

Health Care and Education Access of Transnational Children in Mexico

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ABSTRACT Between 2001 and 2018, more than 5.5 million Mexican migrants were removed from the United States or returned to Mexico with their families as immigration enforcement escalated. Learning how this transition affected their children—also referred to as “the invisibles”—is a policy-relevant topic for both the United States and Mexico. Using representative data on 7.6 million Mexican- and U.S.-born children from the 2015 Mexican Intercensal Survey, we provide evidence of the gaps in access to education and health care between these two groups and of the factors potentially responsible for the existing barriers. Relative to children born in Mexico, U.S.-born children are at a considerable disadvantage in terms of health care access, but less so in terms of education. Lack of a Mexican-issued birth certificate is among the persistent factors responsible for the gaps in services. Policies aimed at changing the approach to immigration enforcement in the United States, lessening paperwork requirements in Mexico, and easing access to documentation in both countries could improve transnational children’s access to basic services, as well as their present and long-term well-being.

KEYWORDS Health care • Education • “Los invisibles” • Transnational children • U.S.-born children in Mexico

Introduction

Between 2001 and 2018, more than 5.5 million Mexican migrants were removed from the United States or returned to Mexico with their families as immigration enforcement escalated (Nowrasteh 2019). This group further included returns taking place for other reasons, such as the Great Recession (Gonzalez-Barrera 2015), as well as such customary motivations as caring for elderly relatives, achieving a desired savings goal, or divorce (Hamann et al. 2018). Learning whether children—most of them U.S. citizens—had access to basic services following that move is a policy-relevant topic for both the United States and Mexico, as well as for the border region. In this article, we provide evidence on the access to health care and education services of U.S.-born children who were living in Mexico in 2015, and on factors potentially responsible for encountered barriers.

Approximately 400,000 Mexican migrants were removed from the United States on a yearly basis during the 2008–2012 period alone because of intensified interior immigration enforcement (Gonzalez-Barrera 2015). Many deportees were long-term migrants who had been in the United States for more than 10 years. They had permanently settled in the country, formed families, and had children who were U.S. citizens and knew only one country—the United States. Suddenly, these families found themselves in Mexico, where many parents lacked the documentation needed to access education and health services (Shaw 2016). Their children were attending a school system that was unfamiliar to them (Román González and Zúñiga 2014; Zúñiga and Hamann 2015). Several studies and policy reports have documented the challenges encountered by these children—a group referred to as “los invisibles” or “the invisibles.” This term has been emblematic of children who are U.S. citizens and have lived most of their lives in the United States, but now reside in Mexico (Cave 2012; Hwang 2017; Sanchez 2016). Despite constituting a nonnegligible population estimated at 430,000–600,000 in 2018 according to Mexico’s Ministry of the Interior (Cruz 2018; Shaw 2016), their experience has been largely overlooked in the literature on migration between the United States and Mexico, in part because of limited data.

In this study, we address that gap in the literature using representative data to examine transnational children’s access to health care and education services, as well as encountered barriers. We rely on data from the 2015 Mexican Intercensal Survey (Encuesta Intercensal 2015, EIC), which is representative at the national, state, and municipal levels. We initially work with a sample of both Mexican- and U.S.-born children (about 7.6 million observations) to examine any gaps in their access to basic services, and how these gaps depend on selected child and family traits, including their age, gender, and household head’s educational attainment. As a second step, we focus on U.S.-born children to explore mechanisms that could explain such gaps—lack of proper documentation, the length of time they have been in Mexico, and the interaction of the two. Specifically, we measure lack of proper documentation as having a foreign or no birth certificate, compared with having a Mexican birth certificate. U.S.-born children who have at least one Mexican parent qualify for binational status. Consequently, they can obtain a Mexican birth certificate in addition to the one they might have from the United States, regardless of whether they ever resided in Mexico; however, the process can be costly.¹

Our analysis contributes to the academic and policy discussion about the transnational experiences of children in various ways. We use nationally representative data to quantify gaps in access to services and move beyond a descriptive analysis by conditioning on a host of relevant traits. Regarding gaps in health care services, we add to the scarce evidence on this topic by examining both type of coverage and actual care

¹ Obtaining a Mexican birth certificate (“*acta de nacimiento*”) is an additional step that parents must take even if their child is born in a Mexican hospital. Parents of children who qualify as Mexican but were born abroad face additional requirements. They can apply for it at the Mexican consulates in the United States, but they must present their own Mexican birth certificates and additional ID, and must also have two witnesses present with their own official ID. If they want to obtain the document once in Mexico, parents must present a certified copy of their child’s U.S. birth certificate, which in turn must be apostilled and translated by a certified translator.

received when sick. Finally, for both education and health care services, we provide evidence of the role of lack of proper documentation, coupled with residence time in Mexico, as key access barriers.

We find that, on average, U.S.-born children are 28% less likely than their Mexican counterparts to be affiliated with any health care provider, and this gap increases for those whose household head has less than a high school education. Among children affiliated with a health care provider, U.S.-born children are less likely to be affiliated with and receive care from a public provider and more likely to have a private or other kind of provider. We find that lack of proper documentation plays a vital role in explaining these gaps. Compared with U.S.-born children with a Mexican birth certificate, those with a foreign or no birth certificate are 64% and 69% less likely to be affiliated with a health care provider, respectively. Although this documentation barrier seems to be slightly worse for children whose household head arrived more recently to Mexico (between 2010 and 2015), its negative impact persists even among children whose household head arrived before 2010, which is particularly worrisome.

In terms of education, we find that U.S.-born children are not at a significant disadvantage compared with their Mexican counterparts. For instance, elementary-school children (ages 6–12) display similar access and outcomes regardless of their country of birth. Furthermore, among older children (ages 13–17), those born in the United States are more likely than those born in Mexico to attend school, to be at an age-appropriate school level, and, in turn, to exhibit smaller educational lags; the advantage of U.S.-born teens is observed for both males and females, but it is significantly smaller for the latter. Nevertheless, among U.S.-born children, lack of proper documentation still seems to be keeping some of these “invisible children” out of school and pushing them into other activities, such as working for pay (mostly for males) or at home (for females).

In sum, compared with their Mexican-born counterparts, U.S.-born children are at a considerable disadvantage in terms of access to health care, but less so in terms of education. These mixed results could be because of a couple of factors. First, in Mexico, the education system is more centralized than the health care system, a trait that favors a quicker response to policy challenges posed by the influx of transnational children. Second, the educational barriers faced by these invisible children have received much more attention in the academic literature, creating greater awareness among policymakers.² In contrast, the empirical evidence on their health care access has been sparser.

Given the long-term implications of health care and educational investments early in life,³ both the Mexican and the U.S. governments should be concerned about

² For instance, between 2006 and 2012, the Mexican government implemented the “Educación Sin Fronteras” initiative, which included the publication of *Alumnos transnacionales: Las escuelas mexicanas frente a la globalización* by Zúñiga et al. (2008), along with other bilingual primary-level educational materials.

³ The literature has documented the long-term impacts of both health care and educational investments during childhood on a wide array of lifetime outcomes, ranging from better employment opportunities, higher earnings, and lower program participation to a lower incidence of medical conditions and diseases, better health behaviors, and improved health status (e.g., Becker and Chiswick 1966; Clark and Royer 2013; Hoynes et al. 2016).

guaranteeing access to these basic services for transnational children.⁴ In the United States, a more targeted or prioritized immigration enforcement approach—rather than an indiscriminate communitywide approach (e.g., raids)—could allow many transnational children to grow up in the only country they know. In the case of Mexico, the government could explore focusing its documentation efforts among transnational children through schools to improve their access to health care and other services given the lack of significant gaps in their school access. Both sets of policies could prevent the loss of critical human capital.

Background

Returns to Mexico Amid Intensified Immigration Enforcement

Over the past three decades, an unprecedented increase in interior immigration enforcement in the United States has resulted in large numbers of removals. The list of criminal offenses that could be penalized with deportation was lengthened to include illegal entry and reentry (Stephens 2012), and cooperation between local and state law enforcement agencies and federal immigration officials was strengthened (Chishti et al. 2017). Specifically, interior immigration enforcement quickly expanded after the mid-2000s through the decentralized adoption by states and counties of various initiatives and programs, such as the 287(g) agreements and the Secure Communities program. Both programs permit matching the fingerprints of those arrested by law enforcement against federal immigration and criminal databases, which resulted in a record-high 360,000 formal removals of individuals in fiscal year 2008—of whom about 234,000 came from the interior of the country (Chishti et al. 2017). With increased funding, removals increased while U.S.–Mexico border apprehensions and returns (which, unlike removals, do not involve a formal court order) decreased during the Obama administration when compared to those taking place during the Clinton and George W. Bush administrations.

These dynamics had important consequences. First, many immigrants chose to permanently settle in the United States instead of moving back and forth between the two countries, as they had done decades earlier (Hagan et al. 2008). Second, many families broke up or separated. From 1995 through 2017, the proportion of the undocumented population with 10 or more years in the United States rose from 33% to 66% (Passel and Cohn 2018). Among those of Mexican origin, that share averaged 83% (Gonzalez-Barrera and Krogstad 2019). Because of the duration of their migration spell, these migrants were more likely to have developed family and community ties in the country, as well as more likely to have children who were U.S. citizens.⁵ Many parents were removed and separated from their children, while other families opted to return to Mexico with their families (Medina and Menjivar 2015). According to Mexico's 2010 Population Census, more than 360,000 of Mexico's international

⁴ Such access is especially critical because these children are also more likely to lead persistently binational lives than those who have only had mononational experiences (Gándara and Jensen 2021).

⁵ In 2018, an estimated 5.1 million U.S. citizen children had at least one undocumented parent (Passel and Cohn 2018).

migrants returned home between 2005 and 2010 (Medina and Menjívar 2015). Furthermore, many of the returnees were U.S.-born children. Between 2000 and 2010, the foreign population in Mexico rose from 500,000 to 960,000. Approximately 22% of them were children aged 5–14, most of whom were born in the United States (Medina and Menjívar 2015).

Access to Health Care and Education in Mexico

The Mexican health care system comprises public and private institutions.⁶ Public health care institutions can be broadly classified into (1) a contributory segment tied to formal employment in the private or public sectors, in which health services are conditioned on the payment of social security contributions; and (2) a noncontributory segment aimed at providing care to the uninsured population through the Seguro Popular program (SP), which ended in 2018, and other more recent programs. Both segments require registering for health care and presenting several identification documents—a birth certificate and unique population registry number (Clave Única de Registro de Población, CURP)—for all family members. As a result, access to these services can be costly in terms of time and paperwork, particularly for families with U.S.-born children who might have had to relocate to Mexico in a rushed manner. In addition, the quality of care might differ among these public health care providers. Private health insurance is very limited in Mexico: it covers a small fraction of high-income salaried workers and is mostly used for major health events. For most day-to-day health care and minor health issues, those who can afford it go to private doctors in hospitals, clinics, and pharmacies, and pay out of pocket.

The education system in Mexico is more centralized than the health care system, particularly at lower education levels,⁷ which include preschool (ages 3–5), primary school (ages 6–12), and middle school (ages 12–15). Overall, the Ministry of Education (Secretaría de Educación Pública, SEP) regulates public and private schools at the federal and state levels, controlling key aspects of education. The system is less integrated at the high school level, where three different subsystems provide some diversity in the type of curricula but make it harder to transition from one type of high school to another.⁸

Between 2000 and 2015, the Mexican government introduced several programs to provide health care and education services to migrants and their families.⁹ It also eased requirements for access and facilitated the acquisition of proper documentation for transnational children. For instance, in 2015 the government eliminated the

⁶ For a more detailed discussion of the aspects covered in this section, please refer to Section 1 in the online appendix.

⁷ The description of the structure of the Mexican education system in this paragraph is based on SEP (2000).

⁸ These subsystems are general high school (bachillerato general), technical high school (bachillerato tecnológico), and technical-professional education (educación profesional técnica).

