CHILDREN'S HEALTH

DOI: 10.1377/hlthaff.2020.00763 HEALTH AFFAIRS 39, NO. 10 (2020): 1752-1761 ©2020 Project HOPE— The People-to-People Health Foundation, Inc.

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Spreading Fear: The Announcement Of The Public Charge Rule Reduced Enrollment In Child Safety-Net Programs

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ABSTRACT Safety-net programs improve health for low-income children over the short and long term. In September 2018 the Trump administration announced its intention to change the guidance on how to identify a potential "public charge," defined as a noncitizen primarily dependent on the government for subsistence. After this change, immigrants' applications for permanent residence could be denied for using a broader range of safety-net programs. We investigated whether the announced public charge rule affected the share of children enrolled in Medicaid, the Supplemental Nutrition Assistance Program, and the Special Supplemental Nutrition Program for Women, Infants, and Children, using county-level data. Results show that a 1-percentage-point increase in a county's noncitizen share was associated with a 0.1-percentage-point reduction in child Medicaid use. Applied nationwide, this implies a decline in coverage of 260,000 children. The public charge rule was adopted in February 2020, just before the coronavirus disease 2019 (COVID-19) pandemic began in the US. These results suggest that the Trump administration's public charge announcement could have led to many thousands of eligible, low-income children failing to receive safety-net support during a severe health and economic crisis.

hild health insurance coverage reached record highs in 2016. However, by mid-2019 more than one million fewer children received public insurance such as Medicaid.¹ In addition, although enrollment in safety-net programs such as the Supplemental Nutrition Assistance Program (SNAP, formerly food stamps) and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) had been steadily declining since the Great Recession, it experienced an accelerating drop after 2016. SNAP enrolled 8.5 million (19 percent) fewer participants in 2019 compared to 2016, whereas the number of WIC enrollees decreased by 1.3 million (17 percent).^{2,3}

Reduced access to safety-net programs wor-

sens child health in the short and long term. Early-life Medicaid coverage increases access to preventive care and reduces chronic conditions in adulthood.⁴ SNAP improves birth outcomes and later-life health,⁵ whereas WIC raises average birthweight, with larger gains for mothers with low educational attainment.⁶ Safety-net programs, and particularly SNAP, also significantly reduce child poverty.⁷

Although enrollment declines from 2016 to 2019 could have occurred because of the improving economy, we investigated another potential cause: fear and misinformation^{8,9} among immigrants and their families caused by the announcement of the public charge rule. Since the 1880s, immigration law has allowed officials to reject applications for admission to the country

or permanent residence if a person is deemed likely to become a "public charge," defined as "primarily dependent on the government for subsistence."¹⁰ Since 1999, legal immigrants could be deemed a public charge for use of cash benefits such as Temporary Assistance for Needy Families.

In September 2018 the Trump administration announced a plan to change how applications for lawful permanent residence are evaluated by expanding the public charge criteria to include the use of noncash programs such as Medicaid and SNAP.^{10,11} Although rumors had started immediately after President Trump's inauguration in January 2017, the announcement was the first formal step taken by the administration to change the federal rule. Similar to any rule change, the announcement opened a public comment period before the rule was finalized. On February 24, 2020, after court injunctions to block the rule were overturned, the expanded definition of a public charge was promulgated across the country. On July 29, 2020, a federal court again blocked the application of the rule, citing the coronavirus disease 2019 (COVID-19) national health emergency.¹² Although the Trump administration is expected to appeal, as of early September, new applications for legal permanent residence (commonly called a green card) are being evaluated using the 1999 public charge definition.13,14

Previous research indicates that changes to administrative burdens generally create a larger "chilling effect" on safety-net participation among immigrants compared with US citizens.^{9,15,16} Chilling effects from the public charge rule announcement could occur through at least two channels. First, people could be dissuaded from using safety-net programs for themselves and their children from fear of jeopardizing their applications for permanent residence. Given the uncertainty around what the rule would entail and the complexity of the rule itself, these fears could lead to program disenrollment even among those eligible for a program and exempt from the rule. Second, program officials may be dissuaded from providing information on eligibility because of misinformation about the rule or perceived political sensitivity.

Press reports indicated that the public charge rule announcement significantly raised fear of using public benefits among legal immigrants.¹⁷ For example, health care providers received "panicked phone calls...demanding to be dropped from the rolls of WIC."¹⁸ A December 2018 survey found that more than 20 percent of adults in low-income immigrant families reported that they or a family member avoided participation in noncash government programs for fear of risking their future immigration status.¹⁹ These fears were driven by misinformation and uncertainty-stoked by rumors and leaked documents-about how the public charge definition would change. Ultimately, the announcement did not penalize legal immigrants for using WIC, which does not restrict child eligibility by immigration status. However, eligibility for Medicaid and SNAP is limited to qualified noncitizen children,²⁰ and, for the latter program, twenty-one states require a five-year waiting period before coverage can begin.²¹ In addition, certain classes of legal immigrants such as refugees and asylees were deemed exempt from the rule. Given these exclusions, one estimate showed that a very small percentage of noncitizens would be subject to any of the expanded rule's provisions.²² Moreover, in 2017, 25 percent of US children lived with at least one foreign-born parent. Of these children, 90 percent were US citizens, meaning that they, too, were exempt from the public charge rule's expansion.23

We estimated the causal effect of the public charge rule on safety-net enrollment after the public charge rule announcement but before the rule was finalized or adopted. Therefore, our results show behavior changes driven by families anticipating the rule's future impact on their immigration status.²⁴ Although multiple analyses predicted how the public charge rule's adoption would affect safety-net program enrollment,²⁵⁻²⁷ no research has yet been done on the observed effects. The welfare implications are large: Medicaid and SNAP covered more than seventy-three million and forty million people in 2018, respectively, whereas WIC enrolled 6.8 million people.²⁸⁻³⁰

Study Data And Methods

DATA We used data on program enrollment by county for Medicaid, SNAP, and WIC from January 2015 to June 2019. These data were collected through a combination of publicly available records and data requests from state offices. For Medicaid, we included data on child enrollment from California, New Jersey, Tennessee, Texas, and Washington State, representing 29 percent of all US children. For SNAP, we used publicly available county-month data on child enrollment from Texas, which alone contains 10 percent of US children. For WIC, we used child enrollment by county-month from California and Washington State, which combined represent 15 percent of US children and 20 percent of WIC participants nationally. No states publish publicly available data on WIC enrollment by county over time. These data were obtained through data use requests from relevant state agencies. The five states for Medicaid and one state for SNAP were included in the sample because these states were the only ones among the top twenty states in terms of population that separately reported monthly data on child enrollment across more than 50 percent of the months from 2015 to mid-2019. The states in each data sample contain an even larger proportion of the US noncitizen population; specifically, 44.5 percent, 13.2 percent, and 26.8 percent of US noncitizens reside in the states included in the Medicaid, SNAP, and WIC samples, respectively.³¹ Online appendix exhibit S.1 provides a full list of data sources by program and dates available.³²

For counties in metropolitan areas, seasonally adjusted monthly unemployment data were taken from Bureau of Labor Statistics local area unemployment statistics.³³ For nonmetropolitan counties, Bureau of Labor Statistics monthly state unemployment data were used instead. Section 3 in the appendix provides additional detail on the data used.³²

To measure exposure to information about the public charge rule, we calculated the number of articles per day that included the term "public charge" in either English or Spanish from August 2016 to June 2019. We measured the number of articles posted from four US-based, Spanish-language newspapers and one major national Spanish-language television network by data scraping using the Python programming language.

OUTCOME VARIABLE For each program, the outcome of interest was the proportion of children enrolled by county and month from January 2015 to June 2019. The count of children per county and per year was obtained from Census Bureau estimates. Because county-level population estimates have not been released for 2019, county population from 2018 was also used to calculate enrollment proportions to June 2019. Because WIC provides nutritional support to children younger than age five only, the annual county population of children in this age group was used to calculate the main outcome variable (enrollment share by county) for that program.

In 2019 Medicaid and the Children's Health Insurance Program (CHIP) provided health insurance coverage to almost thirty million children (36 percent) in the US.³⁴ As of 2018 thirtyfive states had expanded Medicaid for anyone with income below 138 percent of the federal poverty level.³⁵ For nonexpansion states, the income eligibility limits vary from 17 percent to 94 percent of the federal poverty level.³⁶ CHIP provides coverage for children in families with incomes up to 200 percent of the federal poverty level. SNAP provided almost a quarter of all US

Perceptions of safetynet eligibility have an important impact on actual program use that complex exemptions cannot overcome.

children (seventeen million) with food assistance in 2018.²⁹ This program reduces poverty and generates larger benefits during economic slowdowns.³⁷ SNAP eligibility is determined by household income below 130 percent of the federal poverty level, along with household net income and assets under a given threshold. WIC is another crucial safety-net program that provides prenatal care and nutritional support to pregnant women and children under age five. In 2018 WIC provided infant formula and food subsidies to 5.3 million children.³⁸ WIC income limits vary by state from 100 percent to 185 percent of the federal poverty level. These three programs are analyzed because of clear evidence connecting their use to improved child and adult health outcomes.

STATISTICAL METHODS First we examined how child enrollment by program varied over time both nationally and in the states included in the analysis. Then we plotted unadjusted child enrollment shares by noncitizen tertiles over time for each program studied to assess parallel trends. Next we investigated whether the announced public charge rule affected the share of children enrolled in Medicaid, SNAP, and WIC using county-level data. To estimate the causal effect of the proposed rule change, we compared changes in enrollment before and after the September 2018 announcement in counties with different noncitizen population shares. We estimated effects using difference-in-differences models, adjusting for state and year fixed effects to control for time-invariant state and year characteristics and monthly controls to adjust for seasonality in enrollment. The monthly unemployment rate and the interaction between state and unemployment rate were included to control for economic conditions and variation in that relationship across states. To control for annual state-specific policy variation, stateby-year controls were also used. Regressions were weighted by county population, and standard errors were clustered at the county level. We hypothesized that if the public charge rule created chilling effects for the noncitizen population, we would observe larger declines in counties with high compared with low noncitizen shares, and after the announcement compared with before. *Postannouncement* is defined as the months from October 2018 to June 2019.

We ran additional robustness checks. These included varying the specific month defined as postannouncement to August, September, November, and December 2018. We also explored the effects when we redefined the post month to be January 2017, the month of President Trump's inauguration. We also tested the parallel trends assumption using an event study analysis. Finally, we investigated whether an increase in deportation activity coincident with the public charge rule announcement could be driving results, using evidence from Google Trends. Results for all of these checks are in the appendix.³²

LIMITATIONS Our approach had several limitations. First, policies were instituted during our study period that increased the cost of using safety-net benefits for children living in immigrant families. Therefore, it is possible that we detected the effect of other administration policies related to noncitizens. In appendix section 6 and exhibit S.2,³² we explore at length other policies related to safety-net use among noncitizens. Our analysis shows that other major changes do not coincide with the public charge rule announcement. Second, because most states do not report child enrollment separately by safety-net program, we were unable to include all states nationally. However, we focused on obtaining data from the largest states, which are often also the ones with substantial noncitizen populations. The populations of states analyzed represent 10 percent, 15 percent, and 30 percent of all US children when estimating enrollment effects for SNAP, WIC, and Medicaid, respectively.

Study Results

CHANGES IN CHILD SAFETY-NET ENROLLMENT Exhibit 1 shows the proportion of children covered by Medicaid, SNAP, and WIC both nationally and in the data used for this study from 2015 to 2019. First, we plotted each program's child coverage rate nationally. Almost 40 percent of children in the US were covered by Medicaid, about 25 percent of US children used SNAP, and almost one in ten US children younger than age five were enrolled in WIC. The exhibit also shows that the proportions of children covered in the states we analyzed were similar to the national levels for

SNAP and WIC. However, the states we analyzed had about 10 percentage points more children covered by Medicaid compared with the national average. This was likely driven by the inclusion of California, whose eligibility rules have allowed coverage of low-income children younger than nineteen with full-scope Medicaid irrespective of immigration status since 2016.³⁹ Finally, the exhibit confirms the consistent declines in the share of children covered by the safety net in the US over time. From 2016 to 2019, in the states we analyzed, we found that the share of children enrolled in Medicaid declined by 2.33 percentage points (5 percent),⁴⁰ by 3.62 percentage points (14 percent) for SNAP in Texas, and by 1.66 percentage points (20 percent) for WIC in California and Washington in 2019 compared to 2016 levels. This is consistent with other research showing a decline in child Medicaid/ CHIP coverage of more than 800,000 (2.2 percent) nationally from 2017 to 2018, accompanied by a rise in child uninsurance.⁴¹ Appendix exhibit S.3 provides summary statistics.³²

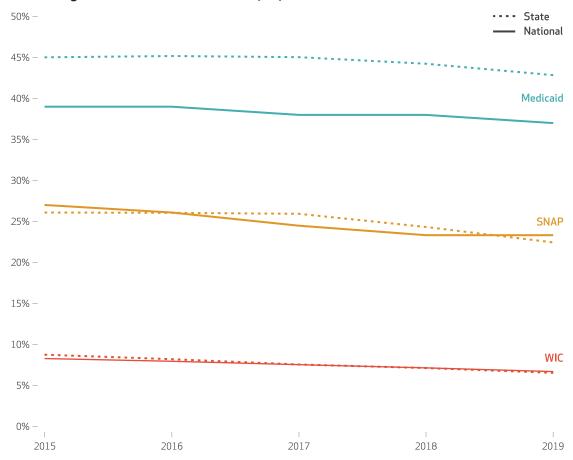
Appendix exhibits S.4–S.6 plot mean child enrollment by counties separated into noncitizen tertiles for Medicaid, SNAP, and WIC, respectively.³² Across the three exhibits, we visually confirmed the key difference-in-differences assumption of parallel trends.

EXPOSURE TO INFORMATION ON THE PUBLIC CHARGE RULE Exhibit 2 shows the number of news articles per day in four locally focused, US-based Spanish-language newspapers and the website of one major national Spanishlanguage television network from September 2016 to May 2019. Articles were counted if they included the term "public charge" in Spanish or English. We observed a large increase in the number of news articles coincident with the announcement of the public charge rule in September 2018. We did not observe a similarly large increase in early 2017, when initial information was released about possible changes to the definition of a *public charge*. This figure strongly confirms our empirical strategy to define postannouncement as including any month on or after October 2018. Exhibit 3 shows the timeline of dates over which the public charge rule went from rumors and a leaked draft executive order in January 2017 to adoption in February 2020.

EFFECT ON CHILD MEDICAID ENROLLMENT Exhibit 4 summarizes the effect of the public charge rule announcement across Medicaid, SNAP, and WIC. It shows that for every 1-percentage-point increase in a county's noncitizen share, the announcement of the public charge rule was associated with a -0.10-percentage-point (95% confidence interval: -0.189, -0.007) change in child Medicaid enrollment. This change represents

EXHIBIT 1

US child enrollment in Medicaid, the Supplemental Nutrition Assistance Program (SNAP), and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), 2015–19

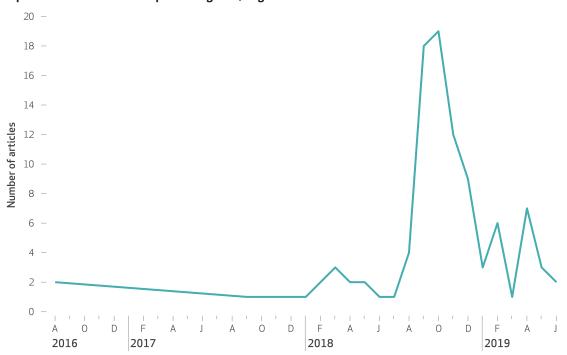


SOURCE Authors' calculations using state-reported data on child enrollment per county for state-specific program enrollment. National SNAP and WIC child enrollment per year are from the Department of Agriculture. National Medicaid child enrollment is from the Centers for Medicare and Medicaid Services. For a complete list of data sources, see appendix section 7 (note 32 in text). **NOTES** The national Medicaid and SNAP measurements indicate the percentage of children covered by Medicaid and SNAP, respectively, nationally, from 2015 to 2019, whereas the national WIC measurement indicates the percentage of children younger than age five covered by WIC from 2015 to 2019. The state Medicaid and SNAP measurements indicate the percentage of children covered by Medicaid and SNAP, respectively, from 2015 to 2019. The state Medicaid and SNAP measurements indicate the percentage of children covered by Medicaid and SNAP, respectively, from 2015 to 2019. The state Medicaid and SNAP measurements indicate the percentage of children covered by Medicaid and SNAP, respectively, from 2015 to 2019, using data from California, New Jersey, Tennessee, Texas, and Washington for Medicaid and data from Texas for SNAP. The state WIC measurement indicates the percentage of children younger than age five covered by WIC in California and Washington from 2015 to 2019. Child enrollment in June is used to plot yearly enrollment from monthly data. Proportion of children enrolled in 2019 for Medicaid, SNAP, and WIC estimated by multiplying the 2018 child enrollment proportion by the 2019 total child count and dividing by the 2019 child population.

a 0.22 percent decline from the populationweighted mean child Medicaid enrollment share of 45 percent. In the Medicaid sample, the share of noncitizens in a county at the seventy-fifth percentile was 9.1 points higher than the share of noncitizens in a county at the twenty-fifth percentile. Our analysis therefore shows that counties in the seventy-fifth percentile of noncitizen share experienced a 0.88-percentage-point larger decline in child Medicaid enrollment share compared with counties in the twenty-fifth percentile after the public charge rule announcement. Applying this change nationwide means that the announcement was associated with a decrease of approximately 260,000 in child Medicaid enrollment from 2017 levels. Because these data represent 30 percent of total US child Medicaid enrollment, the result implies that almost 79,000 children lost coverage in the five states analyzed (calculated from Medicaid estimates in exhibit 4 and Medicaid data in appendix exhibit S.3).³²

Appendix exhibit S.7 shows the full regression output in the five states analyzed, and separately for California and Washington State alone.³² In those two states, the effect of the public charge rule announcement was -0.135 (95% CI: -0.265, -0.006), or 0.3 percent of mean Medic-

EXHIBIT 2



Exposure to information on the public charge rule, August 2016-June 2019

SOURCE Authors' calculations. **NOTE** The number of articles is the number of news articles published per day in four locally focused Spanish-language newspapers in the US and the website of one major national Spanish-language television network from August 2016 to June 2019.

EXHIBIT 3

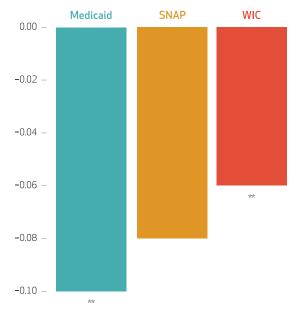
Timeline of public charge rule development and adoption

Date	Action
January 23, 2017	Draft executive order leaked that would require "Department of Homeland Security and the State Department to establish new standards and regulations for determining when aliens will become subject to the 'public charge' grounds of inadmissibility and deportability."
January 3, 2018	The State Department revised a manual used by consular offices for issuing visas to include in the definition of a public charge the use of noncash health benefits including Medicaid/State Children's Health Insurance Program.
September 21, 2018	The secretary of the Department of Homeland Security announced the Proposed Rule on Inadmissibility to the US, the "public charge" rule.
October 10, 2018	The Department of Homeland Security published the proposed public charge regulations in the <i>Federal Register</i> , opening the sixty-day comment period before the rule was to be finalized.
July 3, 2019	The Department of Justice proposed a rule making deportability easier on the basis of being a public charge.
August 14, 2019	Finalized public charge rule published in the <i>Federal Register</i> by the Department of Homeland Security.
October 15, 2019	Date that the public charge rule was supposed to be promulgated; adoption was blocked by federal appeals court on October 11.
January 27, 2020	US Supreme Court overruled a temporary nationwide injunction blocking implementation of the rule.
February 24, 2020	New public charge rule officially adopted.
July 29, 2020	Federal court issued a preliminary nationwide injunction blocking application of the expanded public charge rule, citing the COVID-19 national health emergency as justification.

SOURCE Various government documents and media reports, as detailed in section 8 of the appendix (see note 32 in text). **NOTE** Timeline highlights key dates in which action toward attaining the current status of the public charge rule was implemented.

EXHIBIT 4

Effect of the public charge rule announcement on child Medicaid, Supplemental Nutrition Assistance Program (SNAP), and Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) enrollment



SOURCE Authors' calculations. **NOTE** Regression-adjusted percentage-point change in child enrollment for every 1-percentagepoint increase in a county's noncitizen share, using data on child safety-net enrollment, January 2015 to June 2019. ***p* < 0.05

aid child enrollment share. This result implies that moving from a county in the twenty-fifth percentile of noncitizen share to the seventyfifth percentile decreased Medicaid enrollment by more than 40,000 children in those two states.

effect on child snap enrollment Exhibit 4 also shows the effect of the public charge rule announcement on child SNAP enrollment in Texas. We found that for every 1-percentagepoint increase in a county's noncitizen share, the announcement was associated with a -0.08percentage-point (95% CI: -0.211, 0.052) change in child SNAP enrollment. This change represents a 0.32 percent decline in child SNAP enrollment in Texas. Focusing on SNAP enrollment among children younger than age five, we found that every 1-percentage-point increase in a county's noncitizen share was associated with a -0.03-percentage-point (95% CI: -0.064, 0.011) change in the share of children younger than age five enrolled in SNAP after the public charge rule announcement.

Although the confidence interval crosses zero, the estimated effect implies that the decline in child SNAP enrollment after the public charge rule announcement for a county in the seventyfifth percentile of noncitizen share was 0.83 percentage points larger than for a county in the twenty-fifth noncitizen percentile. In numbers, if this relationship held nationwide, the announcement would have reduced child SNAP enrollment by more than 149,000 children (calculated from SNAP estimates in exhibit 4 and SNAP data in appendix exhibit S.3).³² Appendix exhibit S.8 shows full regression results for child SNAP enrollment for those younger than age nineteen and those younger than age five.³²

EFFECT ON CHILD WIC ENROLLMENT Our final result in exhibit 4 shows the effect of the public charge rule announcement on child enrollment in WIC. We observe that for every 1-percentagepoint increase in a county's noncitizen share, the announcement was associated with a -0.06-percentage-point (95% CI: -0.113, -0.007) change in child WIC enrollment for California and Washington State. This change represents a 0.73 percent decline from the mean WIC enrollment share of children younger than age five of 8.2 percent. The effect implies that the WIC enrollment share declined by 0.38 percentage points more in counties in the seventy-fifth percentile of noncitizen share compared with counties in the twenty-fifth percentile after the public charge rule announcement. In numbers, this means that the announcement was associated with WIC enrollment decrease of more than 21,000 children nationwide. Appendix exhibit S.9 shows full regression results for this program.³²

Discussion

This article assesses whether the announcement of the public charge rule in September 2018 was associated with larger declines in child safety-net enrollment differentially by a county's noncitizen share. As announced, the rule penalized legal immigrants seeking permanent residence for the use of safety-net programs such as Medicaid and SNAP. Because the rule excluded multiple categories of noncitizens, it applied to only a small proportion of the total. Nevertheless, we observed statistically significant declines in Medicaid and WIC enrollment. Although the percentage-point declines were larger for Medicaid, when examined as a percentage of enrollment share, the reduction found in WIC was three times larger than that in Medicaid.

Although the Medicaid effect was smaller in percentage terms, its damaging impact on child welfare was likely greater. First, Medicaid enrolls five times more children compared to WIC. Second, Medicaid spent over \$3,800 per child in 2019, whereas WIC spending per person was \$816.^{3,42} Third, in addition to the higher spending, the services provided by Medicaid are more difficult to obtain privately compared to infant formula and nutritional support for young chil-

dren obtained through WIC.

These data did not allow us to test directly why there were differences in enrollment declines across safety-net programs, as a larger decline could have been driven by the states where data are available or by differential impacts of the public charge rule announcement across programs. However, we did have data to compare effects for the same states between WIC and Medicaid in California and Washington State, and we found that even though the decline in Medicaid was larger when we restricted the sample, the magnitude of the effect on WIC as a percentage of child enrollment was still more than twice as large compared with the effect on Medicaid. That is, the largest percentage declines from the public charge rule announcement came in the program that was exempt. We hypothesize that this occurred because WIC enrollment is permitted for undocumented and legal immigrants without permanent residency. In addition, although our main results show a negative, but statistically insignificant, impact of the public charge rule announcement on child SNAP enrollment, sensitivity analyses shown in appendix exhibits S.18 and S.19 suggest that the decline was immediate postannouncement.³² It is possible, therefore, that this result could be confirmed with more statistical power.

Multiple studies have projected disenrollment because of the public charge rule.¹²⁻¹⁴ These calculations were based on point estimates from studies performed after 1996 welfare reform.⁴³ One analysis focused on Medicaid and CHIP enrollment and found that 800,000 children would lose coverage because of the public charge rule.^{10,44} Unsurprisingly, we found a smaller impact since we calculated anticipatory effects alone, while those analyses estimated the impact of the rule's adoption.

Policy Implications

These findings lead us to three implications for policy. First, perceptions of safety-net eligibility have an important impact on actual program use that complex exemptions cannot overcome. These perceptions change behavior even before a regulation or law takes effect. Our findings add to the evidence that highly complex laws and regulatory changes are likely to cause confusion and fear, especially when they affect low-income and vulnerable populations. Courts and government research agencies must take into account the likelihood that group exemptions will not be understood when the expected welfare impact of changes to law and regulations is being assessed.

Second, previous research emphasizes the importance and cost-effectiveness of investments in early life. Because the benefits in early childhood are more difficult to reproduce later in childhood, proposed legislation or regulatory changes affecting young children must be held to a higher standard than policies that do not affect this group. Given this large impact and the limited autonomy during childhood, stronger defaults should be put in place to reduce the likelihood of policy changes that could cause harm to young children.

Third, the COVID-19 pandemic and ensuing economic crisis mean that the safety net faces an unprecedented challenge. Additional support is needed to alleviate the fear and psychological burden imposed on immigrant families by the public charge rule. Even though there is uncertainty about whether the rule will remain blocked, clarification could be provided on what programs and categories of noncitizens are exempt from the rule. Without these, our analysis indicates that program use among the vulnerable but eligible will not increase with unemployment, thereby weakening the value of the safety net when it is needed most. Moreover, these results suggest that the chilling effects caused by the public charge rule affect perceptions of all public services. Because the rule has caused sufficient fear to reduce child Medicaid and WIC enrollment, it might also have already affected the willingness of noncitizens to use a broader range of government services. Given the nature of infectious disease spread, this is a uniquely dangerous time for any group of people to perceive using government services as highly risky.

Conclusion

The US faces an unprecedented health and economic crisis from COVID-19. Weeks before the pandemic began in the US, a years-long campaign to penalize noncitizens for using safetynet benefits culminated with the adoption of the public charge rule in February 2020. This study finds that the mere announcement of the rule led to reductions in child access to safety-net benefits. That the announcement of the public charge rule reduced program use well before its adoption also implies that the recent court injunction blocking its application is unlikely to result in greater child safety-net access among immigrant families. Our results mean that by reducing child safety-net enrollment, the public charge rule announcement increased child poverty and ill health. Given this impact during a national health emergency and economic crisis, the rule should be repealed and comprehensive efforts initiated to rebuild trust among immigrant communities and encourage safety-net enrollment for all children.

The authors thank the following people for their help in compiling the data used: Ben Jacques-Leslie, Elisabet Eppes, Susan Sabatier, Paul Throne, Anh Tran, Patricia Mattinson, Stacy Dean, and Catlin Nchako. They also thank Eva Matos for research assistance and John Quattrochi and Jacob Bor for their helpful comments.

NOTES

- Alker J, Roygardner L. The number of uninsured children is on the rise [Internet]. Washington (DC): