	0.38	(0.49)	0.44	(0.50)	0.53	(0.50)	0.092***
Firm floor (prop.)	0.61	(0.49)	0.77	(0.42)	0.83	(0.37)	0.058***
Firm walls (prop.)	0.91	(0.28)	0.79	(0.41)	0.87	(0.34)	0.073***
With electricity (prop.)	0.90	(0.30)	0.95	(0.22)	0.98	(0.14)	0.029***
With sewage (prop.)	0.40	(0.49)	0.69	(0.46)	0.88	(0.33)	0.185***
With water acces (prop.)	0.62	(0.49)	0.81	(0.40)	0.95	(0.23)	0.139***
Households (N)	4,195		10,257		3,151		13,408

Notes: Sources: ENSANUT.

6 Concluding Remarks

References

Angelucci, M. and Attanasio, O. (2009). Oportunidades: program effect on consumption, low participation, and methodological issues. *Economic development and cultural change*, 57(3):479–506.

Barham, T. (2011). A healthier start: the effect of conditional cash transfers on neonatal and infant mortality in rural mexico. *Journal of Development Economics*, 94(1):74–85.

Behrman, J. R., Gallardo-Garcia, J., Parker, S. W., Todd, P. E., and Vélez-Grajales, V. (2012). Are conditional cash transfers effective in urban areas? evidence from mexico. *Education economics*, 20(3):233–259.

Bossavie, L., Alderman, H., Giles, J., and Mete, C. (2021). The effect of height on earnings: Is stature just a proxy for cognitive and non-cognitive skills? *Economics & Human Biology*, 43:101046.

Callaway, B. and Sant'Anna, P. H. (2021). Difference-in-differences with multiple time periods. *Journal of econometrics*, 225(2):200–230.

Currie, J. and Vogl, T. (2013). Early-life health and adult circumstance in developing countries. *Annu. Rev. Econ.*, 5(1):1–36.

Duflo, E. (2001). Schooling and labor market consequences of school construction in indonesia: Evidence from an unusual policy experiment. *American economic review*, 91(4):795–813.

Dutra, L. V., Morais, D. d. C., Santos, R. H. S., Franceschini, S. d. C. C., and Priore, S. E. (2018). Contribution of the production for self-consumption to food availability and food security in households of the rural area of a brazilian city. *Ecology of food and nutrition*, 57(4):282–300.

Fernald, L. C., Gertler, P. J., and Hou, X. (2008a). Cash component of conditional cash transfer program is associated with higher body mass index and blood pressure in adults. *The Journal of nutrition*, 138(11):2250–2257.

Fernald, L. C., Gertler, P. J., and Neufeld, L. M. (2008b). Role of cash in conditional cash transfer programmes for child health, growth, and development: an analysis of Mexico's Oportunidades. *The Lancet*, 371(9615):828–837. https://doi.org/10.1016/S0140-6736(08)60382-7.

Fernald, L. C., Gertler, P. J., and Neufeld, L. M. (2009). 10-year effect of Oportunidades Mexico's conditional cash transfer programme, on child growth, cognition, language, and behaviour: a longitudinal follow-up study. *The Lancet*, 374(9706):1997–2005.

Forde, I., Chandola, T., Garcia, S., Marmot, M. G., and Attanasio, O. (2012). The impact of cash transfers to poor women in colombia on bmi and obesity: prospective cohort study. *International journal of obesity*, 36(9):1209–1214.

Georgiadis, A. and Penny, M. E. (2017). Child undernutrition: opportunities beyond the first 1000 days. *The Lancet Public Health*, 2(9):e399.

Gertler, P. (2004). Do conditional cash transfers improve child health? Evidence from PROGRESAs control randomized experiment. *American Economic Review*, 2(94):336–341.

Gertler, P. J., Martinez, S. W., and Rubio-Codina, M. (2012). Investing cash transfers to raise long-term living standards. *American Economic Journal: Applied Economics*, 4(1):164–192.

Hoddinott, J. and Skoufias, E. (2004). The impact of progresa on food consumption. *Economic development and cultural change*, 53(1):37–61.

INEGI (2022). Archivo Historico de Localidades. www.inegi.org.mx/app/geo2/ahl/. Accessed: 2023-01-30.

INSP (2003). Encuesta Nacional de Salud, 2000. 2. La salud de los adultos, Instituto Nacional de Salud Pública y Secretaría de Salud.

Leroy, J. L., Ruel, M., Habicht, J.-P., and Frongillo, E. A. (2014). Linear growth deficit continues to accumulate beyond the first 1000 days in low-and middle-income countries: global evidence from 51 national surveys. *The Journal of nutrition*, 144(9):1460–1466.

Levasseur, P. (2019). Can social programs break the vicious cycle between poverty and obesity? evidence from urban mexico. *World Development*, 113:143–156.

Levy, S. (2006). *Progress Against Poverty: Sustaining Mexico's Progresa-Oportunidades Program*. Brookings Institution Press. https://books.google.com/books?id=hCjsAAAAMAAJ.

Parker, S. W. and Todd, P. (2017). Conditional cash transfers: The case of Progresa/Oportunidades. *Journal of Economic Literature*, 55(3):866–915.

Parker, S. W., Todd, P. E., and Wolpin, K. I. (2005). Within-family treatment effect estimators: The impact of oportunidades on schooling in mexico.

Parker, S. W. and Vogl, T. (2023). Do Conditional Cash Transfers Improve Economic Outcomes in the Next Generation? Evidence from Mexico. *The Economic Journal*, page uead049.

Popkin, B. M., Corvalan, C., and Grummer-Strawn, L. M. (2020). Dynamics of the double burden of malnutrition and the changing nutrition reality. *The Lancet*, 395(10217):65–74.

Progresa (2000). Selección de localidades susceptibles de recibir los beneficios del Progresa.

Schultz, P. (2004). School subsidies for the poor: evaluating the mexican progresa poverty program. *Journal of Development Economics*, 74(1):199–250. https://doi.org/10.1016/j.jdeveco.2003.12.009.

Skoufias, E. (2005). *PROGRESA and its impacts on the welfare of rural households in Mexico*, volume 139. Intl Food Policy Res Inst.

Vilar-Compte, M., Burrola-Méndez, S., Lozano-Marrufo, A., Ferré-Eguiluz, I., Flores, D., Gaitán-Rossi, P., Teruel, G., and Pérez-Escamilla, R. (2021). Urban poverty and nutrition challenges associated with accessibility to a healthy diet: a global systematic literature review. *International Journal for Equity in Health*, 20:1–19.

A Tables

Table A.1: Descriptive Statistics on Urban Households by Socioeconomic Status

	ENSANUT 2000			ENSANUT 2006		
	(1) All	(2) Low SES	(3) High SES	(4) All	(5) Low SES	(6) High SES
Take-up of Progresa (%)	0.0	0.0	0.0	9.8	26.5	0.0
	(0.0)	(0.0)	(0.0)	(29.7)	(44.2)	(0.0)
Household size	3.98	4.76	3.67	4.28	4.33	4.28
	(1.87)	(1.98)	(1.68)	(1.94)	(2.12)	(1.84)
Health Insurance (prop.)	0.58	0.43	0.65	0.61	0.56	0.64
	(0.49)	(0.50)	(0.48)	(0.49)	(0.50)	(0.48)
With children (prop.)	0.68	0.90	0.60	0.69	0.70	0.69
	(0.47)	(0.30)	(0.49)	(0.46)	(0.46)	(0.46)
Number of children	1.49	2.43	1.14	1.56	1.73	1.48
	(1.43)	(1.56)	(1.17)	(1.45)	(1.60)	(1.35)
With adults over 70y (prop.)	0.13	0.03	0.15	0.15	0.20	0.13
	(0.33)	(0.16)	(0.35)	(0.36)	(0.40)	(0.33)
Head of Household						
Age	45.7	36.4	48.0	48.3	49.5	47.7
	(16.1)	(11.8)	(15.9)	(15.3)	(16.8)	(14.5)
Female (prop.)	0.04	0.04	0.04	0.22	0.29	0.19
	(0.19)	(0.21)	(0.19)	(0.42)	(0.45)	(0.39)
Married (prop.)	0.76	0.88	0.72	0.76	0.69	0.79
	(0.43)	(0.33)	(0.45)	(0.43)	(0.46)	(0.40)
Schooling (years)	7.76	6.68	8.21	7.30	5.28	8.58
	(4.42)	(3.60)	(4.64)	(4.46)	(3.86)	(4.34)
House characteristics						
Rooms per person	0.61	0.36	0.71	0.58	0.51	0.62
	(0.42)	(0.18)	(0.45)	(0.37)	(0.35)	(0.37)
Firm roof (prop.)	0.76	0.54	0.86	0.80	0.51	0.97
	(0.42)	(0.50)	(0.34)	(0.40)	(0.50)	(0.17)
Firm floor (prop.)	0.96	0.88	0.99	0.96	0.89	1.00
	(0.20)	(0.33)	(0.08)	(0.20)	(0.32)	(0.00)
Firm walls (prop.)	0.97	0.93	0.99	0.93	0.84	0.99
	(0.16)	(0.25)	(0.07)	(0.26)	(0.37)	(0.11)
With electricity (prop.)	0.99	0.98	1.00	0.99	0.98	1.00
	(0.09)	(0.14)	(0.04)	(0.09)	(0.15)	(0.00)
With sewage (prop.)	0.94	0.85	0.99	0.96	0.89	1.00
	(0.23)	(0.36)	(0.11)	(0.20)	(0.32)	(0.00)
With water acces (prop.)	0.97	0.92	0.99	0.98	0.94	1.00
	(0.17)	(0.28)	(0.08)	(0.15)	(0.23)	(0.02)
Households (N)	27,981	7,243	17,148	29,349	10,758	16,948

Notes: Sample weighted means with standard deviation in parenthesis below. Low SES corresponds to first index tercile; high SES includes second and third index terciles. Sources: ENSANUT.

Table A.2: Baseline Characteristics for Urban Localities (ENSANUT Sample)

	Means in 2000 by Year of First Treatment				
	(1) 2001	(2) 2002	(3) 2004	(4) 2005	(5) After
Marginality (percentile)	54.9	34.3	25.6	24.9	4.9
Social Lag (percentile)	53.5	34.0	29.3	29.7	4.9
Population (1000s)	17.2	129.2	341.5	174.1	688.1
Households (1000s)	4.0	31.5	78.7	41.8	176.7
Female Head of HH (%)	17.8	18.6	16.4	16.6	24.3
Children 6-17y (%)	27.5	26.2	25.2	24.3	19.7
Children not in school (%)	16.5	14.6	13.4	11.3	8.8
Illiteracy Rate (%)	9.4	6.8	5.0	4.5	2.4
No Health Insurance (%)	62.3	50.8	50.5	57.6	45.9
Physicians per 10k	9.4	7.4	6.4	10.5	15.0
Clinics per 100k	11.8	6.7	7.6	5.8	2.3
Localities ($N = 427$)	181	175	54	9	10

Notes: Sample restricted to urban localities treated after 2000 in ENSANUT. No treated localities on 2003 appear in data. Sources: CONAPO, INEGI, Progresa Administrative Records, Ministry of Health, ENSANUT.

