Managing Migration Crises:
Evidence from Surge Facilities and Unaccompanied Minor Children Flows

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Abstract

Climate change, political turmoil, and economic instability worldwide suggest that managing migration surges will be a permanent challenge for many economies. In response to the record arrival of unaccompanied migrant children at the southern border, the Biden administration used surge facilities to expedite the processing of children. We assess the effectiveness of this strategy and document reductions in the time children spent under government custody. A counterfactual analysis reveals that, in their absence, the average time to reunification would have risen from 37 to 50 days. Migration surges involving unaccompanied children underscore the urgency of identifying efficient and humanitarian strategies.

Abbreviations: CBP, Customs and Border Protection; CDC, Center for Disease Control; DHS, Department of Homeland Security; EIS, emergency intake sites; FEMA, Federal Emergency Management Agency; FOIA, Freedom of Information Act; FY, fiscal year; HHS, Health and Human Services; ICF, influx care facilities; ORR, Office of Refugee Resettlement; PSM, propensity score matching; UC, Unaccompanied children; SAIPE, Small Area Income and Poverty Estimates; SUTVA, stable unit treatment value assumption; UNHCR, United Nations High Commissioner for Refugees; UNICEF, United Nations International Children's Fund;

I.   Introduction

The United Nations High Commissioner for Refugees estimates that, for the first time in history, the number of forcibly displaced people in 2022 exceeded 100 million, including 4.5 million asylum seekers (UNHCR, 2022). These figures are likely to increase in the foreseeable future, given the overlapping socioeconomic crises experienced by developing countries brought about by climate-related disasters, the COVID-19 pandemic, and overall deteriorating governance amid increased violence and limited fiscal budgets (World Bank, 2022). The development economics literature has documented how these factors, including border enforcement, shape migration.[1] Yet, little is known about how destination countries manage the pressing global issue of growing migrant flows.

Unaccompanied children (UC)—individuals under 18 years of age entering the country without adult legal guardians and legal status—account for a growing share of U.S. Border Patrol encounters along the southern border.[2] In 2008, they represented 1.1 percent of all cases. However, by 2019, the figure had risen to 9 percent (Transactional Records Access Clearinghouse, 2022). While, in the past, children largely migrated to

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[1] The literature has focused, for example, on the migration impact of economic development (Dao *et al.*, 2018), cash transfers (Angelucci, 2015), foreign assistance (Lanati & Thiele, 2018), import competition (Majlesi & Narciso, 2018), border enforcement (Angelucci, 2012), as well as droughts and violence (Chort & de la Rupelle, 2016).

[2] Children may also be designated as UC if their unauthorized parents or legal guardians are unable to provide care and physical custody because they have been detained and face criminal charges.

escape violence in Mexico (Donato & Perez, 2017), most children now flee extreme violence, poverty, and food insecurity in the Northern Triangle countries of Guatemala, Honduras, and El Salvador (Clemens, 2021). After a significant decline at the beginning of the COVID-19 pandemic, FY 2021 witnessed an unprecedented increase in the UC flow, potentially driven by a pent-up demand to cross to the United States (see Figure 1).[3] The surge created humanitarian and logistical challenges for the Biden administration, including finding places to house them (Desai *et al.*, 2021; Medosch, 2021; UNICEF, 2021).

<Place Figure 1 here>

To manage the challenge created by the spike in migrant children, the administration tasked the Federal Emergency Management Agency (FEMA), the Red Cross, and the Department of Health and Human Services (HHS) to help with the operation of surge facilities *i.e.*, emergency intake sites (EIS) and influx care facilities (ICF). These facilities, predominantly located in cities in Texas and California, promptly housed UC after their referral from U.S. Customs and Border Protection (CBP) to the Office of Refugee Resettlement (ORR) (Impelli, 2021; Kanno-Youngs, 2021; U.S. Department of Homeland Security, 2022).[4]

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[3] A growing backlog in immigration courts and the Center for Disease Control's (CDC) decision to exempt UC from Title 42 expulsions likely exacerbated the situation (American Immigration Council, 2022; Desai *et al.*, 2021).

[4] Part of the space constraint was due to the COVID-19 pandemic, which necessitated reducing the use of available beds in ORR licensed facilities.

In this study, we evaluate the effectiveness of a strategy employed by the United States to manage the record arrival of unaccompanied migrant children at its southern border. Our focus is on the use of *surge facilities* to alleviate the challenges that immigration authorities faced. We gauge whether these facilities expedited the processing of children and reunification of families, lessening the strain on the immigration system.

Ideally, we would also like to examine post-release outcomes for UC housed in surge facilities relative to non-emergency facilities to understand better how faster reunification with sponsors impacts child well-being. However, because ORR does not systematically track children once they are released to a sponsor, data limitations prevent us from examining these outcomes.[5] Therefore, we focus on how placement in surge facilities impacted the duration of UC in ORR custody, which can have significant physical and mental health implications.

Using administrative data on unaccompanied children and a competing-risks model, we find that surge facilities accelerated the processing and release of children to their families and sponsors relative to the existing standard shelters. At any point, minors

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[5] ORR attempts safety and well-being calls to children and their sponsors over a seven-day period 30 days after the child is released from ORR custody. However, the calls are not documented in the Unaccompanied Children Portal Database. ORR also provides limited post-release services to less than half of UC and maintains a 24-hour, 7-day-a-week national call center for released UC and their sponsors. Across these efforts, no health, education, or employment data are collected on unaccompanied minors (Administration for Children and Families, 2023).

in surge facilities were about 30 percent more likely to be reunified with family than their counterparts in non-emergency facilities who had not yet been reunified. A counterfactual scenario assessing the time to reunification in the absence of surge facilities reveals the latter would have risen from 37 to roughly 50 days. In addition, placement in a surge facility expedites family reunification for all children, regardless of gender, albeit less for older (vs. younger) children, and their counterparts from the Northern Triangle countries (vs. mostly Mexico). The differences, however, are not large, suggesting that expedited family reunification is experienced by all youth placed in a surge facility.

To address potential selection issues concerning the location of surge facilities and the distribution of UC across facility types, we conduct a series of identification and robustness checks to assess the validity of our estimates. Our event study analysis finds no pre-program differences in the time to reunification between UC in localities where surge facilities eventually opened and children in other localities. However, we observe a notable divergence in the time-to-reunification trends following the establishment of surge facilities. We also address the concern that non-treated UC might have benefitted due to the potential relief provided by surge facilities to nearby facilities—*i.e.,* a violation of the stable unit treatment value assumption (SUTVA). We find no evidence suggesting that our results are influenced by individuals in the control group being affected by the treatment. In addition, we address the possibility that treatment selection biases our

estimates by implementing a propensity score matching approach, which balances the treatment and control groups based on observable individual characteristics. This exercise finds an even higher likelihood of family reunification for children in surge facilities than their counterparts in other facilities, suggesting that group imbalances are not driving our results. Finally, we show that our results are robust to excluding UC in restrictive settings, typically characterized by the longest durations in facilities.

Our findings have significant implications for the design and implementation of policies aimed at managing migrant surges, particularly the housing and processing of large UC volumes. Specifically, our results suggest that treating UC surges as humanitarian crises with personnel trained for emergencies can expedite the reunification process, potentially reducing the trauma children experience from longer family separations (MacLean *et al.*, 2019). Understanding how to deal with this challenge is of great relevance as both developed and developing nations, such as Colombia, Costa Rica, and Peru, increasingly find themselves on the receiving end (Migration Policy Institute, 2021; Rozo & Vargas, 2021). The U.S., Canada, and 18 Latin American countries recently signed the Los Angeles Declaration on Migration and Protection. The Declaration would create an early-warning system to provide receiving countries with advance notice from source countries and to establish a hemispheric commitment to design strategies to return migrants to their origin countries quickly, safely, and with dignity (Selee, 2022).

II. The Surge in Unaccompanied Children: Response and Impact

A) Response to the Surge

Countries vary in their approaches to addressing the challenges posed by migrant surges, including those consisting of unaccompanied minors. Some countries have treated migrant surges as a security threat, such as Australia transferring thousands of asylum-seekers to Pacific island-states for offshore processing under its military-led Operation Sovereign Borders (United Nations Human Rights Council, 2021). Similarly, as part of its 2014 Southern Border Initiative, Mexico has apprehended and deported thousands of Central Americans attempting to reach the United States (Martínez Flores, 2020). In contrast, other countries address migrant surges as humanitarian crises, as in the case of Germany welcoming Syrian refugees since 2015, Colombia hosting over a million displaced Venezuelans in the late 2010s, or Poland assisting Ukrainians crossing the border following Russia's invasion in 2022.[6]

The United States is not immune to the challenges imposed by large irregular migrant flows, as evidenced by the 450 percent rise in migrant apprehensions along the U.S.-Mexico border over the past four years alone.[7] As living conditions deteriorate in

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[6] The humanitarian approach is often supported with evidence that enforcement and deportations can have detrimental consequences for developing countries and often encourage even more migration. For instance, existing research shows that criminal deportations from the U.S. to El Salvador have spurred migration back to the United States by reducing schooling and increasing violence and gang activity in El Salvador (Kalsi, 2018; Sviatschi, 2022).

[7] Apprehensions increased from 400,000 in FY 2018 to over 2.2 million in 2022 (U.S. Customs and Border Protection, 2022).

much of Latin America, the list of source countries of apprehended migrants continues to expand to include Nicaragua, Venezuela, and other South American countries (Chishti & Bush-Joseph, 2022). These migrant surges have, once again, placed immigration front and center in highly polarized political debates.

Managing migrant crises becomes particularly problematic when it involves vulnerable groups, as in the case of unaccompanied minors (Donato & Sisk, 2015). In the United States alone, an unprecedented 150,000 unaccompanied children were encountered along the U.S.-Mexico border during FY2022 (see Figure 1). In addition to the rising cost of processing migrant children—reflected in the quintupling of the budget for the Office of Refugee Resettlement Unaccompanied Alien Children program,[8] minors are a particularly at-risk population. Aside from hunger, fatigue, dehydration, separation anxiety, trauma, and victimization (Gee, 2018; Office of Refugee Resettlement, 2022), journalistic reports have documented how minors are often the victims of labor exploitation (Dreier, 2023).

In the United States, UC encountered crossing the border are temporarily placed in Border Patrol holding stations until they can be transferred to ORR custody. Journalistic accounts have documented how holding stations contain cold, jail-like cells with armed border patrol officers and lack adequate privacy and personnel with child

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[8] The budget for ORR's Unaccompanied Alien Children program rose from $945 million in 2017 to $3.3 billion requested in 2022 and $5.4 billion received through continuing resolutions (Kandel, 2021, p.35; U.S. Department of Health and Human Services, 2022, p. 65).

welfare expertise (Flagg & Preston, 2022; Zak, 2021). In line with the 2002 Homeland Security Act and 2008 Trafficking Victims Protection Reauthorization Act, when minors cannot be returned to their countries of origin,[9] ORR assumes custody of UC within 72 hours of apprehension, placing them in state-licensed provider facilities across the country. The facilities range from home-based programs, such as foster care, to more restrictive institutional settings, including secure facilities and treatment centers. Most children remain in these facilities until they are released to a sponsor (*e.g.,* parent, legal guardian, relative, licensed program), age out, return to their home countries, or are transferred to a law enforcement agency. While children are required to be transferred to ORR custody within 72 hours, it is not uncommon for them to remain in CBP custody beyond this period when the agency is overwhelmed due to overcrowding.

The placement of UC in facilities is guided primarily by bed space.[10] Minors are sent to regions or states based on facility bed space that ORR monitors through their Unaccompanied Children Portal. The limited discretion for UC placement is evident in ORR policy, which requires that all care providers contracted with ORR must accept children except for when 1) the provider lacks bed space, 2) there is a conflict with state

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[9] The 2008 Trafficking Victims Protection Reauthorization Act established that encountered minors from non-contiguous countries (*e.g.,* Central America) cannot be summarily repatriated to their home countries; and the 2002 Homeland Security Act mandated ORR to process and care for unaccompanied migrant children while they are reunified with their guardians, or their immigration cases are adjudicated.

[10] See section 1.3.2 of the ORR's Unaccompanied Childen Program Policy Guide: Section 1 found at https://www.acf.hhs.gov/orr/policy-guidance/unaccompanied-children-program-policy-guide-section-1

or local licensing rules, or 3) the care provider cannot provide sufficient medical care for children with physical or mental disabilities (U.S. Senate Committee on Homeland Security and Governmental Issues, 2022).

Between February and March 2021, the number of UC detained by CBP doubled from 9,400 to over 18,800, creating a significant backlog in CBP holding stations. Consequently, in March 2021, more than 42 percent of UC were held in a holding station for more than 72 hours (Kanno-Youngs, 2021). The UC surge continued through the end of the fiscal year, with an additional 98,000 unaccompanied minors attempting to enter the United States (U.S. Customs and Border Protection, 2022). While the Biden administration was committed to moving UC quickly out of CBP custody, it faced significant capacity constraints in the existing state-licensed ORR facilities. As a result, the administration initiated Operation Apollo and enlisted the help of FEMA. FEMA's involvement in the operation included "1) rapidly expanding shelter capacity, reducing the holding time at U.S. Border Patrol Facilities; and 2) integrating interagency communication and data from the Department of Homeland Security (DHS) and HHS data sources to anticipate and drive operational decisions" (U.S. Department of Homeland Security Office of Inspector General, 2022). At the core of the operation was FEMA's management of 14 emergency intake sites (EIS), in addition to three influx care facilities (ICF), the administration established to support the strategy (U.S. Department of Homeland Security Office of Inspector General, 2022). Surge facilities (EISs and ICFs)

were established predominantly in Texas and California (see Figure A1 in the online appendix).

Emergency intake sites (EIS) were created as unlicensed facilities in which contracts were awarded in a noncompetitive bidding process to companies with previous FEMA experience and logistics management companies that provide facilities for disaster relief (Greenberg, 2021). The location of the sites was determined by FEMA's Incident Management Assistance Teams (U.S. Department of Homeland Security Office of Inspector General, 2022). As a result, EIS were established in large structures typically utilized during emergencies, such as coliseums, convention centers, oil worker "man camps," and warehouses. Table A1 in the online appendix shows that the capacity of EIS ranged from 372 minors to a maximum of 10,000. ORR followed its existing placement strategy, placing children predominantly based on bed space (U.S. Senate Committee on Homeland Security and Governmental Issues, 2022). The emergency shelter sites housed primarily teenagers, who required less supervision; nevertheless, five facilities also provided shelter for tender-age children (*i.e.*, those aged twelve and under), and others housed only teenage boys or girls.

Influx care facilities (ICF) are also unlicensed facilities created to provide temporary or emergency shelter and services for UC during surges in arrivals when ORR capacity in licensed facilities exceeds 85 percent for a period of three days (Office of Refugee Resettlement, 2019). Children placed in ICFs were often adolescents (Office of Refugee

Resettlement, 2019) and, while the standards for safety, education, and therapeutic services at ICFs were higher than at EIS facilities, they were lower than at licensed facilities (Office of Refugee Resettlement, 2019; Zak, 2021).

B)   Impact of Surge Facilities

While processing times and reunification efforts at surge facilities were slow at the onset, reports indicate that case management accelerated within a few months, with children meeting regularly with case managers and greater transparency in the release process (Women's Refugee Commission, 2022). While we do not have data on the specific services and personnel at each facility, it is possible that, once surge facilities had stabilized, they were able to process UC quicker than licensed ORR facilities because (1) they offered fewer services, (2) hired a large number of trained emergency responders and existing government employees from the onset, and (3) modified reunification procedures. In effect, these operational strategies indicate that the administration prioritized the expeditious reunification of children with their sponsors over providing high-quality care.

Based on ORR reports, emergency intake sites were designed "for mass care with basic standards to meet immediate sheltering needs of unaccompanied children" (Office of Refugee Resettlement, 2021b) and were "not designed or intended to provide the full range of services available at traditional ORR care provider facilities." The limited services provided to UC may have allowed surge facilities to redirect their resources

toward reunification efforts, albeit at the detriment of offering high-quality childcare services.

Another strategy ORR used to speed up the process of discharging unaccompanied minors was the quick hiring of case managers specifically responsible for reuniting children with sponsors. However, in some cases, training and other requirements were dropped to facilitate the hiring of caseworkers. For example, the Fort Bliss EIS hired 300 case managers within a month of opening and waived all training requirements for case managers for 60 days (Grimm, 2022). Some of the case managers were existing federal employees who were asked to deploy to surge facilities, where they were offered overtime and premium pay, as well as reimbursement for any travel and lodging expenses (Administration for Children and Families & Office of Refugee Resettlement, 2021; McGettigan, 2021). In addition, ORR issued guidance to surge facilities that case management services should be focused primarily on "family reunification services in order to release a child without unnecessary delay to a sponsor and may be conducted to the extent feasible remotely." (Office of Refugee Resettlement, 2021b). The swift employment of existing government workers and emergency responders affiliated with the Red Cross and FEMA, coupled with case managers spending less time in training or designing individual service plans for children, could have expedited the reunification process at the expense of lower standards for caseworkers.

Finally, ORR eliminated certain background checks and modified the release process for UC joining immediate family members. For example, in March 2021, ORR issued guidance for surge facilities to follow modified release requirements, which included eliminating background checks for additional household members, eliminating third-party case reviews, and modifying family reunification applications and UC assessments. These changes to the reunification process may have resulted in faster processing times, although less information was gathered on unaccompanied minors (Grimm, 2022; Office of Refugee Resettlement, 2021a).

Despite these mechanisms, which could potentially decrease the time to reunification for UC and their families, it is important to note that under emergency standards of care, surge facilities were encouraged but not required to provide school, daily outdoor activities, mental health services, or privacy for housed minors (Desai *et al.*, 2021). This contrasted with licensed ORR shelters, which are required to "provide a comprehensive medical exam within 48 business hours of arrival, ongoing access to medical and mental health services, six hours of education five days a week, daily outdoor activity and recreation time, legal services, case management and counseling, and privacy policies" (Greenberg, 2021). Children separated from their parents during an arduous migration process would stand to benefit from both a shorter time to reunification and temporary housing that is safe and supportive.

While the goal behind the opening of surge facilities was to expedite the reunification of UC with sponsors, it is hard to predict the impact of these sites on the time to reunification for UC. Those placed in surge facilities may, indeed, experience a faster release based on the rationale for opening those sites—namely, the lack of bed space to house children and the directive from the administration to process children expeditiously. In these facilities, the fulfillment of the mandate was facilitated by the more restricted range of services that surge facilities were obliged to provide vis-à-vis non-surge facilities, as well as simplified release standards in some instances. However, if more children were redirected to surge facilities with the goal of expediting their processing, the rapidly growing UC inflow may have resulted in either stabilizing or rising reunification times over time at those sites.

Similarly, the time to reunification for children placed in non-surge facilities could have shortened or lengthened, depending on the responsiveness of these facilities to the presence of surge facilities. We explore that possibility in the identification checks. For instance, non-surge facilities may have benefited from the opening of surge facilities, with children's managers having smaller caseloads and, in turn, the ability to dedicate more time to each case and work through them more effectively. Alternatively, the opening of surge facilities could have relieved non-surge facilities from the high pressure to place children in homes rapidly and, counterproductively, lengthened the time to reunification in those facilities.

In what follows, we assess the effectiveness of surge facilities in expediting the release of UC to families and other sponsors. We also estimate what the time to family reunification would have looked like in the absence of such facilities. Finally, given the ambiguity in how the overall time to reunification across all types of ORR facilities may have behaved, we examine how the time to reunification also changed in non-EIS facilities.

III. Data and Descriptive Statistics

A) Data on Unaccompanied Minors

Our primary dataset was obtained through a Freedom of Information Act (FOIA) request on unaccompanied minors encountered along the U.S. Southwest border by the U.S. Border Patrol and referred to ORR between January 2019 and June 2022. The dataset includes individual-level information on age, gender, country of origin, date of ORR custody, date of discharge, discharge type, sponsor relationship, and facility type for over 285,000 unaccompanied children. The data refers to children who either crossed the border alone or may have traveled with adult relatives but were separated by Border Patrol.[11]

<Place Table 1 here>

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[11] The data do not allow us to distinguish between the two groups.

Table 1 presents descriptive statistics for the UC in our sample by type of facility placement. Thirty-four percent of children were assigned to surge facilities. The remaining children were placed at non-surge facilities, including restrictive facilities, foster care, and ORR shelters. Table 1 also shows that most UC in our sample were boys who originated from Central America and were discharged and reunified with their families.[12] Regarding differences across program types, UC placed in surge facilities were slightly older, consistent with government efforts to house older children in these programs. While most children were eventually discharged regardless of their program placement, the time spent in custody at surge facilities was shorter by 12 days. At any point in time, children's likelihood of reunification with family was also slightly higher.

<Place Figure 2 here>

Figure 2 shows that between March and August 2021, when the surge was most pronounced, unaccompanied children were more likely to reside in surge facilities than in other facilities. While there was a decline in the number of UC held in surge facilities before 2022, the number of children housed at these sites increased thereafter. This suggests that additional surges may require keeping surge facilities in operation. Figures A2 and A3 in the online appendix display additional trends in surge and non-surge facilities. Figure A2 shows that within three months of opening, UC held in surge

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[12] Reunification with family includes both the nuclear family (*e.g.*, parents and siblings) as well as the extended family (*e.g.*, aunts, uncles, etc.).

facilities experienced a shorter time to reunification than minors in regular shelters.[13]

Figure A4 shows that while surge facilities were initially less likely to discharge UC to families, within three months, they began releasing children at the same rate as non-surge facilities. After nine months of operation, they were discharging UC at a higher rate.

B) Additional Data

We also gather data from various sources to account for baseline county-specific characteristics likely altering the custodial conditions and reunification prospects of unaccompanied migrant children encountered at the border. To account for the role of economic conditions, we use data on county unemployment rates from the Bureau of Labor Statistics Local Area Unemployment Statistics. Economic conditions can impact the resources available to ORR to manage shelters and signal the existence of local labor shortages, both of which could have implications for unaccompanied migrant children. For example, journalistic reports have documented increased child labor violations involving unaccompanied minors because of tight labor markets, which may have expedited the release of children (Dreier, 2023). We also include other county-level traits potentially correlated with county-level economic conditions that could influence the opening of a surge facility. These factors include local population estimates, crime levels,

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[13] Appendix Table A2 shows the average length of custody and Appendix Figure A3 shows the average time to reunification by facility type. The time to reunification is the longest for UC residing in restrictive facilities. The shortest durations to reunification are observed among unaccompanied children in surge facilities.

and socioeconomic conditions. County total and Hispanic population estimates are taken from the U.S. Census and the Center for Disease Control's Bridged-Race Population Estimates. County crime levels are gathered from the Jacob Kaplan's Uniform Crime Reporting Program data files (Kaplan, 2021) to capture the role that crime rate might play in the reunification process. County-level socioeconomic status is accounted for by incorporating information on poverty rates and median household income data from the Census Small Area Income and Poverty Estimates (SAIPE).

Given that our analysis overlaps with the COVID-19 pandemic, we control for monthly COVID-19 deaths per 100,000 people using data from USA Facts on monthly county-level counts of COVID-19 deaths and estimates from the Census Bureau on the 2019 county populations. We control for the pandemic as it could have impacted ORR's operational efforts, including the management of its facilities.

Finally, we collect information on interior immigration enforcement and sanctuary policies in the localities where children were held in ORR custody. Our rationale for accounting for the enforcement climate in the local area around the holding facility is that sponsors may be reticent to pick up children if they fear being placed under high scrutiny by federal officials, which could lengthen the time to reunification. We account for the intensity of local immigration enforcement using the activation of various policies at the county level, as estimated in Amuedo-Dorantes & Bucheli (2023). Data on sanctuary policies comes from the Center for Immigration Studies. In our analyses, we use a

dichotomous variable to account for the existence of a sanctuary policy in each jurisdiction.

IV. Methodology

Our goal is to learn about the efficacy of surge facilities in addressing the migration crisis posed by recent surges in UC by expediting their reunification with family and other sponsors. To achieve that aim, we model how placement in a surge facility might have impacted children's family reunification prospects. Although 94% of children in our sample were discharged to an individual sponsor, more than 4,500 aged out, ran away, or left the country, and almost 10,000 were still under ORR custody by the end of the study period. Hence, we estimate the likelihood of reunification as a competing-risks model that accounts for competing failure events—*e.g.*, leaving the country or aging out of ORR care—and right-censoring in the data, as not every child has been discharged. Our competing-risks regression model is given by:

(1) $\bar{h}_1\big(t|W_{ifct}\big) = \bar{h}_{1,0}(t)\exp\big(W_{ifct}\theta\big)$

$$= \bar{h}_{1,0}(t)\exp\big(\beta_1 SF_{fct} + X_i\beta_2 + Z_{ct}\beta_3 + \gamma_c + \gamma_m + trend\big)$$

where $\bar{h}_1\big(t|W_{ifct}\big)$ is the probability that child i placed in facility f in county c will be reunified with their family before time t in the presence of alternative failure modes (discharge types). SF is an indicator of whether each facility is designated as a surge facility. The model also accounts for minors' age and gender in vector X_i to account for

child traits potentially affecting the length of ORR custody. Further, the vector Z_{ct} includes county-specific information on demographics, economic indicators, monthly Covid-19 deaths per 100,000 people, the local level of immigration enforcement, and the presence of sanctuary policies. These policies may affect relatives' willingness to come forward and pick up children if, for example, their own immigration status puts them at risk of apprehension and deportation.[14] Finally, we add calendar month fixed effects to control for seasonality in the flow of unaccompanied minors, county fixed effects that account for unobserved local characteristics, and, in alternative specifications, a time trend and county-specific trends.

Our identifying assumption is the lack of pre-existing differential trends in children's likelihood of family reunification in localities with and without a surge facility. This assumption might be violated if, for example, surge facilities were strategically placed in locations where children's family reunification hazards were lower or if children housed in those facilities were more likely to be reunified with their families.[15] In addition to these selection and reverse causality concerns, unobserved heterogeneity might bias the estimated impact of surge facilities on unaccompanied minors' time in

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[14] It was common practice for ORR to fingerprint and run background checks on all members of families attempting to sponsor unaccompanied minors (Capps *et al.*, 2019).

[15] The strategic location of surge facilities may be less of a concern if the government were to have opened the surge facilities in areas where processing times were the highest or rising the most. As children were placed in surge facilities, the time to reunification would have been expected to rise. As such, any estimates that suggest that surge facilities expedited the reunification process would only understate the true effect.

ORR custody until reunification with family members. To address these endogeneity

concerns, we conduct the following event study analysis:

(2) $y_{ict} = \alpha + \sum_{t=-7}^{-2} \tau_t \cdot 1(SF_{ct} = 1) + \sum_{t=0}^{7} \rho_t \cdot 1(SF_{ct} = 1) + \delta_{i(c)t}\beta_1 + \gamma_c + \gamma_t + \varepsilon_{ct}$

where the indicator function $1(SF_{ct} = 1)$ represents the tth month before or after the

implementation of a surge facility in county c. Pre-existing differences in the discharge

type between locations with and without surge facilities are captured by the coefficients

in vector τ_t. In contrast, the coefficients in vector ρ_t capture the differential impact of

surge facilities on the reunification probability up to six months after their opening.[16] This

approach enables us to gauge if custodial outcomes for unaccompanied minors already

differed across locations before the opening of surge facilities. It also allows us to uncover

these facilities' short- vs. long-lasting impacts.

V.   Surge Facilities and Children's Family Reunification Prospects

A)   Main Findings

We aim to gauge the efficacy of surge facilities in managing the unprecedented

increase in unaccompanied minors arriving at the U.S.-Mexico border since 2021.

Particularly crucial is learning if surge facilities helped facilitate minors' reunification

with families, given that family separation can result in development disruptions and

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[16] Periods before $t = -6$ and after $t = 6$ are binned up into $t = -7$ and $t = 7$, respectively.

long-term negative psychological and physical health consequences, as exemplified by

higher rates of depression and maladaptive behaviors (Carey, 2018; Linton *et al.*, 2017).

<Place Table 2 here>

The results from estimating equation (1) are displayed in Table 2. Once we account

for child demographic traits, temporal trends, baseline changes in placement county

traits, and country-of-origin specific time trends, children placed in surge facilities were

30 percent more likely to be reunified with family than their counterparts in state-licensed

facilities.[17] To facilitate the interpretation of these estimates, Figure 3 displays the

cumulative incidence of family reunification based on the type of facility where the

children were placed. Two months after being placed under ORR custody, the odds of

family reunification in surge facilities averaged 90 percent—*i.e.*, 10 percentage points

higher than their counterparts in other facilities (for whom those rates averaged 80

percent).

<Place Figure 3 here>

The results in Table 2 reveal how surge facilities, managed by FEMA jointly with

the Department of Health and Human Services, expedited the release of children to

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[17] Most UC are reunified with nuclear family members (*e.g.,* parents or siblings), but a non-negligible share is also unified with extended family members, such as aunts and uncles. If time to reunification with nuclear family members is shorter than time to reunification with extended family members, family composition could be driving our results. We re-estimate our main model using both the nuclear family definition and the extended family definition to explore whether our estimates are sensitive to family composition. Results, which prove robust to this alternative definition of family reunification, are shown in the third column of Appendix Table A5.

families and other sponsors relative to standard shelters.[18] The effectiveness of surge

facilities in accelerating family reunification also appears to have benefited all children,

with only small differences according to children's age and origin, as shown in Table 3.

While older children and children from the Northern Triangle countries placed in surge

facilities display a lower family reunification hazard than their younger and Mexican

counterparts, the differences are not very large. Furthermore, to the extent that increased

bed space provided by surge facilities may have also allowed for a faster transfer of the

children out of CBP jail-type facilities and into ORR facilities, our estimates may be

considered a lower-bound impact of surge facilities on time to reunification.

<Place Table 3 here>

A concern is that our findings may be driven by the selective assignment of

children who are expected to be more easily reunified with family in the United States to

surge facilities. Even though ORR's guidance mentions that UC in surge facilities should

be "expected to be released to a sponsor within 30 days" (Office of Refugee Resettlement,

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[18] We also model the time under ORR custody using a semiparametric Cox proportional hazard regression that addresses the non-normal distribution of duration data and the right censoring of our dataset, as a discharge is not observed for some children. This framework enables us to quantify the impact on children's discharge hazards based on the type of ORR facility where they are placed. Kaplan-Meier failure estimates based on the facility where the child was placed are shown in online Appendix Figure A5. The probability of discharge for children in a surge facility was 75 percent one month after placement under ORR custody—approximately 25 percentage points higher than for children in non-surge facilities—suggesting the efficacy of surge programs in expediting the discharge process. Appendix Table A3 shows the results from the Cox proportional hazard regression. While the estimated discharge rates drop from 60 percent in models that only control for basic child demographic traits (such as age, gender, and country of origin) to 30 percent in the fully saturated model specification, they remain significantly higher at surge facilities.

2019), this guidance is not likely to generate a selection of children for various reasons. *First*, CBP is required to transfer UC over to ORR within 72 hours of their apprehension. This limited time window does not permit a careful assessment of difficulties surrounding a future family reunification. In this regard, ORR recognizes that following their guidelines might prove "impracticable or impossible, as information regarding the child may be incomplete or unknown" by DHS or ORR at the time of transfer (Office of Refugee Resettlement, 2021b). *Second*, if UC with better family reunification prospects were being selectively placed in surge facilities, children with more complex family reunification prospects would be housed in other licensed facilities. Yet, based on Figure A2, the average time to reunification decreased, as opposed to increased, across surge and licensed facilities following the opening of the former. *Finally*, if our findings were driven by the differential processing, by surge facilities, of children who can be easily reunified with family, we would not expect the placement of children in surge facilities to accelerate other types of discharge, such as those taking place by aging out, being deported, or voluntarily leaving the country. Based on the results in Table A4 in the online appendix, those discharge rates were 60 percent higher in surge facilities than in licensed shelters. In turn, the Kaplan-Meier failure estimates in Figure A6 in the appendix reveal that those children's discharge probabilities two months after entering ORR's custody were at least 25 points higher in surge facilities than in other facilities. Overall, the results suggest that surge facilities expedited all types of discharges, not only those

related to family reunification. In sum, for the abovementioned reasons, we can view the results as indicative of the relief surge facilities provide to the entire UC processing system.

B)   Identification and Robustness Checks

In this section, we conduct a series of identification and robustness checks to assess the validity of our estimates.

i.   The Parallel Trends Assumption

Identification rests on the assumption that, in the absence of surge facilities, the reunification of children would have trended parallelly in localities without surge facilities and localities where surge facilities were eventually placed. While this parallel trend assumption is untestable, we conduct an event study to assess if reunification already differed for unaccompanied minors placed in localities that eventually got a surge facility compared to children in other localities. Recent work by Sun & Abraham (2021) shows that results of event study analysis exploiting variation in treatment timing can break down in the presence of heterogeneous treatment effect, as in the case of difference-in-differences designs with staggered adoption of treatment. While most surge facilities opened within a relatively short period (see online Appendix Table A1), we estimate the event study using the imputation approach developed by Borusyak *et al.* (2024), which is robust to heterogeneous treatment effects and allows for the use of

repeated cross-sections.[19] Treatment is defined by the month ORR first opened a surge facility in a given county.

Figure 4 displays the results of this exercise. As shown therein, ten months before the opening of a surge facility, the time to reunification for children in localities where a surge facility was eventually placed was no different than the time to reunification for children in localities that never opened such a surge facility. This supports the assumption of no pre-trends, the suitability of our control group, and the lack of anticipation effects, which is consistent with the administration's decision to allow FEMA to determine the location of sites based on its emergency management protocols. In addition, there is a clear break in the trend of the time to reunify children placed in surge facilities following their opening. This trend persists over several months after the introduction of such facilities.

<Place Figure 4 here>

Overall, our main findings hold, with time to reunification averaging ten days fewer for children placed in surge facilities than their counterparts in other sites, *i.e.*, 30 percent less time one month after placement in ORR custody. The robustness of our

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[19] We estimate the analysis using the difference-in-differences imputation estimator (Borusyak *et al.*, 2021). This method is used in difference-in-differences settings with staggered adoption of treatment and heterogenous treatment effects. First, the imputation method estimates a regression of the outcome on group and time fixed effects using untreated observations. Second, it uses the regression to predict the counterfactual outcome for the treated observations. Finally, treatment effect estimates are obtained by taking the difference between the treated and predicted untreated outcomes. See Borusyak *et al.* (2021) for details.

estimate is not surprising, given a couple of factors. *First*, surge facilities opened in

localities with space availability, as in the case of empty auditoriums (Montoya-Galvez,

2022), with contracts awarded to companies and facilities with previous FEMA

experience that were able to meet the logistical needs. *Secondly*, most children continued

to be placed in standard shelters in 'never-treated' localities, where a surge facility never

opened. As such, our estimates are mainly driven by comparisons of treated to never-

treated units, as opposed to 'bad' comparisons where early-treated groups serve as the

control for later-treated groups (Goodman-Bacon, 2021).[20]

ii.   *The Stable Unit Treatment Assumption*

Causal inference in the difference-in-differences framework also relies on the

assumption that the results are not driven by children's response at non-surge facilities

to the opening of nearby surge facilities, *i.e.,* that the Stable Unit Treatment Value

Assumption (SUTVA) holds. Yet, this assumption could be violated if children at non-

surge facilities experience shorter detentions or a higher likelihood of family reunification

as surge facilities alleviate the pressure on nearby facilities. While, in that instance, the

estimated impact of surge facilities would be downward biased, we conduct a couple of

checks to assess the degree to which our findings might be potentially biased.

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[20] Prior to the opening of the surge facilities, non-surge facilities were authorized to cover the travel expenses that UC would incur to reach the homes of their sponsors (Merchant, 2021). Using government funds to cover transportation costs could facilitate the reunification of UC housed in non-surge facilities with their sponsors. Such a policy would cause a downward bias in any estimates that suggest surge facilities resulted in an expedited release of children to their sponsors.

Specifically, we redefine the treatment indicator to include all children in counties with

an active surge facility to account for any spillover effects from the nearby surge facility.

We then compare these children to children in localities where no surge facility opened

during the entire study period. As indicated in column (2) in Table 4, we obtain nearly

identical point estimates to those obtained in column (1) (reproduced from Table 2),

suggesting that our results are not driven by surge facilities' spillover impacts on children

in the control group.

<Place Table 4 here>

A more restrictive way of checking whether our estimates identify the causal effect

of surge facilities is by comparing the outcomes of children in surge facilities to those of

children in distant non-surge facilities. To conduct this exercise, we repeat the analysis

while excluding children in non-surge facilities located in the same states where surge

facilities opened. In this way, we compare children in surge facilities to children in states

without a surge facility. Column (3) in Table 4 reveals a smaller effect, although still in

the same direction as those in Table 2, suggesting once more that our findings are not

driven by individuals in the control group being affected by the treatment.

 iii.   *The Comparability of the Control Group*

Because we are using observational data to estimate the impact of surge facilities,

a potential concern stems from the imbalance in observable individual characteristics

between the treated and control groups. As shown in the descriptive statistics in Table

1, UC placed in surge facilities were slightly older, more likely to be male, and more likely to originate from Central America than children at regular facilities. While children placed in surge and non-surge facilities may also differ in terms of other unobservable traits, we experiment with matching them with regards to these observable differences using a propensity score matching approach (PSM) with one-to-one nearest neighbor matching with replacement between treated and control units.

Specifically, we estimate the propensity score with children's gender, age group, and origin (*i.e.*, Central America, Mexico, or South America). Figure 5 displays the distribution of the propensity scores by surge facility placement for the sample with common support. Dropping the observations outside the common support region excludes 100,000 observations—about a third of the original sample. We then use the PSM sample to re-estimate equation (1).

<Place Figure 5 here>

Table 5 presents the results of this exercise. Columns (1)–(3) indicate that children placed in surge facilities were approximately 60 percent more likely to be reunified with family than their counterparts in state-licensed facilities. This is an even larger effect than the estimated with the entire sample in Table 2. Columns (4) and (5) show coefficients that are not significant and closer to one, given the combination of a smaller sample and the loss in variation as we include time trends and county-specific time trends. While not

comparable owing to the distinct samples involved, it suggests that imbalances in individual characteristics are not driving our results.

<Place Table 5 here>

iv.   *Robustness of Results to Alternative Samples and Outcome*

To conclude, we experiment with estimating our main specification with alternative samples and outcomes. We begin by excluding children placed in restrictive settings. As documented in Panel B, Table A2 in the appendix, these children remained under ORR custody for unusually long periods, ranging from five to nine months before the government started installing surge facilities. Even then, the duration in those facilities remained, by far, the longest (see also Appendix Figure A3). That said, the number of kids in restrictive settings was negligible, suggesting children's placement in such settings does not likely drive our estimates. Table 6 supports that hypothesis by showing similar estimates to those presented in Table 2 when we exclude children placed in restrictive facilities from the sample.

<Place Table 6 here>

Next, in Appendix Table A5, we repeat the analysis, experimenting with additional sample modifications. Column (1) excludes the months of peak COVID-19 disruptions. During March through September 2020, the composition of the UC flows changed significantly due to the pandemic relative to the rest of the study period, with the relative size of the flow of unaccompanied teenage boys and children from Central

America dropping significantly (see Appendix Figures A7 and A8). Changes in the UC

demographics could have impacted reunification times. However, as shown in column

(1), our results prove remarkably robust to excluding the pandemic months, with the

placement in surge facilities further accelerating family reunification.

Column (2) of Table A5 repeats the analysis while excluding individuals referred

to ORR in county-months where more than one surge facility operated.[21] The estimated

sub-hazard shows that children in surge facilities were more than 35 percent more likely

to be reunited with family than their counterparts in other facilities.

Finally, we verify that the faster reunifications documented at surge facilities

happened regardless of how we define children's families. As observed in column (3) of

Appendix Table A5, when we change the definition of family reunification to only

consider discharges to the nuclear family—*i.e.*, parents and siblings—and exclude those

who were reunified with other relatives, our estimated effects become larger, suggesting

even faster discharge rates.

VI.   Discussion of Findings and Policy Implications

Our findings point to surge facilities being instrumental in accelerating the

processing of UC by expediting their discharge from ORR custody and reunification with

family. That said, these facilities came under intense scrutiny given that states did not

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[21] El Paso County, TX, May–June 2022; Reeves County, TX, June 2022; Dimmit County, TX, April–July 2021; and Bexar County, TX, April–May 2021.

regulate them, failed to provide some of the services that non-surge facilities offered, and often lacked privacy and personal space for UC. In addition, the establishment of these facilities can prove expensive.

Regarding the latter, Department of Health and Human Services officials estimated that the Trump administration spent an average of $775 daily per person in "tent cities" built to temporarily house children separated from their families under the 2018 "zero tolerance" policy (Ainsley, 2018). Instead, holding children in regular shelters was estimated at $256 per day. Yet, the $775 figure includes the initial sunk cost of setting up these new infrastructures. Average operating costs are likely to be significantly lower, especially as the number of hosted UC rises. Still, housing and processing surges of UC come at a high price to taxpayers. In FY 2022 alone, Congress appropriated $5.4 billion to ORR's Unaccompanied Alien Children program (U.S. Department of Health and Human Services, 2022).

Despite the costs and criticisms associated with surge facilities, the alternative is that children are housed at regular ORR shelters and spend more time under government custody and away from their families while their cases are processed. Research shows that the prolonged institutional custody of migrant children can inflict severe and potentially long-term psycho-emotional trauma on minors (MacLean *et al.*, 2019). Surge facilities may have helped minimize the negative impact of keeping children away from families by reducing their time in institutional custody.

While we cannot assess how surge facilities have fared relative to regular shelters when processing UC due to data limitations, we can explore how times to reunification might have looked like in the absence of surge facilities. For this counterfactual exercise, we rely on information from the months preceding the establishment of the first surge facility in January 2021 to forecast what discharge and family reunification rates would be like in 2021 and 2022. We first use data from 2019 and 2020 to estimate a linear regression for the average time to reunification in a given month on the corresponding number of UC placed under ORR custody:

(3) $\overline{time\ to\ reunification}_t = \pi_0 + \pi_1 UMC_t, \qquad t = \{January\ 2019, \ldots, December\ 2020\}.$

Then, we use the π_1 coefficient to extrapolate the counterfactual average time to reunification for the remainder of the period, *i.e.*, January 2021 through June 2022, given the observed monthly inflow of UC. This approach assumes that all conditions driving children's time to reunification, except for the number of UC encountered every month, remained constant before and after the establishment of any surge facilities. This seems a reasonable assumption given the lack of significant changes in the average time to reunification in non-surge facilities around the implementation of surge facilities (see online Appendix Figure A2). We only observe a reduction in the time to reunification among "untreated" children more than a year after the opening of surge facilities.

Figure 6 presents the observed and estimated monthly average time to reunification. The figure shows that the counterfactual time to reunification obtained

with the linear prediction closely follows the observed outcome prior to the opening of the surge facilities. During this period, it took ORR an average of 37 days to reunify unaccompanied minors with their families. Starting in early 2021, when the first surge facilities started receiving children, the observed average time to reunification briefly rose to almost 45 days before dropping throughout the remaining periods. This spike in the average time to reunification was likely driven by the early longer time to reunification observed in surge facilities (see Figure A2) amid initial management constraints.

<Place Figure 6 here>

In contrast to that pattern, the counterfactual outcome indicates that, based on the growing inflow of unaccompanied minors, the average time to reunification would have increased to almost 50 days without surge facilities. The difference between the actual time to reunification and the counterfactual is substantial. Instead of an average of 25 days, it would have taken 50 days to reunify children with their families. Given the damaging impacts of family separation, attention to strategies that expedite the processing of children both *directly* and possibly *indirectly*—as suggested by the significant reduction in the time to reunification at non-surge facilities after 2021 in Panel B of Appendix Table A2—is well-warranted.

VII.   Summary and Conclusions

Global economic, political, and environmental crises, as well as changes in U.S. immigration policy, point to migrant surges growing in magnitude and frequency in the

future. In recent months, the United States has experienced historical surges among Cuban and Venezuelan migrants fleeing political and economic turmoil (Abi-Habib & Sullivan, 2022; Turkewitz, 2022). Particularly vulnerable are unaccompanied children, whose number of encounters has risen from approximately 80,000 before the COVID-19 pandemic to almost twice as much in just two years. The humanitarian crisis caused by the surge in UC is one of this decade's most pressing and important immigration issues. Understanding how to best manage migrant surges is well warranted, given persistent security concerns, an increasingly polarized political environment, the costs associated with migrants' processing and care, the well-documented psycho-emotional effects on detained children, and the increase in the number of migrant children in violation of U.S. child labor laws (Dreier, 2023; MacLean *et al.*, 2019).

Our results suggest that the creation of surge facilities to process the increase in the flow of UC helped expedite the reunification of migrant children with their families. We find that, at any point in time, children in surge facilities were 30 percent more likely to be reunified with family or sponsors than children placed in non-surge facilities, given they had not been reunified yet. The effectiveness of surge facilities in expediting family reunification benefited children regardless of gender, even if younger and Mexican children benefited slightly more than their older and Northern Triangle counterparts. Furthermore, a counterfactual analysis suggests the average time to reunification would have increased to almost 50 days without such facilities. These findings indicate that

there may be lessons to be learned from the management of UC flows as humanitarian or emergency crises when aiming for a reduction in family separation and institutionalized custody.

Surge programs appear to have helped in providing an immediate and emergency response to UC flows. FEMA's emergency management expertise and ability to respond to crises quickly might have been instrumental in reuniting migrant children with their parents and guardians. This has previously occurred in other crises during which children become separated from their parents or legal guardians. For instance, following Hurricane Katrina in 2005, the government established family reunification as one of FEMA's primary responsibilities following a natural disaster and created the Unaccompanied Minors Registry administered by the National Center for Missing and Exploited Children and FEMA (Federal Emergency Management Agency *et al.*, 2013). Reuniting children with family or sponsors should be a main priority, accompanied by the necessary infrastructure to care for such a vulnerable group, such as qualified staff and resources meeting the needs of these children. One should not come at the expense of the other, as might have been the case based on journalistic accounts of UC lacking access to essential education and health services (Desai *et al.*, 2021).

While our results suggest the emergency response played a vital role in reunifying children more quickly, data limitations do not allow us to explore the impact of emergency responses on post-release outcomes such as health, employment, or

schooling. Reports of recently released migrant children working under dangerous employment conditions in violation of U.S. child labor laws (Dreier, 2023), as well as their lack of medical and mental health care post-release (Beier & Fredricks, 2023), underscore pending needs and the urgency in adopting policies and procedures that move beyond just ensuring a speedy release of migrant children to family and sponsors. Tracking the health, employment, and schooling outcomes of UC through ORR's system or the existing foster care system could help ensure that children are enrolled in school, receive proper healthcare access, and are not forced into employment.

Data Availability Statement

The data that support the findings of this study are openly available in openICPSR https://doi.org/10.3886/E200663V3 , reference number openicpsr-200663.

References

Abi-Habib, M., & Sullivan, E. (2022, May 3). Cuban Migrants Arrive to U.S. in Record Numbers, On Foot, Not by Boat. *The New York Times*. https://www.nytimes.com/2022/05/03/world/americas/cuban-migration-united-states.html

Administration for Children and Families. (2023). *Update on Efforts to Mitigate Child Labor Exploitation and Internal Audit on Placement Process Used to Transfer Custody of Unaccompanied Children to Vetted Sponsors*. https://www.acf.hhs.gov/sites/default/files/documents/orr/update-on-efforts-to-mitigate-child-labor-exploitation-internal-audit-placement-process.pdf

Administration for Children and Families & Office of Refugee Resettlement. (2021). *Unaccompanied Children: Emergency Operations*. https://www.hhs.gov/sites/default/files/faqs-for-detail-opportunities-supporting-unaccompanied-children-federal-detailees.pdf

Ainsley, J. (2018, June 20). Trump admin's "tent cities" cost more than keeping migrant kids with parents. *NBC News*. https://www.nbcnews.com/storyline/immigration-border-crisis/trump-admin-s-tent-cities-cost-more-keeping-migrant-kids-n884871

American Immigration Council. (2022). *Rising Border Encounters in 2021: An Overview and Analysis*. https://www.americanimmigrationcouncil.org/rising-border-encounters-in-2021

Amuedo-Dorantes, C., & Bucheli, J. R. (2023). Immigration Policy and Hispanic Representation in National Elections. *Journal of Policy Analysis and Management*, *42*(3), 815–844. https://doi.org/10.1002/pam.22444

Amuedo-Dorantes, Catalina, Bucheli, Jose, and Lopez, Mary. ECIN-Sep-2023-0386 Replication Package for Managing Migration Crises: Evidence from Surge Facilities and Unaccompanied Minor Children Flows. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2024-06-09. https://doi.org/10.3886/E200663V3

Angelucci, M. (2012). US Border Enforcement and the Net Flow of Mexican Illegal Migration. *Economic Development and Cultural Change*, *60*(2), 311–357. https://doi.org/10.1086/662575

Angelucci, M. (2015). Migration and Financial Constraints: Evidence from Mexico.

Review of Economics and Statistics, 97(1), 224–228.
https://doi.org/10.1162/rest_a_00487

Beier, J., & Fredricks, K. (2023). *A Path to Meeting the Medical and Mental Health Needs of Unaccompanied Children in U.S. Communities*. Migration Policy Institute and American Academy of Pediatrics.
https://www.migrationpolicy.org/research/medical-mental-health-needs-unaccompanied-children

Borusyak, K., Jaravel, X., & Spiess, J. (2024). Revisiting Event Study Designs: Robust and Efficient Estimation. *Review of Economic Studies*. http://arxiv.org/abs/2108.12419

Capps, R., Meissner, D., Ruiz Soto, A. G., Bolter, J., & Pierce, S. (2019). From Control to Crisis: Changing Trends and Policies Reshaping U.S.-Mexico Border Enforcement. *Migration Policy Institute*.

Carey, B. (2018, June 18). A Troubling Prognosis for Migrant Children in Detention: 'The Earlier They're Out, the Better.' *The New York Times*.
https://www.nytimes.com/2018/06/18/health/migrant-children-mental-health.html

Chishti, M., & Bush-Joseph, K. (2022). Amid Record Venezuelan Arrivals, Biden Administration Embraces Border Expulsions Policy. *Migration Policy Institute*.
https://www.migrationpolicy.org/article/venezuelan-expulsions-policy-biden

Chort, I., & de la Rupelle, M. (2016). Determinants of Mexico-U.S. Outward and Return Migration Flows: A State-Level Panel Data Analysis. *Demography*, *53*(5), 1453–1476.
https://doi.org/10.1007/s13524-016-0503-9

Clemens, M. A. (2021). Violence, Development, and Migration Waves: Evidence from Central American Child Migrant Apprehensions. *Journal of Urban Economics*, *124*, 103355. https://doi.org/10.1016/j.jue.2021.103355

Dao, T. H., Docquier, F., Parsons, C. P., & Peri, G. (2018). Migration and development: Dissecting the anatomy of the mobility transition. *Journal of Development Economics*, *132*, 88–101. https://doi.org/10.1016/j.jdeveco.2017.12.003

Desai, N., de Gramont, D., & Miller, A. (2021). *Unregulated & Unsafe: The Use of Emergency Intake Sites to Detain Immigrant Children*. National Center for Youth Law.
https://youthlaw.org/unregulated-unsafe-emergency-intake-sites

Donato, K. M., & Perez, S. L. (2017). Crossing the Mexico-U.S. Border: Illegality and Children's Migration to the United States. *RSF: The Russell Sage Foundation Journal of*

the *Social Sciences*, *3*(4), 116. https://doi.org/10.7758/rsf.2017.3.4.07

Donato, K. M., & Sisk, B. (2015). Children's Migration to the United States from Mexico and Central America: Evidence from the Mexican and Latin American Migration Projects. *Journal on Migration and Human Security*, *3*(1), 58–79. https://doi.org/10.1177/233150241500300103

Dreier, H. (2023, February 25). Alone and Exploited, Migrant Children Work Brutal Jobs Across the U.S. *The New York Times*. https://www.nytimes.com/2023/02/25/us/unaccompanied-migrant-child-workers-exploitation.html

Federal Emergency Management Agency, U.S. Department of Health and Human Services, American Red Cross, & National Center for Missing & Exploited Children. (2013). *Post-Disaster Reunification of Children: A Nationwide Approach*. https://www.ready.gov/sites/default/files/2019-06/post_disaster_reunification_of_children.pdf

Flagg, A., & Preston, J. (2022). *"No Place for A Child."* https://www.themarshallproject.org/2022/06/16/no-place-for-a-child

Gee, D. (2018, June 20). I study kids who were separated from their parents. The trauma could change their brains forever. *Vox*. https://www.vox.com/first-person/2018/6/20/17482698/tender-age-family-separation-border-immigrants-children

Goodman-Bacon, A. (2021). Difference-in-differences with variation in treatment timing. *Journal of Econometrics*, *225*(2), 254–277. https://doi.org/10.1016/j.jeconom.2021.03.014

Greenberg, M. (2021). *U.S. Government Makes Significant Strides in Receiving Unaccompanied Children but Major Challenges Remain*. https://www.migrationpolicy.org/news/unaccompanied-children-emergency-intake-site-challenges

Grimm, C. A. (2022). *Operational Challenges Within ORR and the ORR Emergency Intake Site at Fort Bliss Hindered Case Management for Children* (OEI-07-21-). U.S. Department of Health and Human Services Office of Inspector General. https://www.oig.hhs.gov/oei/reports/OEI-07-21-00251.pdf

Impelli, M. (2021). Red Cross to Care for Migrant Children at Texas Facility Originally Built for Oilfield Workers. *Newsweek*. https://www.newsweek.com/red-cross-care-migrant-children-texas-facility-originally-built-oilfield-workers-1576331

Kalsi, P. (2018). The impact of U.S. deportation of criminals on gang development and education in El Salvador. *Journal of Development Economics*, *135*, 433–448. https://doi.org/10.1016/j.jdeveco.2018.08.010

Kandel, W. A. (2021). Unaccompanied Alien Children: An Overview. *Congressional Research Service*, *R43599*. https://sgp.fas.org/crs/homesec/R43599.pdf

Kanno-Youngs, Z. (2021, March 8). A Surge in Migrant Children Detained at the Border is Straining Shelters. *The New York Times*. https://www.nytimes.com/live/2021/03/08/us/joe-biden-news/a-surge-in-migrant-children-detained-at-the-border-is-straining-shelters?

Kaplan, J. (2021). Jacob Kaplan's Concatenated Files: Uniform Crime Reporting Program Data: Offenses Known and Clearances by Arrest (Return A), 1960-2020. *Inter-University Consortium for Political and Social Research (ICPSR)*. https://www.openicpsr.org/openicpsr/project/100707/version/V17/view

Lanati, M., & Thiele, R. (2018). Foreign assistance and migration choices: Disentangling the channels. *Economics Letters*, *172*, 148–151. https://doi.org/10.1016/j.econlet.2018.09.002

Linton, J. M., Griffin, M., & Shapiro, A. J. (2017). Detention of Immigrant Children. *Pediatrics*, *139*(5). https://doi.org/10.1542/peds.2017-0483

MacLean, S. A., Agyeman, P. O., Walther, J., Singer, E. K., Baranowski, K. A., & Katz, C. L. (2019). Mental health of children held at a United States immigration detention center. *Social Science & Medicine*, *230*, 303–308. https://doi.org/10.1016/j.socscimed.2019.04.013

Majlesi, K., & Narciso, G. (2018). International import competition and the decision to migrate: Evidence from Mexico. *Journal of Development Economics*, *132*, 75–87. https://doi.org/10.1016/j.jdeveco.2017.12.002

Martínez Flores, F. (2020). The Effects of Enhanced Enforcement at Mexico's Southern Border: Evidence From Central American Deportees. *Demography*, *57*(5), 1597–1623. https://doi.org/10.1007/s13524-020-00914-3

McGettigan, K. M. (2021). *Detail Opportunity: Information for Department/Agency Leadership*. https://www.chcoc.gov/content/detail-opportunity-information-departmentagency-leadership

Medosch, E. (2021). *The Traumatic Events Migrant Children Endure*. Immigration and

Human Rights Law Review. https://lawblogs.uc.edu/ihrlr/2021/05/28/the-traumatic-events-migrant-children-endure/

Merchant, N. (2021, February 24). With long-term facilities nearly full, U.S. tries to expedite release of migrant children. *Los Angeles Times*. https://www.latimes.com/world-nation/story/2021-02-24/amid-surge-us-tries-to-expedite-release-of-migrant-children

Migration Policy Institute. (2021). *Top 20 Diaspora Groups, 2019*. https://www.migrationpolicy.org/programs/data-hub/us-immigration-trends

Montoya-Galvez, C. (2022, May 3). U.S. preparing 19,000 beds for migrant children in case of spike in border arrivals, officials say. *CBS News*. https://www.cbsnews.com/news/immigration-migrant-children-border-arrivals-xavier-becerra/

Office of Refugee Resettlement. (2019). *ORR Unaccompanied Children Program Policy Guide: Section 7*. https://www.acf.hhs.gov/orr/policy-guidance/unaccompanied-children-program-policy-guide-section-7

Office of Refugee Resettlement. (2021a). *Field Guidance #10 - Expedited Release for Eligible Category 1 Cases*. https://www.acf.hhs.gov/sites/default/files/documents/orr/FG-10 Expedited Release for Eligible Category 1 Cases 2021 03 22.pdf

Office of Refugee Resettlement. (2021b). *Field Guidance #13 – Emergency Intakes Site (EIS) Instructions and Standards*. https://www.acf.hhs.gov/sites/default/files/documents/orr/FG-13 EIS Instructions and Standards 2021 04 30.pdf

Office of Refugee Resettlement. (2022). *Fact Sheets and Data*. https://www.acf.hhs.gov/orr/about/ucs/facts-and-data

Rozo, S. V., & Vargas, J. F. (2021). Brothers or invaders? How crisis-driven migrants shape voting behavior. *Journal of Development Economics*, *150*, 102636. https://doi.org/10.1016/j.jdeveco.2021.102636

Sun, L., & Abraham, S. (2021). Estimating Dynamic Treatment Effects in Event Studies with Heterogeneous Treatment Effects. *Journal of Econometrics*, *225*(2), 175–199. https://doi.org/10.1016/j.jeconom.2020.09.006

Sviatschi, M. M. (2022). Spreading Gangs: Exporting US Criminal Capital to El Salvador. *American Economic Review*, *112*(6), 1985–2024. https://doi.org/10.1257/aer.20201540

Transactional Records Access Clearinghouse. (2022). *Growing Numbers of Children Try To Enter the U.S.* https://trac.syr.edu/immigration/reports/687/

Turkewitz, J. (2022, October 7). In Record Numbers, Venezuelans Risk a Deadly Trek to Reach the U.S. Border. *The New York Times.* https://www.nytimes.com/2022/10/07/world/americas/venezuelan-migrants-us-border.html

U.S. Customs and Border Protection. (2022). *Southwest Land Border Encounters.* https://www.cbp.gov/newsroom/stats/southwest-land-border-encounters

U.S. Department of Health and Human Services. (2022). *Administration for Children and Families Fiscal Year 2023 Justification of Estimates for Appropriations Committees.* https://www.acf.hhs.gov/sites/default/files/documents/olab/fy-2023-congressional-justification.pdf

U.S. Department of Homeland Security. (2022). *FACT SHEET: DHS Preparations for a Potential Increase in Migration.* https://www.dhs.gov/news/2022/03/30/fact-sheet-dhs-preparations-potential-increase-migration

U.S. Department of Homeland Security Office of Inspector General. (2022). *FEMA Successfully Assisted HHS in Providing Shelter and Supplies to Unaccompanied Children from the Southwest Border.* U.S. Department of Homeland Security. https://www.oig.dhs.gov/sites/default/files/assets/2022-04/OIG-22-35-Mar22.pdf

U.S. Senate Committee on Homeland Security and Governmental Issues. (2022). *Federal Care of Unaccompanied Children: Minors Remain Vulnerable to Trafficking and Abuse - Minority Staff Report.* https://www.hsgac.senate.gov/wp-content/uploads/imo/media/doc/Federal Care of Unaccompanied Alien Children Report (FINAL).pdf

UNHCR. (2022). *Refugee Data Finder.* https://www.unhcr.org/refugee-statistics/insights/explainers/100-million-forcibly-displaced.html

UNICEF. (2021). *Best Practices for Working with Unaccompanied Migrant Children in Humanitarian Contexts: A Guide for Staff and Volunteers in the United States.* https://www.unicef.org/media/114286/file/Best-practices-working-with-unaccompanied-migrant-children.pdf

United Nations Human Rights Council. (2021). *Report on means to address the human rights impact of pushbacks of migrants on land and at sea.* https://documents-dds-ny.un.org/doc/UNDOC/GEN/G21/106/33/PDF/G2110633.pdf?OpenElement

Women's Refugee Commission. (2022). *Unaccompanied Children in Emergency Intake Site (EIS) Facilities—A Progress Report*. https://www.womensrefugeecommission.org/research-resources/unaccompanied-children-emergency-intake-site-facilities-progress-report/

World Bank. (2022). *The Crisis Facing Development – Speech by World Bank Group President David Malpass before the 2022 Annual Meetings*. https://www.worldbank.org/en/news/speech/2022/09/29/the-crisis-facing-development-speech-by-world-bank-group-president-david-malpass-before-the-2022-annual-meetings

Zak, D. (2021). *Explainer: Emergency Shelters and Facilities Housing Unaccompanied Children*. https://immigrationforum.org/article/explainer-emergency-shelters-and-facilities-housing-unaccompanied-children/

Table 1: Descriptive Statistics for Unaccompanied Migrant Children, 2019-2022

	Surge Facilities (1)	Non-Surge Facilities (2)	Difference (1)-(2)
Age at placement (years)	15.61 (1.774)	14.40 (3.404)	1.21***
Female (%)	0.336 (0.472)	0.345 (0.475)	-0.010***
Origin: Mexico (%)	0.008 (0.087)	0.026 (0.160)	-0.019***
Origin: Central America (%)	0.969 (0.174)	0.920 (0.270)	0.048***
Origin: South America (%)	0.020 (0.140)	0.033 (0.179)	-0.013***
Origin: Other (%)	0.004 (0.060)	0.020 (0.140)	-0.016***
Child discharged by the end of the study period (%)	0.965 (0.183)	0.966 (0.181)	-0.001
Child reunified with family if discharged (%)	0.987 (0.115)	0.968 (0.175)	0.018***
Time to reunification if discharged (days)	24.58 (22.093)	36.19 (31.953)	-11.60***
Observations	92,424	180,582	

Notes: The table shows summary statistics for the universe of unaccompanied minors encountered by U.S. Border Patrol along the southwest border and referred to ORR between January 2019 and June 2022. Sample means, standard deviations in parentheses.

Table 2: Competing-Risks Model for Reunification, 2019-2022

	Sub-Hazard				
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Placement in a surge facility	1.500***	1.604***	1.504***	1.413**	1.297*
	(0.233)	(0.258)	(0.231)	(0.208)	(0.205)
Child demographic controls	No	Yes	Yes	Yes	Yes
County time-varying controls	No	No	Yes	Yes	Yes
Time trend	No	No	No	Yes	No
County-specific time trends	No	No	No	No	Yes
Observations	285,457	285,457	285,457	285,457	285,457

Notes: The table presents the sub-hazard ratios from a competing-risks model that analyzes time to reunification after a minor is discharged from ORR custody while considering alternative forms of discharge as competing events. Surge facilities include emergency intake sites (EIS) and influx care facilities (ICF). All model specifications include month and county fixed effects. Child demographic controls include gender, age, and country of birth. County time-varying controls include information on the county's level of interior immigration enforcement, the presence of a sanctuary policy, as well as changes in the unemployment rate, total and Hispanic populations, crime, poverty rate, median household income, and monthly COVID-19 death rates per 100,000. Clustered standard errors at the county level in parentheses. $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$.

Table 3: Heterogeneous Analyses
Competing-Risks Model for Reunification, 2019-2022

	Sub-Hazards			
	(1)	**(2)**	**(3)**	**(4)**
Placement in a surge facility	2.640***	1.271	2.488***	1.428**
	(0.767)	(0.193)	(0.652)	(0.239)
Surge facility×Female	1.054	1.070	—	—
	(0.048)	(0.048)		
Surge facility×Age at placement	0.960***	—	0.959***	—
	(0.012)		(0.011)	
Surge facility×Northern Triangle	0.910**	—	—	0.903***
	(0.036)			(0.035)
Child demographic controls	Yes	Yes	Yes	Yes
County time-varying controls	Yes	Yes	Yes	Yes
County-specific time trends	Yes	Yes	Yes	Yes
Observations	285,457	285,457	285,457	285.457

Notes: The table presents the sub-hazard ratios from a competing-risks model that analyzes time to reunification after a minor is discharged from ORR custody while considering alternative forms of discharge as competing events. Surge facilities include emergency intake sites (EIS) and influx care facilities (ICF). All model specifications include month and county fixed effects. Child demographic controls include gender, age, and country of birth. County time-varying controls include information on the county's level of interior immigration enforcement, the presence of a sanctuary policy, as well as changes in the unemployment rate, total and Hispanic populations, crime, poverty rate, median household income, and monthly COVID-19 death rates per 100,000. Robust standard errors in parentheses. $*p < 0.1$; $**p < 0.05$; $***p < 0.01$.

Table 4: Competing-Risks Model for Reunification with Alternative Treatment Definitions, 2019-2022

	Sub-Hazard		
	Estimate from main model	**Treatment defined by county**	**Excluding non-surge facilities in states with surge facilities**
	(1)	(2)	(3)
Placement in a surge facility	1.413**	1.400***	1.320*
	(0.208)	(0.108)	(0.218)
Child demographic controls	Yes	Yes	Yes
County time-varying controls	Yes	Yes	Yes
Time trend	Yes	Yes	Yes
Observations	285,457	285,457	210,372

Notes: The table presents the sub-hazard ratios from a competing-risks model that analyzes time to reunification after a minor is discharged from ORR custody while considering alternative forms of discharge as competing events. The estimates in column (1) are reproduced from column (4) in Table 2. Column (2) defines the treatment group as children placed in counties with an active surge facility, regardless of the facility type in which they are placed. Column (3) estimates "distant" differences by comparing children in surge facilities to individuals in states where surge facilities never operated. All model specifications include month and county fixed effects. Child demographic controls include gender, age, and country of birth. County time-varying controls include information on the county's level of interior immigration enforcement, the presence of a sanctuary policy, as well as changes in the unemployment rate, total and Hispanic populations, crime, poverty rate, median household income, and monthly COVID-19 death rates per 100,000. Robust standard errors in parentheses. $*p < 0.1$; $**p < 0.05$; $***p < 0.01$.

Table 5: Robustness Check — Competing-Risks Model for Reunification with Propensity Score Matching, 2019-2022

	Sub-Hazard				
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Placement in surge facility	1.764***	1.819***	1.693***	1.366	0.991
	(0.214)	(0.241)	(0.207)	(0.344)	(0.409)
Child demographic controls	No	Yes	Yes	Yes	Yes
County time-varying controls	No	No	Yes	Yes	Yes
Time trend	No	No	No	Yes	No
County-specific time trends	No	No	No	No	Yes
Observations	184,846	184,846	184,846	184,846	184,846

Notes: The table presents the sub-hazard ratios from a competing-risks model estimated with propensity score matching. The model analyzes time to reunification after a minor is discharged from ORR custody while considering alternative forms of discharge as competing events. Surge facilities include emergency intake sites (EIS) and influx care facilities (ICF). All model specifications include month and county fixed effects. Child demographic controls include gender, age, and country of birth. County time-varying controls include information on the county's level of interior immigration enforcement, the presence of a sanctuary policy, as well as changes in the unemployment rate, total and Hispanic populations, crime, poverty rate, median household income, and monthly COVID-19 death rates per 100,000. Robust standard errors in parentheses. *$p < 0.1$; **$p < 0.05$; ***$p < 0.01$.

Table 6: Robustness Check — Competing-Risks Model for Reunification without Placements in Restrictive Facilities, 2019-2022

	Sub-Hazard				
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Placement in surge facility	1.487**	1.596***	1.494**	1.406**	1.291
	(0.237)	(0.261)	(0.235)	(0.212)	(0.208)
Child demographic controls	No	Yes	Yes	Yes	Yes
County time-varying controls	No	No	Yes	Yes	Yes
Time trend	No	No	No	Yes	No
County-specific time trends	No	No	No	No	Yes
Observations	284,983	284,983	284,983	284,983	284,983

Notes: The table presents the sub-hazard ratios from a competing-risks model that analyzes time to reunification after a minor is discharged from ORR custody while considering alternative forms of discharge as competing events. Surge facilities include emergency intake sites (EIS) and influx care facilities (ICF). All model specifications include month and county fixed effects. Child demographic controls include gender, age, and country of birth. County time-varying controls include information on the county's level of interior immigration enforcement, the presence of a sanctuary policy, as well as changes in the unemployment rate, total and Hispanic populations, crime, poverty rate, median household income, and monthly COVID-19 death rates per 100,000. Robust standard errors in parentheses. *$p < 0.1$; **$p < 0.05$; ***$p < 0.01$.

Figure 1
Unaccompanied Migrant Children Encountered along the Southwest Border
by U.S. Border Patrol (2008-2022)
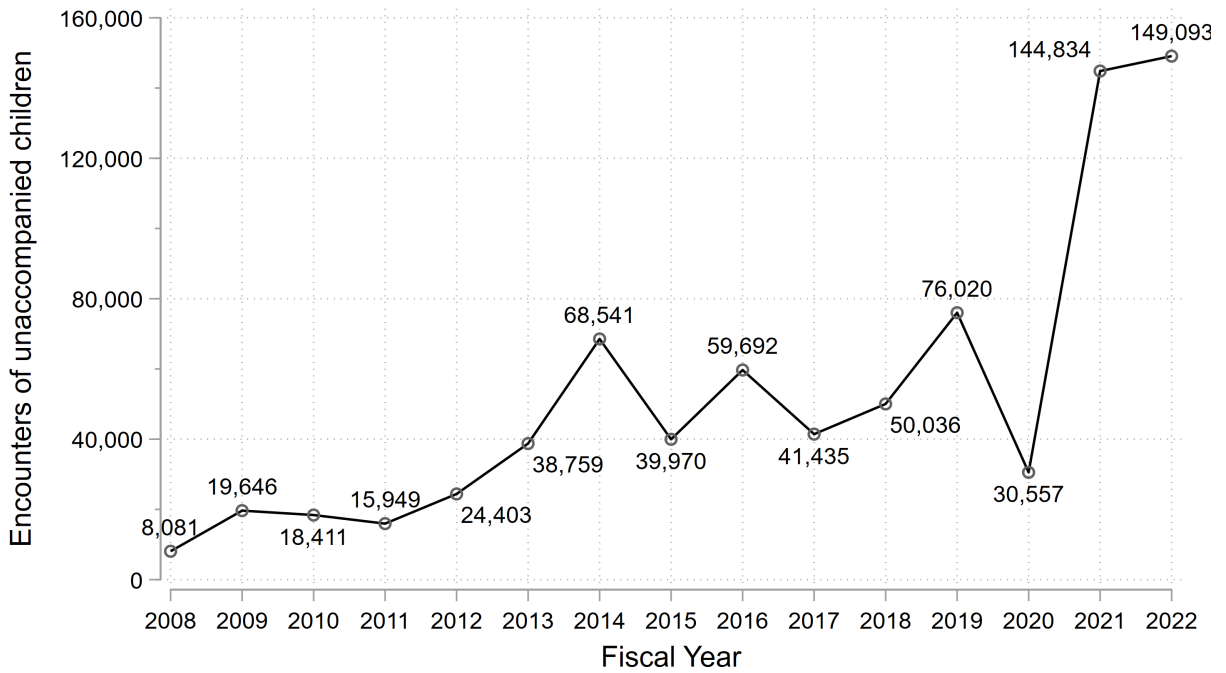
Notes: Data obtained from U.S. Customs and Border Protection and the Transactional Records Access Clearinghouse (TRAC) at Syracuse University (https://trac.syr.edu/phptools/immigration/cbparrest/. Last accessed September 2022).

Figure 2
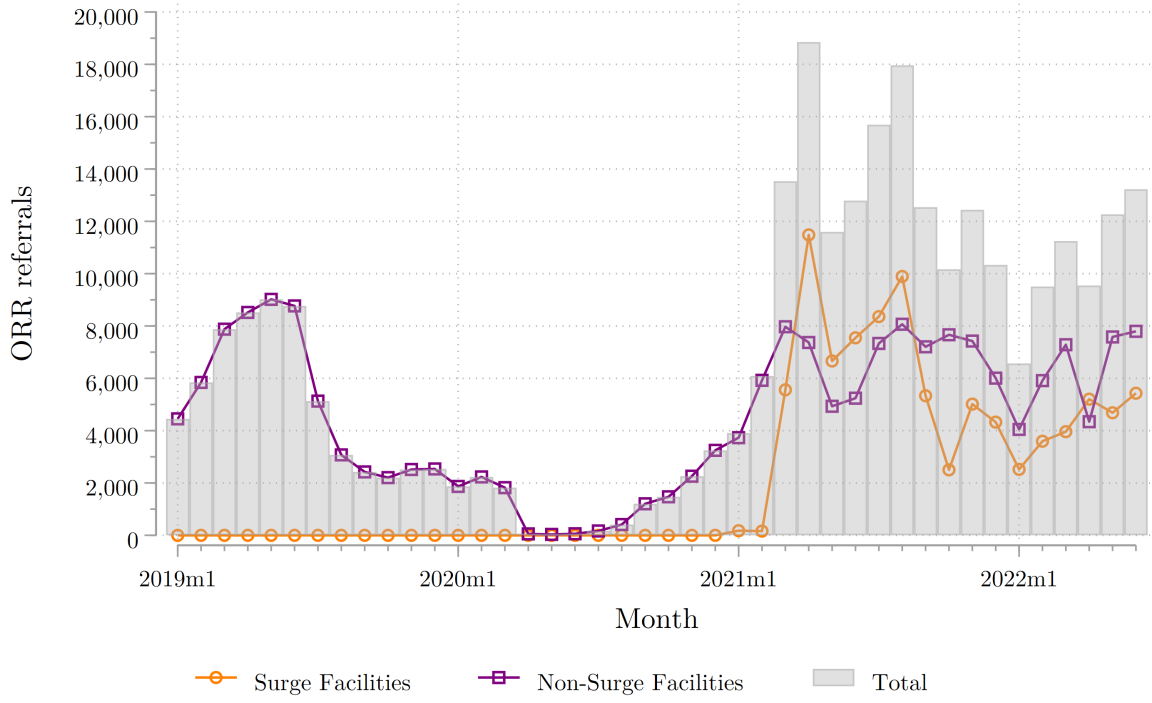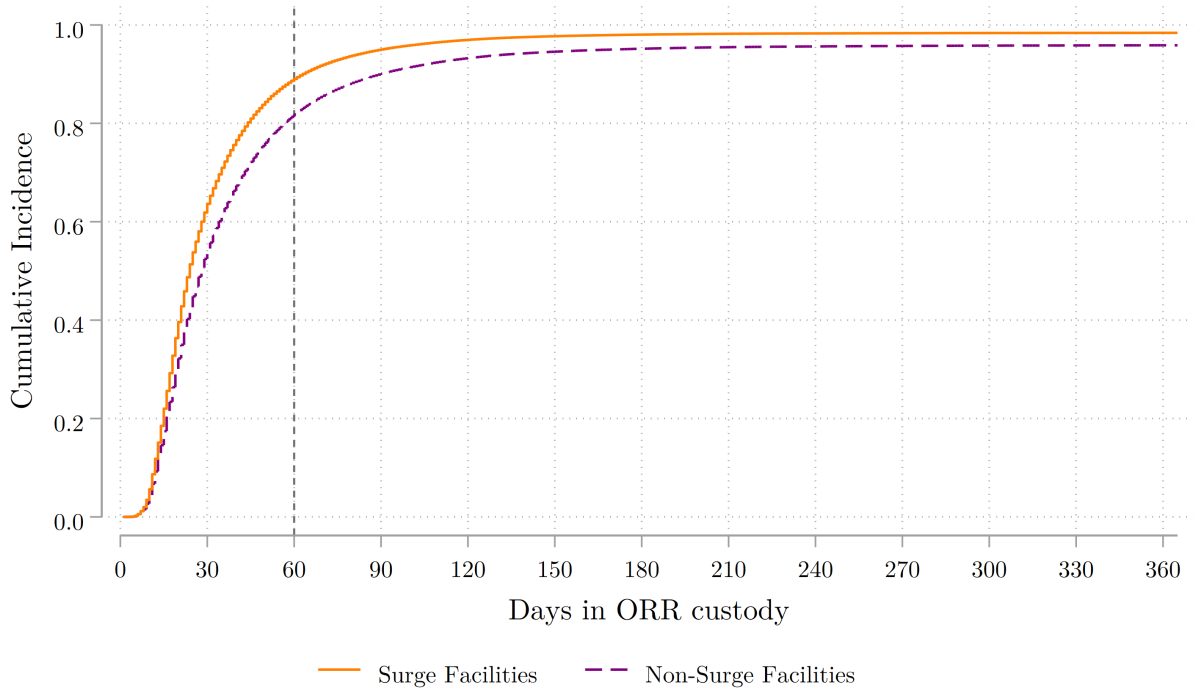**Unaccompanied Migrant Children Referrals to ORR by Program Placement (2019-2022)**