⁹ Giorguli et al. (2014) provide an overview of the different programs and actions that the Mexican government has implemented for migrants and their families, at both the federal and the state level. Please refer to Cuadro 3 of their work.

apostille requirements and the official translation of school and identity documents for enrolling children in Mexican schools and for recognizing their completed grades at the basic and high school levels.¹⁰ Since 2016, other efforts have focused on promoting the registration of U.S.-born children who qualify for binational status in Mexico.¹¹ However, most of these changes took place after 2015—the year corresponding to our data. As a result, we find that the lack of proper documentation is still a significant hurdle for these children when accessing health and education services in Mexico. In addition, despite these government efforts, results have been limited by lack of information, resources, or consistency (Giorguli et al. 2014; Vargas Valle 2019). These circumstances might have also been aggravated by the growing numbers of foreign, non-U.S.-born youth in Mexico (particularly Central Americans) and subsequent actions by the U.S. and Mexican governments.

Literature on Health Care and Education Among U.S.-born Minors in Mexico

A recent and expanding literature has addressed the role of interior immigration enforcement on accessing health care in the United States and on the educational attainment of U.S.-born children with likely undocumented migrant parents from Mexico and Central America (e.g., Amuedo-Dorantes and Antman 2017; Amuedo-Dorantes and Lopez 2017; Amuedo-Dorantes and Sparber 2014; Koohi 2017; Watson 2014). However, evidence on the access to these same services in Mexico of the so-called invisible children—namely, those who left the United States after their parents were deported or returned voluntarily to Mexico—has been relatively scarce (Cruz 2018).

Most of the existing work has described the experiences and challenges faced by these children at Mexican schools, relying on student surveys, in-depth interviews of students and teachers, visits, and on-site observation in schools in selected Mexican states (Sanchez García and Zúñiga 2010, for Nuevo León and Zacatecas; Zúñiga and Hamman 2013, for Puebla and Jalisco; or Panait and Zúñiga 2016, for Zacatecas; or Medina and Menjívar 2015, for Estado de México). These studies provide a vivid picture of the hardships and mixed feelings experienced by children after transitioning from the United States to the Mexican education system. They also document the specific barriers they face once they are enrolled in a Mexican school, such as linguistic adaptation. By using the 2015 EIC data, we take a step back and examine the gaps in education access and outcomes between Mexican- and U.S.-born children using both descriptive and regression-based analysis. In addition, the nationally representative nature of the EIC enables us to provide a broader picture than previous work of some of the educational challenges endured by these children.

¹⁰ Please refer to: <https://www.gob.mx/sep/prensa/comunicado-148-se-elimina-requisito-de-apostille-a-documentos-de-ninos-y-jovenes-migrantes?state=published>.

¹¹ The program “Soy Mexico. Registro de Nacimiento de la Población Mexicano-Americana” (“I am Mexico. Birth registration of the Mexican-American Population”) allows the online validation of U.S. birth certificates, to make it easier for Mexican-American individuals to obtain a Mexican birth certificate and CURP.

Regarding access to health care, the literature has shown that Mexican migrants returning from the United States have a higher probability of lacking such access, compared with predeparture (Martinez-Donate et al. 2017). This lack of access is, in part, related to returnees' having greater difficulty than nonmigrant Mexicans in obtaining a job that provides health insurance (e.g., Águila et al. 2015; Denier and Masferrer 2020)—a circumstance that could negatively impact the health care access of their dependents (e.g., their children). Yet, Donato and Duncan (2011) found no statistically significant difference between the health of children who lived in the United States and returned to Mexico and those who always lived in Mexico. However, their analysis relied on data from 1995 through 1997—a period during which return migration flows probably differed from those in recent years.¹² In addition, it focused on a subjective measure of health, as opposed to health care access and use.

In a recent study using data from Mexico's 2018 National Survey of Demographic Dynamics (ENADID), Wassink (2020) documented the lower health insurance coverage of U.S.-born minors living in Mexico and their greater reliance on private insurance, especially among those who had arrived during the past year. Besides other differences in the data used and the estimation methods, we add considerably to the evidence provided by this study in several ways. By using data from the 2015 EIC, we benefit from a much larger sample, which allows us to unveil a more representative picture of children's health insurance coverage and of their actual health care use when sick. In addition, we explore whether health care gaps between Mexican- and U.S.-born children vary with the age and gender of the child, as well as with the education level of the household head. For both education and health care, we delve into the mechanisms behind those barriers and focus on the lack of proper documentation, the residence time in Mexico, and the interaction of the two. Finally, we study whether U.S.-born teenagers' reduced access to education translates into higher involvement in paid and unpaid work.

Data

We use data from the 2015 EIC, collected by the Mexican Institute of Statistics and Geography (Instituto Nacional de Estadística y Geografía, INEGI), as an intermediate survey between the 2010 and 2020 full Mexican population censuses. The EIC survey has a sample of about six million Mexican dwellings, and it is representative at the national, state, and municipal levels. It is also representative at the locality level for those with 50,000 or more inhabitants. The data were collected in March 2015.¹³

For our study, the EIC data present several advantages. First, they include information on our outcomes of interest—namely, health care and education outcomes. More specifically, the EIC survey asks whether respondents are affiliated with any health care provider and the type (i.e., public contributory, public noncontributory, private, or any other kind), whether they received health care when sick, and where. For all household members aged three or older, the survey also reports whether

¹² As noted by Masferrer et al. (2019), growth in Mexico's U.S.-born population largely postdates 1997.

¹³ For more information on the EIC survey, please see <https://www.inegi.org.mx/programas/intercensal/2015/>.

they attend school and the last grade achieved. We use the latter, together with the child's age, to construct a dummy variable equal to 1 if the child is at an age-appropriate grade, and another variable measuring the number of years that she or he is lagging.¹⁴ Second, we can identify U.S.-born children because, for each household member, the survey asks about the state of birth if born in Mexico or the country of birth if born abroad. Third, the survey has information on whether each person holds a birth certificate and whether it was issued in Mexico or the United States, which allows us to look at documentation barriers among U.S.-born children. Fourth, we can observe where each household member aged five or older lived in 2010—that is, five years prior. This enables us to identify if U.S.-born children and the head of their households arrived recently (between 2010 and 2015) or not (before 2010) and, in turn, explore their progression of access to education and health care services. Furthermore, by looking at the interaction of residence time in Mexico and the lack of proper documentation, we gauge if families overcome the latter over time or if it persists as an access barrier. Finally, the EIC data allow us to account for a rich set of child and household traits, including characteristics of the child's household head.

Our sample consists of children ages 0–17 when examining their access to health care, and children ages 6–17 for schooling outcomes. Because we have information on work outcomes for all individuals at least 12 years old, we also look at the probability of working for pay or at home for children ages 12–17 as complementary evidence.

As detailed in the next section, in the first part of our analysis, we use a sample of both Mexican- and U.S.-born children (about 7.6 million observations) to compare their access to health care and education services. We exclude households that have children who were born in any other country (6,765 child observations or .08% of the sample). As a second step, we focus on U.S.-born children to explore the factors responsible for their limited access to basic services. In this part, our interest is on U.S.-born children who were living in either the United States or Mexico in 2010, excluding children living in any other country in that year (715 observations or .7% of this sample). We also exclude U.S.-born children whose household head was living in any other country in 2010 (458 observations or .4% of this sample).

Tables A1, A2, and A3 in the online appendix present some descriptive statistics for our sample. About 85% of children born in Mexico are affiliated with a health care provider, compared with only 56% of U.S.-born children. In addition, children born in Mexico are more likely than those born in the United States to be affiliated with a public health care provider (83% vs. 46%); U.S.-born children are more likely to be affiliated with a private provider. Despite these differences, almost all children receive health care when sick, with differences in the type of health care provider by place of birth resembling those for affiliation. In contrast, U.S.-born children have better mean schooling outcomes than their Mexican-born counterparts: about 81% of U.S.-born children attend school, compared with 72% of Mexican-born children. U.S.-born children are also more likely to be at an age-appropriate grade and lag fewer years in school.

¹⁴ In Section 2 of the online appendix, we provide more details on these and other variables.

Methods

For the first part of our analysis, we use a sample of Mexican- and U.S.-born children to gauge if the latter have limited access to health care and schooling. To that end, we estimate different versions of the following model:

$$Y_{ihm} = \alpha + \lambda \text{bornusa}_i + \mathbf{X}'_i\beta + \mathbf{Z}'_h\gamma + \delta_m + \varepsilon_{ihm}, \quad (1)$$

where Y_{ihm} stands for the outcome of interest for child i in household h in municipality m . Our health care outcomes are dummy variables for (1) whether the child is affiliated with a health care provider; (2) the type of health care provider, if affiliated; (3) whether the child received care when sick; and (4) the type of institution that provided the care. Our schooling outcomes are dummy variables for (1) whether the child attends school, (2) whether the child is at an age-appropriate school level, and (3) the number of years the child is lagging in school. Our key regressor, bornusa_i , is a dummy variable equal to 1 if the child was born in the United States and 0 if born in Mexico. Its coefficient measures the gap in outcomes between these two groups of children. The vector \mathbf{X}_i includes child traits (i.e., age, gender, indigenous descent, and whether the child has both parents at home (the reference category), only the mother, only the father, or none). The vector \mathbf{Z}_h includes information on the household size and the number of children in different age-groups; dummy variables for whether all children were born in Mexico (the reference category), all in the United States, or some in each country; a set of household wealth quintile dummy variables; and a dummy variable for whether the household resides in a rural locality—that is, one with fewer than 2,500 inhabitants. We also control for the characteristics of the child's household head, including age, educational attainment (less than high school vs. high school or higher),¹⁵ gender, indigenous descent,¹⁶ whether she or he was born in Mexico or abroad, and whether she or he lived in Mexico in 2010. Finally, Eq. (1) includes municipality-level fixed effects (δ_m) to capture any unobserved differences across municipalities affecting children's health care and education access.

To explore the existence of differential effects by age, we also estimate Eq. (1) separately for the following age-groups: children ages 0–5, 6–12, and 13–17 when examining health care outcomes; and for the older two age-groups when assessing education outcomes. Within each age-group, we also examine if the impact of being born in the United States varies by the child's gender and the education of the child's household head by estimating the following variation of Eq. (1):

$$Y_{ihm} = \alpha + \lambda_1 \text{bornusa}_i + \lambda_2 \text{bornusa}_i \times \text{charact}_i + \mathbf{X}'_i\beta + \mathbf{Z}'_h\gamma + \delta_m + \varepsilon_{ihm}, \quad (2)$$

¹⁵ We do not include employment status of the household head as a regressor because it is likely endogenous, particularly for health care access. Instead, we account for the head's age and education, which correlate with employability. In alternative results (available from the authors), including this regressor does not alter the main findings.

¹⁶ We measure indigenous descent as a binary variable, relying on two questions in the EIC: question #10 about whether the person identifies herself as indigenous and question #13 about whether the person speaks an indigenous language. Nevertheless, we acknowledge that measuring this characteristic is a nuanced, nonbinary issue in Mexico.

where $charact_i$ stands for either the child's gender or for whether the household head has less than 12 years of education (i.e., less than completed high school); both traits are included in \mathbf{X}_i .¹⁷ All other terms in Eq. (2) remain the same as in Eq. (1).

For the second part of the analysis, we focus on the sample of U.S.-born children to examine the potential *barriers* to their access of essential services in Mexico. We explore differences in their outcomes based on whether they and their household head resided in the United States five years earlier, in 2010. We also pay close attention to the role of having a foreign birth certificate or no birth certificate at all in the child's access to services owing to previous reports underscoring documentation barriers. Finally, we explore the joint role played by these two aspects (time in Mexico and documentation). To that end, we estimate the following model:

$$Y_{ihm} = \alpha + \lambda_1 foreignbc_i + \lambda_2 nobc_i + \lambda_3 foreignbc_i \times recentarrival_h + \lambda_4 nobc_i \times recentarrival_h + \mathbf{X}_i' \beta + \mathbf{Z}_h' \gamma + \delta_m + \epsilon_{ihm}, \quad (3)$$

where $foreignbc_i$ and $nobc_i$ are indicators for whether the child has a foreign or no birth certificate, respectively. The reference category is U.S.-born children who have a Mexican birth certificate.¹⁸ In this specification, we also include the interaction of these variables with $recentarrival_h$, a dummy for whether the child's household head was living in the United States in 2010 and arrived in Mexico between 2010 and 2015. In that case, the reference category is household heads who were already living in Mexico in 2010. This dummy variable for recent arrival is included by itself in \mathbf{Z}_h . All other terms in Eq. (3), including the dependent variables, are the same ones described earlier, except for the vector \mathbf{X}_i , which also includes a dummy variable for whether the child was living in the United States in 2010 when looking at educational outcomes. As in the first part of our analysis, we also look at heterogeneous impacts by age, including interactions of gender and education of the household head with our key regressors.

Finally, to shed some light on the collateral damage of restricted access to education on these invisible children, we also look at the incidence of child labor outside and inside the home. To that end, we estimate Eq. (3) using a sample of U.S.-born children ages 12–17, for whom the EIC reports work variables, and allow the impacts to differ by the child's gender and the education of the household head, as before. The dependent variables are, alternatively, a dummy variable for whether the child works for pay and another for whether she or he works on household chores.

¹⁷ We chose a binary indicator for whether household heads have a high school education because, in our data, 83% of children have a head of household with less than that level. Only 9% had parents with a high school education, and 8% with more than high school. Hence, a high school education is a good indicator for relatively skilled parents in our sample. In fact, high school became mandatory in Mexico only three years before the survey—in 2012. Additionally, most Mexican migrants in the United States have a relatively low educational attainment (Israel and Batalova 2020).

¹⁸ Recall that U.S.-born children who have at least one Mexican parent qualify for binational status, so they can be registered in Mexico and obtain a Mexican birth certificate.

All estimations are performed by ordinary least squares, clustering standard errors at the municipality level.¹⁹

Results

Health Care and Educational Access by Place of Birth

Are U.S.-born children returning to Mexico at a disadvantage in accessing health care? We report our estimated gaps as percentages, computed by dividing the estimated coefficient by the dependent variable mean, shown at the bottom of each table column, and multiplying by 100. [Table 1](#) shows that U.S.-born children are 28% less likely than their Mexican counterparts to be affiliated with a health care provider. This gap is largest (38%) among the youngest children (ages 0–5). Column 5 shows that, across age-groups, it is also larger for children whose household head has less than a high school education.²⁰ In addition, despite lacking coverage, nearly all children get health care when sick. U.S.-born children are only 1% less likely to do so. This gap is slightly larger for older children, and it is concentrated among U.S.-born children with less educated household heads.²¹

Among children who are affiliated with a health care provider, U.S.-born children are 10% and 4% less likely than their Mexican counterparts to be affiliated with a contributory or noncontributory public health care provider, respectively (panel A of [Table 2](#)).²² The first gap is smaller for U.S.-born children whose household head has less than a high school education (7%), compared with those whose household head is more educated (18%), whereas we find no significant differences by this variable for the second gap. In addition, U.S.-born children are 1.2 times more likely than Mexican-born children to be affiliated with a private health care provider, and this is more prevalent for those whose household head is more educated.²³ Finally, U.S.-born children are two times more likely to be affiliated with another kind of health care provider.

Following their health care affiliation patterns, panel B of [Table 2](#) shows that U.S.-born children are 21%–25% less likely than Mexican-born children to receive health care from a public institution when sick. The gap for public contributory care narrows if the household head is less educated and widens for noncontributory public care. U.S.-born children are 75% and twice as likely as Mexican-born children to get

¹⁹ Please refer to Section 2 in the online appendix for a discussion of the choice of estimation method and alternatives used.

²⁰ Although we chose a binary indicator for whether parents have less than a high school education, other authors document greater health care coverage among Mexican returnees with a college degree when compared with their less educated counterparts (Langellier et al. 2020).

²¹ We find no differential impact of nativity by gender; therefore, we omit those results for brevity.

²² We do not present separate estimations based on the child's age, because the pattern is similar for all age-groups. Similarly, we find no significant heterogeneity by gender.

²³ This pattern is common in Mexico, where more educated individuals are likely to have private insurance and health care, usually on top of contributory (employment-based) public health care, given the time and bureaucratic costs of accessing the latter (e.g., Das et al. 2008; López et al. 2015).

Table 1 Health care access of U.S.-born children compared with Mexican-born children

	Affiliated With a Health Care Provider					Got Care When Last Sick				
	All (1)	0-5 (2)	6-12 (3)	13-17 (4)	All With Interaction (5)	All (6)	0-5 (7)	6-12 (8)	13-17 (9)	All With Interaction (10)
U.S.-born	-.237** (.008)	-.317** (.011)	-.224** (.009)	-.196** (.012)	-.172** (.008)	-.009** (.001)	-.005* (.003)	-.008** (.001)	-.010** (.003)	.000 (.003)
U.S.-born × Head <H.S.					-.086** (.008)					-.013** (.003)
Number of Observations	7,656,973	2,475,719	3,048,668	2,132,586	7,656,973	7,692,263	2,505,471	3,051,881	2,134,911	7,692,263
R ²	.029	.027	.034	.032	.029	.013	.042	.004	.005	.013
DV Mean	.847	.838	.858	.841	.847	.988	.981	.993	.989	.988

Notes: Ordinary least squares estimates are from models including a constant term, as well as controls for (1) children's gender, age, indigenous origin, and living arrangement (with their mother, father, both, or none); and (2) household and household head traits, including household size and composition (number of children of age 0-5, 6-12, or 13-17 in the household, as well as dummy variables for whether all children were born in Mexico, the United States, or both countries), household wealth (dummy variables indicative of the household's position in a particular wealth quintile) and location (rural or urban), and information on the household head's gender, age, indigenous origin, educational attainment, place of birth (Mexico, the United States, or elsewhere), and recent arrival to the country (whether they lived in Mexico, the United States, or elsewhere five years prior). All models also include municipality fixed effects, and standard errors are clustered at the municipality level. H.S. = high school. DV = dependent variable.

* $p < .10$; ** $p < .01$

Table 2 Health care access by type of affiliation for U.S.-born children compared with Mexican-born children

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Public Provider—Contributory		Public Provider—Noncontributory		Private Provider		Other Kind of Provider	
A. Type of Health Care Affiliation								
U.S.-born	-.039** (.008)	-.074** (.013)	-.023** (.007)	-.034** (.007)	.030** (.004)	.078** (.006)	.026** (.007)	.031** (.010)
U.S.-born × Head <H.S.		.048** (.013)		.015 (.010)		-.066** (.007)		-.007 (.007)
Number of observations	6,599,982	6,599,982	6,599,982	6,599,982	6,599,982	6,599,982	6,599,982	6,599,982
R ²	.285	.285	.347	.347	.063	.063	.008	.008
DV mean	.401	.401	.582	.582	.026	.026	.014	.014
B. Type of Health Care Provider When Last Sick								
U.S.-born	-.081** (.008)	-.140** (.011)	-.096** (.005)	-.042** (.006)	.155** (.008)	.158** (.009)	.023** (.005)	.024** (.006)
U.S.-born × Head <H.S.		.078** (.009)		-.073** (.009)		-.004 (.010)		-.001 (.005)
Number of observations	7,593,453	7,593,453	7,593,453	7,593,453	7,593,453	7,593,453	7,593,453	7,593,453
R ²	.143	.143	.247	.247	.058	.058	.017	.017
DV mean	.321	.321	.459	.459	.207	.207	.013	.013

Notes: Ordinary least squares estimates are from models as described in the Table 1 note. H.S. = high school. DV = dependent variable.

**p < .01

Table 3 Access to education for U.S.-born children compared with Mexican-born children, by age-group

	Ages 6–12			Ages 13–17								
	Attends School (1)	Age-Appropriate Schooling (2)	Educational Lag in Years (3)	Attends School (4)	Age-Appropriate Schooling (5)	Educational Lag in Years (6)	Attends School (7)	Age-Appropriate Schooling (8)	Educational Lag in Years (9)	Attends School (10)	Educational Lag in Years (11)	Attends School (12)
U.S.-born	.002 (.003)	-.001 (.003)	-.007* (.004)	-.005 (.004)	.007 (.007)	.013 (.008)	.043** (.007)	.004 (.009)	.040** (.011)	-.003 (.012)	-.084** (.023)	.044* (.021)
U.S.-born × Female	-.001 (.002)	.000 (.002)	.000 (.002)	.000 (.002)	.002 (.004)	.002 (.004)	-.023** (.005)		-.027** (.008)		.052** (.020)	
U.S.-born × Head < H.S.		.003 (.003)		-.002 (.002)		-.006 (.005)		.037** (.006)		.038** (.010)		-.134** (.020)
Number of Observations	3,049,087	3,049,087	3,035,895	3,035,895	3,035,895	3,035,895	2,133,481	2,133,481	2,129,039	2,129,039	2,129,039	2,129,039
R ²	.011	.011	.021	.021	.013	.013	.115	.115	.101	.101	.081	.081
DV Mean	.978	.978	.962	.962	.064	.064	.812	.812	.793	.793	.451	.451

Notes: Ordinary least squares estimates are from models as described in the Table 1 note. H.S. = high school. DV = dependent variable.

*p < .10; **p < .05; ***p < .01

care at a private or another type of institution, respectively, and we find no differences by the education level of the household head.

Do we observe similar inequities in schooling access by place of birth? Not necessarily. In [Table 3](#), the main finding is the lack of a significant difference in schooling outcomes among children ages 6–12 by place of birth. Among 13- to 17-year-olds, however, differences emerge in favor of U.S.-born children. U.S.-born male teenagers are 5% more likely than their Mexican-born counterparts to attend school or to be at an age-appropriate level; their educational lag is 19% lower. We find a similar but smaller advantage for same-aged U.S.-born females, who are 3% and close to 2% more likely than their Mexican-born counterparts to attend school or be in age-appropriate schooling, respectively; their education lag is 7% lower. Transnational children and their families may bring with them different educational attainment expectations, contributing to their higher level of continued educational engagement (Cortez-Román and Hamann 2014). Finally, because of their comparison group, it is U.S.-born youth with *less* educated household heads who do comparatively better.²⁴

Understanding Barriers to Health Care and Education Access

In [Table 4](#), we go deeper into the factors driving the lower health care coverage of U.S.-born children compared with their counterparts born in Mexico. *Is it their recent arrival to the country? Or does it have to do with documentation barriers?* Recall that we measure lack of proper documentation as having a foreign birth certificate or none at all, compared with having a Mexican birth certificate. As shown in [Table A1](#) in the online appendix, about 47% of U.S.-born children in our sample have a Mexican birth certificate.

Looking at the first column of [Table 4](#), lack of proper documentation seems to be the major impediment. U.S.-born children with a foreign or no birth certificate are 64% and 69% less likely than those with a Mexican birth certificate to be affiliated with a health care provider, respectively. The interactions of the recent arrival with the birth certificate dummy variables show that the negative effect of lacking a Mexican birth certificate is about 8–10 percentage points larger for children whose household head arrived more recently to Mexico than for those whose household head arrived before 2010. However, the magnitude of the birth certificate dummy variables alone suggests that documentation barriers are persistent, even for children whose household head arrived before 2010. Accordingly, having a foreign birth certificate lowers a child's likelihood of getting health care when sick by roughly 1%, whereas not having any birth certificate does so by 3%.²⁵

²⁴ Recall that these estimates already control for the household's wealth quintile. As expected, being in the upper wealth quintiles has mostly a positive and significant effect on both health care affiliation and care, compared with being in the first wealth quintile. Similarly, household wealth has positive and significant effects on children's school enrollment and appropriate age–grade relationship, and negative effects on their educational lag.

²⁵ In [Tables 5 and 6](#), we focus on the whole sample of U.S.-born children because there are no significant differences by age.

Table 4 Health care access of U.S.-born children by country of birth certificate and recent arrival of household head

	Affiliated With a Health Care Provider (1)	Got Care When Last Sick (2)
Child Has Foreign Birth Certificate	-.356** (.014)	-.013** (.003)
Child Has No Birth Certificate	-.384** (.021)	-.029** (.009)
Recently Arrived HH Head	.007 (.011)	-.001 (.002)
Child Has Foreign Birth Certificate × Recently Arrived HH Head	-.102** (.016)	-.028** (.009)
Child Has No Birth Certificate × Recently Arrived HH Head	-.084** (.031)	-.028† (.016)
Number of Observations	101,647	102,083
R ²	.182	.028
DV Mean	.558	.976

Notes: Ordinary least squares estimates are from models as described in the Table 1 note. For birth certificate variables, the reference category is having a Mexican birth certificate. HH = household. DV = dependent variable.

†*p* < .10; ***p* < .01

Table 5 shows that the lack of a Mexican birth certificate also decreases the child’s likelihood of having any public health care affiliation and increases that of having private or other types of coverage. For instance, U.S.-born children with a foreign birth certificate are 18% and 23% less likely than those with a Mexican birth certificate to have public contributory and noncontributory health care coverage, respectively. Conversely, they are between 61% and 1.4 times more likely to have a private or other type of health care provider, respectively. The corresponding estimates for lacking any birth certificate follow the same pattern and are similar in magnitude.

The recent arrival of the household head has a significant impact on the type of health care coverage. U.S.-born children whose household head arrived in Mexico between 2010 and 2015 are 23% *less* likely than those whose household head arrived before 2010 to have public contributory coverage, but 22% *more* likely to have public noncontributory coverage. This probably reflects the Mexican government’s increased provision of support and information about basic services to more recent arrivals, compared with those who arrived earlier. For instance, starting in 2012, the Mexican government established several health care booths at the main points of entry to the country—precisely to provide basic health care to returning and deported migrants, and to affiliate them with SP.²⁶ More recent arrivals are also 16% less likely to be affiliated with a private health

²⁶ These booths, called “Health Care Booths for Repatriated Migrants” (Módulos de Atención a la Salud del Migrante Repatriado), are located in Tijuana, Matamoros, Nuevo Laredo, Reynosa, and Nogales. For the most recent information about them, please see <https://saludfronterizamx.org/modulo-salud-migrante/index.php>. From January 2013 to June 2017, these booths provided care and support to about 23,000 migrants (Presidencia de la República, México 2017).

Table 5 Health care access of U.S.-born children by type of affiliation, according to country of birth certificate and recent arrival of household head

	Public Provider— Contributory (1)	Public Provider— Noncontributory (2)	Private Provider (3)	Other Kind of Provider (4)
Child Has Foreign Birth Certificate	-.064** (.021)	-.111** (.009)	.076** (.011)	.085** (.014)
Child Has No Birth Certificate	-.054† (.032)	-.123** (.018)	.073** (.016)	.088** (.017)
Recently Arrived HH Head	-.084** (.014)	.104** (.014)	-.020* (.009)	-.004 (.005)
Child Has Foreign Birth Certificate × Recently Arrived HH Head	.014 (.024)	-.044 (.029)	.035† (.020)	-.004 (.027)
Child Has No Birth Certificate × Recently Arrived HH Head	.094 (.090)	-.054 (.084)	-.065 (.048)	.025 (.046)
Number of Observations	57,915	57,915	57,915	57,915
R ²	.185	.396	.158	.102
DV Mean	.360	.479	.124	.062

Notes: Ordinary least squares estimates are from models as described in the Table 1 note. For birth certificate variables, the reference category is having a Mexican birth certificate. HH = household. DV = dependent variable.

†*p* < .10; **p* < .05; ***p* < .01

care provider. Overall, we find no significant interactions between the birth certificate and the recent arrival dummy variables. In Table A4 in the online appendix, the impacts of the lack of proper documentation and recent arrival on the type of institution where care was received when last sick resemble these for health care affiliation.

In sum, our results suggest that the lack of documentation is a significant hurdle for the health care coverage and care receipt of U.S.-born children returning to Mexico with their families. *Does it play a similar role in the educational context?* Table 6 addresses this question. U.S.-born children ages 6–12 with a foreign birth certificate are only 1% less likely than those with a Mexican birth certificate to attend school and to be at an age-appropriate grade. Thus, documentation does not seem to be a major barrier to school attendance. Nevertheless, it is also associated with a 40% greater educational lag. Perhaps the gradual easing of enrollment requirements for these children—who might have not been able to enroll immediately because of their lack of documentation, but could do so later—partly explains these results. Similarly, the recent arrival of the child lowers the likelihood of attending school and of being at an age-appropriate education level by 1% and 2%, respectively, and increases the educational lag by 56%. This evidence suggests that factors other than documentation, such as knowledge about the school system or language barriers, play a role.²⁷

²⁷ In this regard, Zúñiga and Hamann (2013) note how Mexican schools often held back children one year as a strategy for “helping” them improve their Spanish. This could be contributing to the greater likelihood for children to lag in school the longer the parents have been in Mexico.

Table 6 Access to education for U.S.-born children by country of birth certificate and recent arrival of household head

	Ages 6–12			Ages 13–17		
	Attends School (1)	Age-Appropriate Schooling (2)	Educational Lag in Years (3)	Attends School (4)	Age-Appropriate Schooling (5)	Educational Lag in Years (6)
Child Has Foreign Birth Certificate	-.008* (.003)	-.013** (.003)	.019** (.005)	-.076** (.008)	-.052** (.010)	.109** (.019)
Child Has No Birth Certificate	-.010* (.005)	-.005 (.004)	.009 (.007)	-.097** (.020)	-.096** (.026)	.198** (.052)
Child Was Living in U.S.A. in 2010	-.012** (.004)	-.019** (.005)	.027** (.010)	-.065** (.018)	-.026 (.017)	.056 (.048)
Recently Arrived HH Head	.006 (.004)	.009 (.006)	-.018* (.009)	.034* (.018)	-.006 (.020)	-.018 (.050)
Child Has Foreign Birth Certificate × Recently Arrived HH Head	-.006 (.006)	-.011* (.006)	.009 (.008)	-.003 (.023)	.008 (.022)	-.019 (.052)
Child Has No Birth Certificate × Recently Arrived HH Head	-.044 (.033)	-.042* (.022)	.044* (.025)	-.026 (.058)	.001 (.064)	-.093 (.074)
Number of Observations	58,400	58,178	58,178	21,107	21,039	21,039
R ²	.024	.042	.034	.199	.132	.091
DV Mean	.981	.968	.048	.879	.861	.248

Notes: Ordinary least squares estimates are from models as described in the Table 1 note. For birth certificate variables, the reference category is having a Mexican birth certificate. HH = household. DV = dependent variable.

* $p < .10$; ** $p < .05$; *** $p < .01$

Table 7 Market work and housework for U.S.-born children ages 12–17

	Works for Pay (1)	Works at Home (2)
Child Has Foreign Birth Certificate	.030** (.007)	.003 (.003)
Child Has No Birth Certificate	.026* (.013)	-.001 (.004)
Child Was Living in United States in 2010	-.005 (.008)	.031** (.009)
Recently Arrived HH Head	.013 (.015)	-.014† (.007)
Recently Arrived HH Head × Female	-.008 (.015)	-.004 (.012)
Child Has Foreign Birth Certificate × Female	-.019* (.008)	.021** (.007)
Child Has No Birth Certificate × Female	.010 (.024)	.056* (.027)
Child Has Foreign Birth Certificate × Recently Arrived HH Head	-.021 (.020)	-.005 (.006)
Child Has Foreign Birth Certificate × Recently Arrived HH Head × Female	.020 (.023)	.003 (.020)
Child Has No Birth Certificate × Recently Arrived HH Head	-.008 (.031)	.013 (.011)
Child Has No Birth Certificate × Recently Arrived HH Head × Female	.035 (.058)	-.051 (.052)
Number of Observations	28,135	28,135
R ²	.078	.115
DV Mean	.047	.030

Notes: Ordinary least squares estimates are from models as described in the [Table 1](#) note. For birth certificate variables, the reference category is having a Mexican birth certificate. HH = household. DV = dependent variable.

† $p < .10$; * $p < .05$; ** $p < .01$

Among U.S.-born youth (ages 13–17), lack of documentation negatively impacts their schooling outcomes. For instance, having a foreign or no birth certificate makes them 9%–11% less likely than those with a Mexican birth certificate to attend school. Lack of documentation also reduces their probability of being at an age-appropriate grade and increases their educational lag. In addition, although recently arrived youth are 7% less likely than earlier arrivals to attend school, the impact of recent arrival in Mexico on schooling outcomes is less significant.

Finally, *are these older youth being pushed into the labor market or home labor?* [Table 7](#) shows that U.S.-born male and female youth with a foreign birth certificate are 64% and 23% more likely than their counterparts with a Mexican birth certificate to work for pay, respectively. Likewise, those lacking a birth certificate are 55% more likely to work for pay, regardless of gender. For females, having a foreign or no birth certificate raises their likelihood of working at home by 69% and 1.8 times,

respectively.²⁸ Working at home is twice as prevalent among U.S.-born youth who were living in the United States five years earlier, but 46% less likely among those whose household heads recently came back to Mexico. In sum, then, [Tables 6](#) and [7](#) confirm that the lack of proper documentation keeps these invisible children out of school and pushes them into other activities, such as paid work or housework.²⁹

Summary and Policy Implications

Over the past two decades, the United States has experienced an unprecedented increase in immigration enforcement, resulting in large numbers of deportees (Nowrasteh 2019). Many of them were long-term Mexican migrants who had settled in the United States and formed families. Suddenly, they found themselves back in Mexico with their children, who had been born and raised in the United States. In this article, we examine the health care and education barriers encountered by these children—a group referred to as “the invisibles” in the literature, and whose number was estimated to be close to half a million in 2018 (Cruz 2018; Shaw 2016).

Using data from the 2015 Mexican EIC, we document that these children are 28% less likely than their Mexican counterparts to be affiliated with any health care provider. When they are, U.S.-born children are less likely to be affiliated with and receive health care from a public health care provider and are more likely to have a private or other kind of health care provider. We also provide empirical evidence that a lack of proper documentation is a significant and persistent barrier that could explain these gaps in access to care. However, we find no significant gaps in educational access of primary-school children (ages 6–12) by place of birth, and positive gaps for U.S.-born teenagers (ages 13–17), when compared with their Mexican-born counterparts. Yet, for some U.S.-born children, lack of proper documentation represents a barrier to their educational attainment.

In sum, U.S.-born children are at a considerable disadvantage in terms of health care access, but less so regarding access to education, compared with their Mexican-born counterparts. A couple of factors could explain these findings. First, the education system in Mexico is much more centralized, particularly at the basic educational levels, compared with the health care system, and this favors a prompter and more uniform response to the policy challenges posed by the recent influx of transnational children. Second, the educational barriers faced by these invisible children have received much more attention in the academic literature, probably contributing to a higher awareness among policymakers; in contrast, the empirical evidence on their health care access has been scarce. We provide comprehensive evidence of the substantial gaps that remain in health care coverage. These gaps—and their persistence—are worrisome because they expose transnational children and their families to considerable health risks with long-term consequences, as well as to catastrophic expenses. In addition, by document-

²⁸ Children are “working at home” if they are devoted to housework chores and not working for pay.

²⁹ Regarding other covariates, for transnational children, having their parents present at home has some relevant impacts on their health care and education access (not shown). Not having both parents at home has a negative impact on health care affiliation, but no significant effect on whether they get care when sick. In terms of education, the absence of parents at home has a small but nonsignificant impact on the schooling outcomes of primary-age U.S.-born children (ages 6–12). However, for children ages 13–17, not having both parents at home has a negative impact on attending school and being at an age-appropriate grade, and a positive impact on their educational lag.

ing the role played by lack of proper documentation, we underscore easing documentation requirements as a key policy in facilitating these children's access to health care. Given the lack of significant gaps in school access at lower school levels, the Mexican government could rely on schools to provide direct assistance to transnational children and their families for getting their Mexican identification documents (birth certificate and CURP) and signing up for publicly provided health care coverage.

Regarding education, our results suggest that the active easing of barriers implemented by the Mexican government through SEP has favored transnational children's access to education. However, such efforts should continue to be promoted and enforced, as some transnational youths are still being left out of school because of a lack of proper documents. In addition, the literature highlights the challenges and hardships that invisible children face once they can attend a Mexican school, such as language barriers. Hence, the focus should be on improving the quality of their educational experience to ensure that these children progress adequately and do not drop out as they transition to high school and college.

On the United States' side, the approach to immigration enforcement could change from a communitywide tactic to a more targeted one that prioritizes children. Also, providing a path for families to stay together in the United States could also benefit these children considerably, sparing them the trauma of leaving their country and having to find their way in a new environment.

Transnational children are citizens of both Mexico and the United States. Given the well-documented, long-term impacts of adequate health care and educational investments early in life (e.g., Becker and Chiswick 1966; Clark and Royer 2013; Hoynes et al. 2016), both countries should be invested in facilitating children's access to such services. After all, as adults, these children might choose to go back to the United States or to stay in Mexico. Limited access to basic services could seriously hamper their development and growth, breaking the cycle of intergenerational progress that probably motivated their parents to migrate in the first place. ■

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