Table A.3: Descriptive Statistics in 2000 by Progresa's Scale-up Phase and Type of Locality

	Urban						Rural					
	(1) 1999-2000		(2) 2001-2005		(3) After 2006		(4) 1999-2000		(5) 2001-2005		(6) After 2006	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Mun. Marginality	56.2	21.0	32.5	21.1	5.9	6.9	57.5	24.4	51.7	28.6	55.1	29.4
Population (1000s)	9.7	13.8	50.3	142.0	387.0	482.4	0.40	0.63	0.36	0.84	0.09	0.26
Households (100s)	21.1	34.7	118.2	334.4	991.4	1178.2	0.84	1.36	0.81	1.90	0.19	0.57
Members per house	4.7	0.5	4.3	0.4	4.1	0.7	4.7	0.9	4.7	1.2	4.6	1.3
Pop. Density	3.1	4.2	2.8	7.8	0.1	0.1	5.5	11.1	7.0	16.1	7.6	19.4
Female (%)	51.2	1.3	51.5	1.2	49.5	11.5	50.2	5.3	49.6	7.1	48.7	8.5
Children 6-17y (%)	30.0	2.8	27.2	2.5	21.1	6.8	30.5	7.6	28.3	10.1	27.4	11.7
Illiteracy Rate (%)	19.3	10.5	9.1	5.1	5.6	9.4	22.6	15.0	21.5	18.8	25.3	22.2
Schooling (years)	5.5	1.3	7.2	1.2	8.8	2.2	4.2	1.3	4.4	1.9	4.1	2.0
No Healthcare (%)	80.1	16.3	61.2	17.3	52.6	20.3	86.4	20.4	81.7	24.0	82.6	26.7
Physicians per 100k	43.1	47.6	60.0	71.9	66.1	101.7	21.4	152.5	25.0	533.1	6.9	160.5
Clinics per 100k	10.9	9.2	10.3	10.5	2.3	3.1	18.9	135.6	17.2	220.0	6.5	157.4
Hospitals per million	4.8	21.7	8.6	25.2	2.9	4.2	0.3	16.6	1.9	151.0	0.4	41.1
Geographic Region												
North (%)	17.3	38.0	18.7	39.0	5.6	23.6	18.7	39.0	24.1	42.8	28.4	45.1
Center (%)	39.8	49.1	53.9	49.9	94.4	23.6	41.2	49.2	43.6	49.6	26.7	44.2
South (%)	42.9	49.7	27.5	44.6	0.0	0.0	40.1	49.0	32.3	46.8	45.0	49.7
Localities (N)	134		1,154		18		18,351		26,945		17,699	

Notes: Means and standard deviations by locality. Urban localities have 5,000 inhabitants or more. Municipality marginality index expressed in percentiles, population density refers to mean by municipality. Sources: CONAPO, INEGI, Progresa Administrative Records, Ministry of Health.

Table A.4: Intent-to-Treat Effects on Boys' Height

	Boys' Height (cm)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.365*	0.369*	0.438**	0.387**	0.362**	0.384**	0.385**
	(0.199)	(0.192)	(0.173)	(0.176)	(0.176)	(0.167)	(0.167)
SES Index				0.049***	0.049***	0.049***	0.044***
(percentile)				(0.008)	(0.008)	(0.008)	(0.008)
Age					1.194**	1.201**	1.279***
					(0.482)	(0.488)	(0.477)
Mother's Educ $\geq$ 6y							1.264***
							(0.436)
Locality Controls							
Marginality		-0.037***	0.022			0.034**	0.038**
(percentile)		(0.013)	(0.017)			(0.017)	(0.017)
Children 6-17y (%)		-0.025	-0.441***			-0.441***	-0.456***
		(0.144)	(0.165)			(0.155)	(0.153)
Physicians per 1000s		0.410	0.333			0.449	0.471
		(0.400)	(0.339)			(0.368)	(0.371)
State FE	no	no	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	144.1	144.1	144.1	144.1	144.1	144.1	144.1
Observations	2,702	2,702	2,702	2,702	2,702	2,702	2,702
R^2	0.744	0.747	0.758	0.764	0.765	0.766	0.768

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.5: Intent-to-Treat Effects on Boys' Standardized Height for Age

	Boys' Height-for-Age (z-score)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.043	0.044	0.053**	0.046*	0.048*	0.052**	0.052**
	(0.028)	(0.027)	(0.024)	(0.025)	(0.025)	(0.023)	(0.024)
SES Index				0.007***	0.007***	0.007***	0.006***
(percentile)				(0.001)	(0.001)	(0.001)	(0.001)
Age					-0.115*	-0.114*	-0.103*
					(0.061)	(0.062)	(0.061)
Mother's Educ $\geq$ 6y							0.182***
							(0.055)
Locality Controls							
Marginality		-0.005***	0.003			0.005**	0.006**
(percentile)		(0.002)	(0.002)			(0.002)	(0.002)
Children 6-17y (%)		-0.013	-0.067***			-0.067***	-0.069***
		(0.021)	(0.023)			(0.021)	(0.021)
Physicians per 1000s		0.055	0.042			0.058	0.061
		(0.044)	(0.038)			(0.042)	(0.042)
State FE	no	no	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30	-0.30
Observations	2,702	2,702	2,702	2,702	2,702	2,702	2,702
R^2	0.085	0.101	0.141	0.160	0.161	0.169	0.175

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.6: Intent-to-Treat Effects on Girls' Height

	Girls' Height (cm)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.184	0.208	0.215	0.195	0.157	0.168	0.172
	(0.165)	(0.157)	(0.150)	(0.154)	(0.153)	(0.151)	(0.152)
SES Index				0.031***	0.029***	0.021***	0.019***
(percentile)				(0.006)	(0.006)	(0.006)	(0.006)
Age					1.400***	1.402***	1.406***
					(0.379)	(0.372)	(0.377)
Menarche					3.988***	3.962***	3.988***
					(0.690)	(0.689)	(0.682)
Mother's Educ $\geq$ 6y							0.709**
							(0.358)
Locality Controls							
Marginality		-0.079***	-0.049***			-0.041***	-0.038***
(percentile)		(0.011)	(0.014)			(0.015)	(0.014)
Children 6-17y (%)		0.147	-0.104			-0.080	-0.096
		(0.108)	(0.147)			(0.145)	(0.143)
Physicians per 1000s		-0.141	-0.139			-0.143	-0.139
		(0.266)	(0.290)			(0.289)	(0.292)
State FE	no	no	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	145.3	145.3	145.3	145.3	145.3	145.3	145.3
Observations	2,960	2,960	2,960	2,960	2,960	2,960	2,960
R^2	0.443	0.468	0.488	0.485	0.505	0.512	0.513

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.7: Intent-to-Treat Effects on Girls' Standardized Height for Age

	Girls' Height-for-Age (z-score)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.017	0.020	0.019	0.015	0.013	0.015	0.016
	(0.025)	(0.024)	(0.023)	(0.023)	(0.023)	(0.023)	(0.023)
SES Index				0.004***	0.004***	0.003***	0.003***
(percentile)				(0.001)	(0.001)	(0.001)	(0.001)
Age					-0.056	-0.055	-0.054
					(0.056)	(0.055)	(0.056)
Menarche					0.458***	0.454***	0.458***
					(0.099)	(0.099)	(0.098)
Mother's Educ $\geq$ 6y							0.119**
							(0.053)
Locality Controls							
Marginality		-0.012***	-0.007***			-0.006***	-0.005**
(percentile)		(0.002)	(0.002)			(0.002)	(0.002)
Children 6-17y (%)		0.015	-0.019			-0.016	-0.018
		(0.016)	(0.022)			(0.022)	(0.021)
Physicians per 1000s		-0.031	-0.027			-0.026	-0.025
		(0.039)	(0.043)			(0.043)	(0.044)
State FE	no	no	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38	-0.38
Observations	2,960	2,960	2,960	2,960	2,960	2,960	2,960
R^2	0.111	0.154	0.184	0.179	0.195	0.206	0.208

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.8: Intent-to-Treat Effects on Boys' Weight

	Boys' Weight (kg)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.551**	0.553**	0.659**	0.611**	0.578**	0.601**	0.601**
	(0.261)	(0.258)	(0.260)	(0.265)	(0.263)	(0.258)	(0.259)
SES Index				0.040***	0.040***	0.042***	0.037***
(percentile)				(0.011)	(0.011)	(0.011)	(0.011)
Age					1.546*	1.526*	1.603*
					(0.856)	(0.859)	(0.837)
Mother's Educ $\geq$ 6y							1.196*
							(0.635)
Locality Controls							
Marginality		-0.025	0.023			0.033	0.037
(percentile)		(0.018)	(0.024)			(0.025)	(0.025)
Children 6-17y (%)		-0.123	-0.261			-0.265	-0.278
		(0.164)	(0.207)			(0.207)	(0.205)
Physicians per 1000s		0.160	0.192			0.285	0.306
		(0.352)	(0.326)			(0.314)	(0.312)
State FE	no	no	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	41.7	41.7	41.7	41.7	41.7	41.7	41.7
Observations	2,726	2,726	2,726	2,726	2,726	2,726	2,726
R^2	0.538	0.540	0.550	0.553	0.554	0.555	0.556

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.9: Intent-to-Treat Effects on Boys' Standardized Weight for Age

	Boys' Weight-for-Age (z-score)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.040	0.040	0.052**	0.047*	0.049*	0.052**	0.052**
	(0.028)	(0.027)	(0.026)	(0.027)	(0.027)	(0.026)	(0.026)
SES Index				0.004***	0.004***	0.004***	0.004***
(percentile)				(0.001)	(0.001)	(0.001)	(0.001)
Age					-0.093	-0.095	-0.087
					(0.078)	(0.078)	(0.075)
Mother's Educ $\geq$ 6y							0.141**
							(0.063)
Locality Controls							
Marginality		-0.002	0.003			0.005*	0.005**
(percentile)		(0.002)	(0.003)			(0.003)	(0.003)
Children 6-17y (%)		-0.028	-0.044*			-0.044*	-0.046**
		(0.018)	(0.023)			(0.023)	(0.023)
Physicians per 1000s		0.035	0.028			0.039	0.041
		(0.033)	(0.031)			(0.029)	(0.029)
State FE	no	no	yes	yes	yes	yes	yes
Cohort × Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Observations	2,700	2,700	2,700	2,700	2,700	2,700	2,700
R^2	0.024	0.031	0.057	0.063	0.064	0.067	0.070

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.10: Intent-to-Treat Effects on Girls' Weight

	Girls' Weight (kg)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.668**	0.695**	0.737***	0.716**	0.657**	0.664**	0.668**
	(0.293)	(0.290)	(0.283)	(0.290)	(0.289)	(0.284)	(0.283)
SES Index				0.031**	0.028**	0.023*	0.020
(percentile)				(0.013)	(0.014)	(0.014)	(0.014)
Age					0.884	0.905	0.898
					(0.594)	(0.601)	(0.600)
Menarche					6.544***	6.507***	6.513***
					(1.142)	(1.145)	(1.135)
Mother's Educ $\geq$ 6y							0.673
							(0.787)
Locality Controls							
Marginality		-0.054***	-0.012			-0.004	-0.002
(percentile)		(0.018)	(0.024)			(0.024)	(0.023)
Children 6-17y (%)		0.032	-0.340			-0.297	-0.314
		(0.207)	(0.277)			(0.278)	(0.280)
Physicians per 1000s		0.470	0.514			0.530	0.533
		(0.334)	(0.378)			(0.388)	(0.392)
State FE	no	no	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	42.9	42.9	42.9	42.9	42.9	42.9	42.9
Observations	2,929	2,929	2,929	2,929	2,929	2,929	2,929
R^2	0.330	0.337	0.351	0.351	0.369	0.371	0.372

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.11: Intent-to-Treat Effects on Girls' Standardized Weight for Age

	Girls' Weight-for-Age (z-score)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.073**	0.076**	0.080***	0.077***	0.073**	0.075***	0.075***
	(0.030)	(0.030)	(0.028)	(0.030)	(0.029)	(0.028)	(0.028)
SES Index				0.004***	0.003***	0.003**	0.003**
(percentile)				(0.001)	(0.001)	(0.001)	(0.001)
Age					-0.020	-0.018	-0.018
					(0.059)	(0.059)	(0.059)
Menarche					0.627***	0.618***	0.617***
					(0.102)	(0.102)	(0.101)
Mother's Educ $\geq$ 6y							-0.003
							(0.068)
Locality Controls							
Marginality		-0.005***	-0.000			0.001	0.001
(percentile)		(0.002)	(0.002)			(0.002)	(0.002)
Children 6-17y (%)		-0.024	-0.062***			-0.058***	-0.058***
		(0.016)	(0.022)			(0.022)	(0.022)
Physicians per 1000s		0.034	0.039			0.040	0.040
		(0.032)	(0.036)			(0.037)	(0.037)
State FE	no	no	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	0.46	0.46	0.46	0.46	0.46	0.46	0.46
Observations	2,909	2,909	2,909	2,909	2,909	2,909	2,909
R^2	0.026	0.041	0.060	0.055	0.081	0.089	0.089

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.12: Intent-to-Treat Effects on Boys' BMI

	Boys' BMI						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.109	0.108	0.139	0.131	0.123	0.128	0.128
	(0.088)	(0.087)	(0.089)	(0.091)	(0.090)	(0.089)	(0.089)
SES Index				0.004	0.004	0.005	0.004
(percentile)				(0.004)	(0.004)	(0.004)	(0.004)
Age					0.389	0.380	0.389
					(0.284)	(0.286)	(0.283)
Mother's Educ $\geq$ 6y							0.142
							(0.202)
Locality Controls							
Marginality		-0.000	0.006			0.007	0.007
(percentile)		(0.005)	(0.008)			(0.008)	(0.008)
Children 6-17y (%)		-0.061	-0.032			-0.032	-0.034
		(0.054)	(0.074)			(0.074)	(0.074)
Physicians per 1000s		0.011	0.017			0.028	0.030
		(0.110)	(0.120)			(0.116)	(0.116)
State FE	no	no	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	19.8	19.8	19.8	19.8	19.8	19.8	19.8
Observations	2,697	2,697	2,697	2,697	2,697	2,697	2,697
R^2	0.199	0.199	0.213	0.214	0.215	0.215	0.215

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.13: Intent-to-Treat Effects on Boys' Standardized BMI for Age

	Boys' BMI-for-Age (z-score)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.014	0.014	0.025	0.022	0.023	0.026	0.026
	(0.025)	(0.025)	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)
SES Index				0.001	0.001	0.001	0.001
(percentile)				(0.001)	(0.001)	(0.001)	(0.001)
Age					-0.053	-0.058	-0.056
					(0.074)	(0.074)	(0.074)
Mother's Educ $\geq$ 6y							0.036
							(0.056)
Locality Controls							
Marginality		0.002	0.003			0.003	0.004
(percentile)		(0.002)	(0.002)			(0.002)	(0.002)
Children 6-17y (%)		-0.028*	-0.011			-0.011	-0.012
		(0.016)	(0.021)			(0.021)	(0.021)
Physicians per 1000s		0.007	0.007			0.010	0.011
		(0.036)	(0.040)			(0.039)	(0.039)
State FE	no	no	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Observations	2,697	2,697	2,697	2,697	2,697	2,697	2,697
R^2	0.013	0.015	0.034	0.033	0.033	0.035	0.035