Figure 3
**Cumulative Reunification Incidence by ORR Facility Type**

Notes: The graph shows the reunification incidence curves by ORR facility type where children were placed. For example, the probability of family reunification within 60 days of initial ORR placement in a surge facility was approximately 90%, and 80% for children in non-surge facilities. The probabilities consider the possibility that alternative forms of discharge could occur.

Figure 4
**Event Study for Time to Reunification**
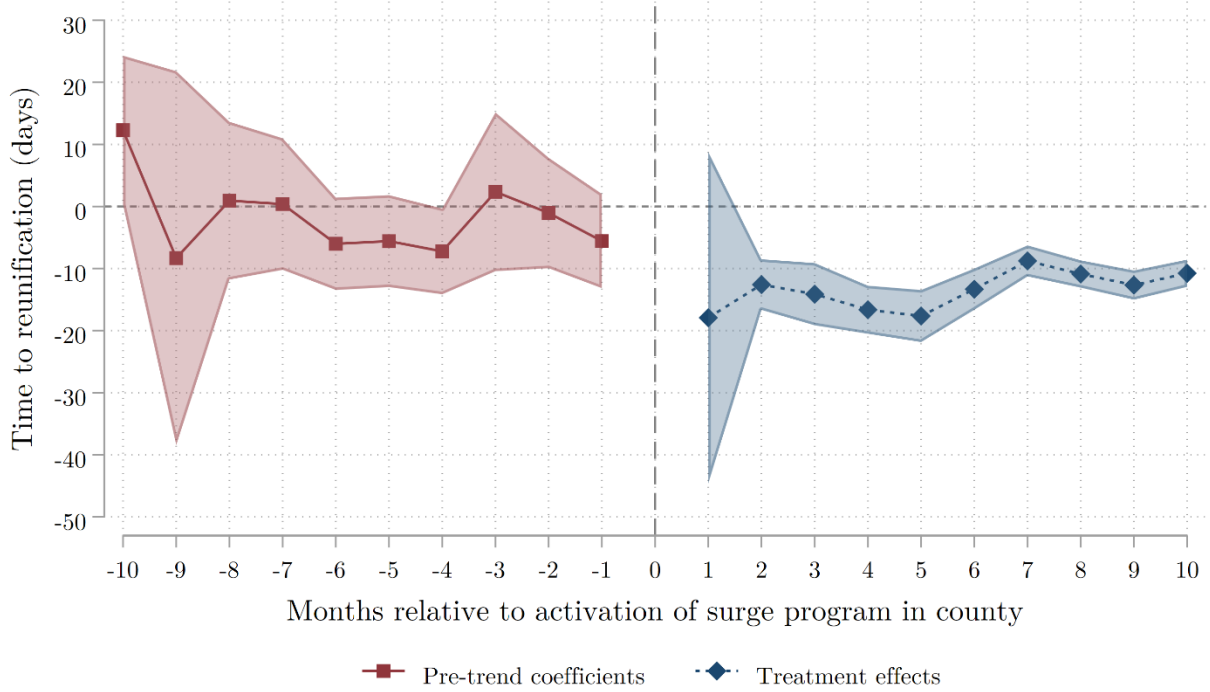
Notes: Periods before $t = -10$ and after $t = 10$ are binned up into $t = -10$ and $t = 10$, respectively. The average time to reunification throughout the study period for all children is 32 days.

Figure 5
Evidence of Common Support across Surge Facility Placement after Propensity Score Matching
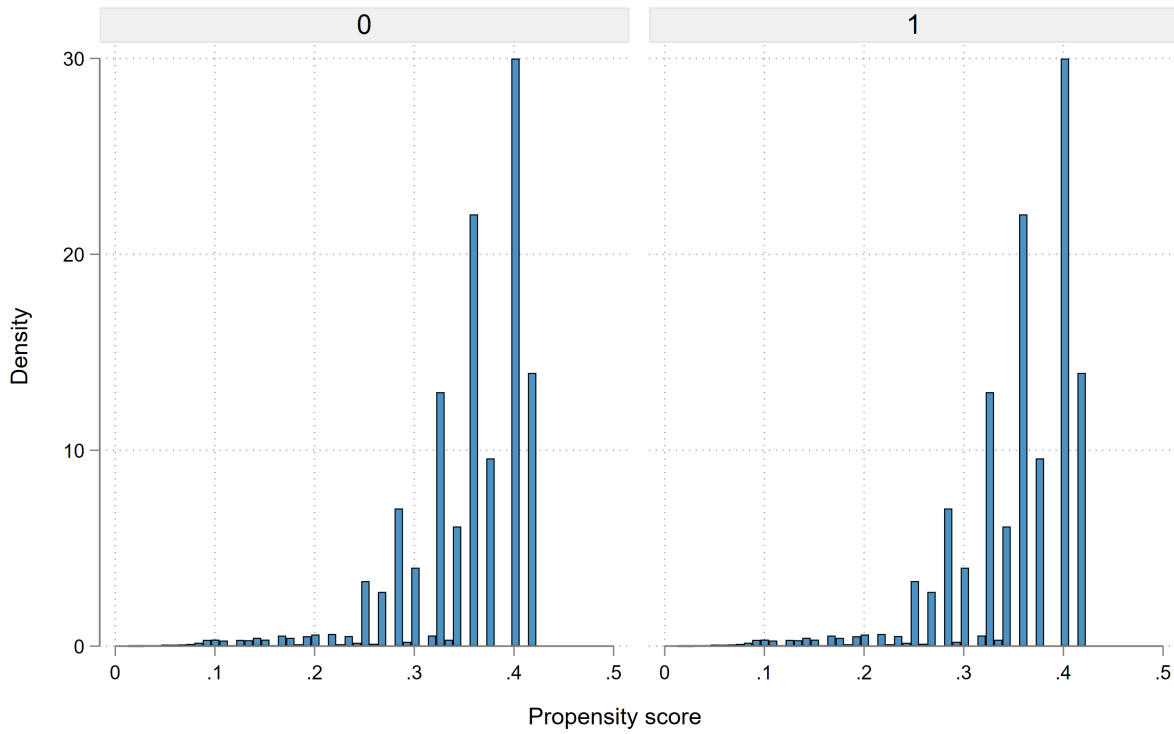
Notes: The figure presents a histogram of propensity scores by surge facility status of the sample with common support. 0=No surge facility placement; 1=Surge facility placement.

Figure 6
Observed and Counterfactual Average Time to Reunification (2019–2022)
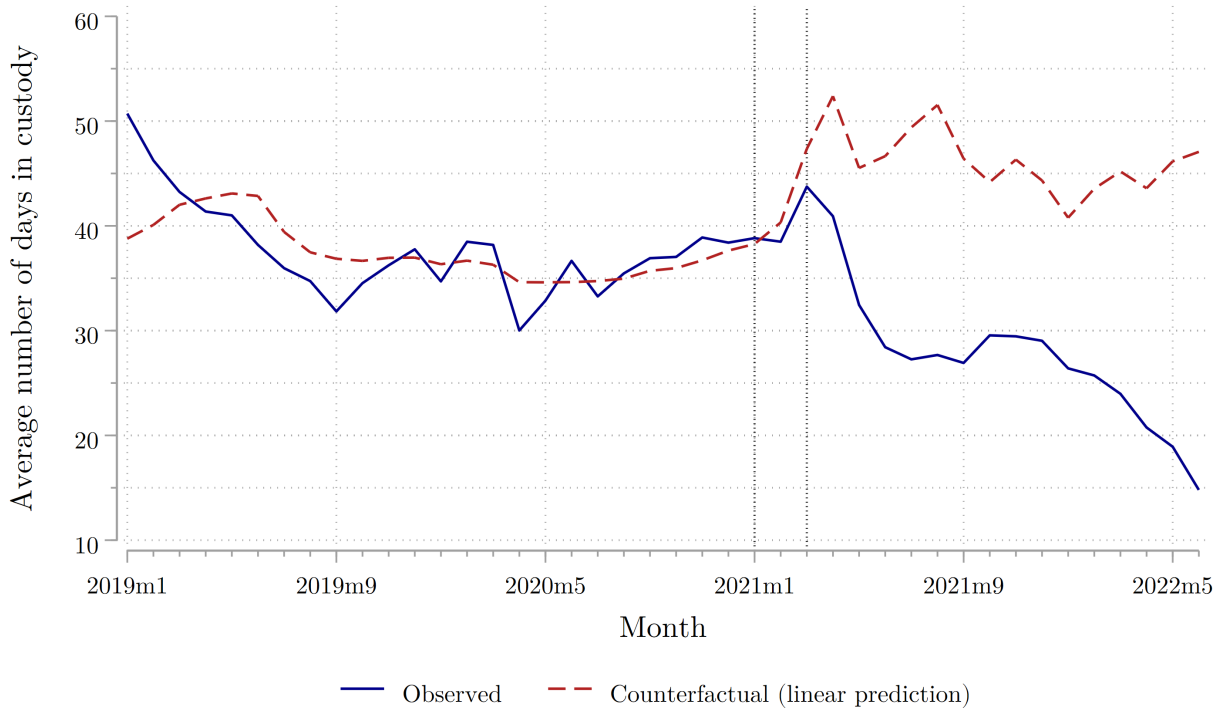
Notes: The solid line indicates the observed average time to reunification for children encountered in each month. The dashed line is the predicted average time to reunification based on a linear prediction using the monthly number of children encountered in 2019 and 2020. The first influx care facility (ICF) opened in January 2021, and the first emergency intake site (EIS) opened in March 2021.