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.14: Intent-to-Treat Effects on Girls' BMI

	Girls' BMI						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.320***	0.321***	0.343***	0.340***	0.328***	0.329***	0.328***
	(0.112)	(0.111)	(0.107)	(0.109)	(0.109)	(0.107)	(0.107)
SES Index				0.005	0.004	0.004	0.004
(percentile)				(0.005)	(0.005)	(0.005)	(0.005)
Age					0.134	0.132	0.131
					(0.248)	(0.250)	(0.251)
Menarche					1.771***	1.751***	1.748***
					(0.353)	(0.354)	(0.352)
Mother's Educ $\geq$ 6y							-0.095
							(0.304)
Locality Controls							
Marginality		0.000	0.012			0.013	0.013
(percentile)		(0.006)	(0.009)			(0.009)	(0.009)
Children 6-17y (%)		-0.074	-0.170*			-0.155	-0.153
		(0.069)	(0.100)			(0.101)	(0.103)
Physicians per 1000s		0.249**	0.279**			0.282**	0.282**
		(0.104)	(0.116)			(0.120)	(0.120)
State FE	no	no	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Observations	2,907	2,907	2,907	2,907	2,907	2,907	2,907
R^2	0.190	0.193	0.207	0.204	0.215	0.219	0.219

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.15: Intent-to-Treat Effects on Girls' Standardized BMI for Age

	Girls' BMI-for-Age (z-score)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.066**	0.066**	0.071***	0.070***	0.067**	0.068***	0.067***
	(0.027)	(0.027)	(0.025)	(0.026)	(0.026)	(0.025)	(0.025)
SES Index				0.001	0.001	0.001	0.001
(percentile)				(0.001)	(0.001)	(0.001)	(0.001)
Age					-0.008	-0.008	-0.008
					(0.057)	(0.057)	(0.057)
Menarche					0.465***	0.458***	0.457***
					(0.084)	(0.085)	(0.085)
Mother's Educ $\geq$ 6y							-0.053
							(0.059)
Locality Controls							
Marginality		0.001	0.003			0.003	0.003
(percentile)		(0.001)	(0.002)			(0.002)	(0.002)
Children 6-17y (%)		-0.032**	-0.049**			-0.045**	-0.044**
		(0.014)	(0.019)			(0.019)	(0.019)
Physicians per 1000s		0.046*	0.051*			0.052*	0.052*
		(0.025)	(0.027)			(0.027)	(0.027)
State FE	no	no	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	0.60	0.60	0.60	0.60	0.60	0.60	0.60
Observations	2,907	2,907	2,907	2,907	2,907	2,907	2,907
R^2	0.020	0.025	0.042	0.038	0.057	0.061	0.062

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.16: Intent-to-Treat Effects on Boys' Underweight Prevalence

	Boys' Underweight						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.0047	0.0051	0.0026	0.0026	0.0024	0.0021	0.0021
	(0.0082)	(0.0081)	(0.0081)	(0.0081)	(0.0082)	(0.0082)	(0.0082)
SES Index				0.0003	0.0003	0.0003	0.0003
(percentile)				(0.0005)	(0.0005)	(0.0005)	(0.0005)
Age					0.0088	0.0111	0.0113
					(0.0206)	(0.0208)	(0.0207)
Mother's Educ $\geq$ 6y							0.0040
							(0.0219)
Locality Controls							
Marginality		-0.0008	-0.0004			-0.0003	-0.0003
(percentile)		(0.0006)	(0.0008)			(0.0008)	(0.0008)
Children 6-17y (%)		0.0039	-0.0069			-0.0068	-0.0068
		(0.0053)	(0.0056)			(0.0056)	(0.0055)
Physicians per 1000s		0.0057	0.0070			0.0078	0.0079
		(0.0132)	(0.0111)			(0.0107)	(0.0107)
State FE	no	no	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	0.085	0.085	0.085	0.085	0.085	0.085	0.085
Observations	1,819	1,819	1,819	1,819	1,819	1,819	1,819
R^2	0.017	0.019	0.049	0.047	0.047	0.050	0.050

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.17: Intent-to-Treat Effects on Girls' Underweight Prevalence

	Girls' Underweight						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	-0.0031	-0.0022	-0.0027	-0.0031	-0.0022	-0.0019	-0.0020
	(0.0089)	(0.0089)	(0.0087)	(0.0086)	(0.0086)	(0.0086)	(0.0085)
SES Index				0.0001	0.0001	0.0000	-0.0002
(percentile)				(0.0003)	(0.0003)	(0.0003)	(0.0003)
Age					-0.0228	-0.0217	-0.0209
					(0.0224)	(0.0224)	(0.0220)
Menarche					-0.0461*	-0.0471*	-0.0451*
					(0.0260)	(0.0259)	(0.0260)
Mother's Educ $\geq$ 6y							0.0485***
							(0.0162)
Locality Controls							
Marginality		-0.0013***	-0.0006			-0.0005	-0.0004
(percentile)		(0.0004)	(0.0006)			(0.0006)	(0.0006)
Children 6-17y (%)		0.0037	-0.0019			-0.0023	-0.0035
		(0.0050)	(0.0056)			(0.0057)	(0.0057)
Physicians per 1000s		-0.0044	-0.0022			-0.0026	-0.0016
		(0.0084)	(0.0064)			(0.0064)	(0.0066)
State FE	no	no	yes	yes	yes	yes	yes
Cohort × Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	0.095	0.095	0.095	0.095	0.095	0.095	0.095
Observations	2,012	2,012	2,012	2,012	2,012	2,012	2,012
R^2	0.008	0.014	0.040	0.039	0.042	0.044	0.050

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.18: Intent-to-Treat Effects on Boys' Overweight Prevalence

	Boys' Overweight						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.0041	0.0037	0.0031	0.0022	0.0025	0.0033	0.0032
	(0.0124)	(0.0121)	(0.0124)	(0.0128)	(0.0127)	(0.0124)	(0.0124)
SES Index				0.0003	0.0003	0.0004	0.0004
(percentile)				(0.0005)	(0.0005)	(0.0005)	(0.0005)
Age					-0.0118	-0.0127	-0.0134
					(0.0310)	(0.0309)	(0.0316)
Mother's Educ $\geq$ 6y							-0.0095
							(0.0271)
Locality Controls							
Marginality		0.0009	0.0013			0.0015	0.0014
(percentile)		(0.0008)	(0.0011)			(0.0011)	(0.0011)
Children 6-17y (%)		-0.0101	-0.0147			-0.0147	-0.0146
		(0.0065)	(0.0093)			(0.0094)	(0.0094)
Physicians per 1000s		0.0100	0.0121			0.0130	0.0129
		(0.0200)	(0.0180)			(0.0173)	(0.0174)
State FE	no	no	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	0.265	0.265	0.265	0.265	0.265	0.265	0.265
Observations	2,257	2,257	2,257	2,257	2,257	2,257	2,257
R^2	0.009	0.011	0.028	0.026	0.026	0.028	0.029

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.19: Intent-to-Treat Effects on Girls' Overweight Prevalence

	Girls' Overweight						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.0266**	0.0269**	0.0261**	0.0257**	0.0258**	0.0259**	0.0257**
	(0.0115)	(0.0115)	(0.0113)	(0.0113)	(0.0114)	(0.0113)	(0.0113)
SES Index				0.0003	0.0003	0.0004	0.0003
(percentile)				(0.0004)	(0.0005)	(0.0005)	(0.0005)
Age					-0.0258	-0.0244	-0.0242
					(0.0281)	(0.0281)	(0.0279)
Menarche					0.1097**	0.1071**	0.1078**
					(0.0433)	(0.0436)	(0.0431)
Mother's Educ $\geq$ 6y							0.0303
							(0.0284)
Locality Controls							
Marginality		-0.0003	0.0013			0.0014	0.0015
(percentile)		(0.0007)	(0.0009)			(0.0010)	(0.0010)
Children 6-17y (%)		-0.0012	-0.0144*			-0.0130*	-0.0137*
		(0.0068)	(0.0080)			(0.0078)	(0.0079)
Physicians per 1000s		-0.0103	-0.0057			-0.0042	-0.0040
		(0.0124)	(0.0130)			(0.0127)	(0.0126)
State FE	no	no	yes	yes	yes	yes	yes
Cohort × Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	0.255	0.255	0.255	0.255	0.255	0.255	0.255
Observations	2,480	2,480	2,480	2,480	2,480	2,480	2,480
R^2	0.018	0.019	0.035	0.034	0.040	0.041	0.042

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.20: Intent-to-Treat Effects on Boys' Obesity Prevalence

	Boys' Obesity						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.0013	0.0010	0.0024	0.0019	0.0014	0.0013	0.0012
	(0.0080)	(0.0080)	(0.0085)	(0.0087)	(0.0085)	(0.0085)	(0.0085)
SES Index				0.0009***	0.0009***	0.0009***	0.0008**
(percentile)				(0.0003)	(0.0003)	(0.0003)	(0.0003)
Age					0.0253	0.0255	0.0279
					(0.0242)	(0.0245)	(0.0240)
Mother's Educ $\geq$ 6y							0.0302*
							(0.0173)
Locality Controls							
Marginality		-0.0009**	-0.0001			0.0001	0.0002
(percentile)		(0.0005)	(0.0007)			(0.0007)	(0.0007)
Children 6-17y (%)		0.0003	-0.0035			-0.0028	-0.0030
		(0.0045)	(0.0066)			(0.0067)	(0.0066)
Physicians per 1000s		-0.0032	-0.0031			-0.0002	0.0001
		(0.0077)	(0.0078)			(0.0075)	(0.0074)
State FE	no	no	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	0.139	0.139	0.139	0.139	0.139	0.139	0.139
Observations	1,927	1,927	1,927	1,927	1,927	1,927	1,927
R^2	0.018	0.021	0.041	0.046	0.047	0.047	0.049

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.21: Intent-to-Treat Effects on Girls' Obesity Prevalence

	Girls' Obesity						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.0150*	0.0158*	0.0160*	0.0154*	0.0154*	0.0156*	0.0157*
	(0.0088)	(0.0087)	(0.0087)	(0.0088)	(0.0088)	(0.0086)	(0.0085)
SES Index				0.0006	0.0005	0.0004	0.0004
(percentile)				(0.0004)	(0.0004)	(0.0004)	(0.0004)
Age					-0.0320*	-0.0330*	-0.0330*
					(0.0191)	(0.0196)	(0.0196)
Menarche					0.0573*	0.0582**	0.0585**
					(0.0294)	(0.0295)	(0.0294)
Mother's Educ $\geq$ 6y							0.0093
							(0.0254)
Locality Controls							
Marginality		-0.0006	0.0004			0.0006	0.0006
(percentile)		(0.0004)	(0.0006)			(0.0006)	(0.0006)
Children 6-17y (%)		-0.0049	-0.0079			-0.0071	-0.0073
		(0.0047)	(0.0068)			(0.0069)	(0.0069)
Physicians per 1000s		0.0269**	0.0325***			0.0333***	0.0334***
		(0.0108)	(0.0114)			(0.0118)	(0.0119)
State FE	no	no	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	0.115	0.115	0.115	0.115	0.115	0.115	0.115
Observations	2,079	2,079	2,079	2,079	2,079	2,079	2,079
R^2	0.021	0.033	0.057	0.051	0.055	0.063	0.063

Notes: Sample restricted to birth cohorts from 1987 to 1989 from urban localities treated between 2001-2006. All regressions include sample weights; standard errors clustered by locality. Individual covariates are interacted with a missing-value indicator to control for attrition bias. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.22: First Stage OLS Estimates on Take-up Rate (Binary)

	Take-up in 2006						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treated=1	0.147***	0.135***	0.135***	0.134***	0.134***	0.134***	0.136***
	(0.026)	(0.024)	(0.022)	(0.022)	(0.022)	(0.021)	(0.021)
SES Index			-0.003***	-0.003***	-0.003***	-0.003***	-0.003***
(percentile)			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Mun. Marginality Index				0.003***	0.003***	0.002**	0.002*
(percentile)				(0.001)	(0.001)	(0.001)	(0.001)
Locality Controls							
Physicians per 1000s					-0.023***	-0.031***	-0.028***
					(0.006)	(0.007)	(0.007)
Illiteracy Rate (%)						0.016***	0.014**
						(0.005)	(0.006)
Mean Schooling (years)						0.035***	0.053***
						(0.012)	(0.013)
Members per Household							0.085
							(0.054)
Female (%)							-0.024**
							(0.011)
State FE	no	yes	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	144.7	144.7	144.7	144.7	144.7	144.7	144.7
Observations	5,714	5,714	5,714	5,714	5,714	5,714	5,714
R^2	0.118	0.155	0.261	0.278	0.283	0.291	0.298

Notes: Sample restricted to children born between 1987–1989 from urban localities not treated by 2000. Standard errors clustered by locality. All regressions include sample weights. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.
Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.23: First Stage OLS Estimates on Take-up Rate (Continuous)

	Take-up in 2006						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated	0.035***	0.032***	0.032***	0.032***	0.032***	0.032***	0.033***
	(0.006)	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
SES Index			-0.003***	-0.003***	-0.003***	-0.003***	-0.003***
(percentile)			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Mun. Marginality Index				0.003***	0.003***	0.002**	0.002*
(percentile)				(0.001)	(0.001)	(0.001)	(0.001)
Locality Controls							
Physicians per 1000s					-0.023***	-0.031***	-0.028***
					(0.006)	(0.008)	(0.007)
Illiteracy Rate (%)						0.016***	0.014**
						(0.005)	(0.006)
Mean Schooling (years)						0.035***	0.054***
						(0.012)	(0.013)
Members per Household							0.088*
							(0.053)
Female (%)							-0.024**
							(0.011)
State FE	no	yes	yes	yes	yes	yes	yes
Cohort $\times$ Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	144.7	144.7	144.7	144.7	144.7	144.7	144.7
Observations	5,714	5,714	5,714	5,714	5,714	5,714	5,714
R^2	0.119	0.156	0.263	0.280	0.284	0.292	0.300

Notes: Sample restricted to children born between 1987–1989 from urban localities not treated by 2000. Standard errors clustered by locality. All regressions include sample weights. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.
Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.

Table A.24: First Stage OLS Estimates on Take-up Rate (Categories)

	Take-up in 2006						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years Treated=4	0.127***	0.115***	0.113***	0.114***	0.113***	0.112***	0.111***
	(0.029)	(0.027)	(0.025)	(0.024)	(0.024)	(0.023)	(0.023)
Years Treated=5	0.197***	0.183***	0.187***	0.184***	0.184***	0.187***	0.199***
	(0.048)	(0.046)	(0.042)	(0.040)	(0.039)	(0.039)	(0.038)
SES Index			-0.003***	-0.003***	-0.003***	-0.003***	-0.003***
(percentile)			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Mun. Marginality Index				0.003***	0.003***	0.002**	0.002*
(percentile)				(0.001)	(0.001)	(0.001)	(0.001)
Locality Controls							
Physicians per 1000s					-0.023***	-0.031***	-0.028***
					(0.006)	(0.008)	(0.007)
Illiteracy Rate (%)						0.016***	0.014**
						(0.005)	(0.006)
Mean Schooling (years)						0.036***	0.055***
						(0.012)	(0.013)
Members per Household							0.093*
							(0.052)
Female (%)							-0.025**
							(0.011)
State FE	no	yes	yes	yes	yes	yes	yes
Cohort × Time FE	yes	yes	yes	yes	yes	yes	yes
Mean DV	144.7	144.7	144.7	144.7	144.7	144.7	144.7
Observations	5,714	5,714	5,714	5,714	5,714	5,714	5,714
R^2	0.120	0.156	0.264	0.280	0.285	0.293	0.302

Notes: Sample restricted to children born between 1987–1989 from urban localities not treated by 2000. Standard errors clustered by locality. All regressions include sample weights. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.
Sources: ENSANUT, Progresa Administrative Records, CONAPO, INEGI, Ministry of Health.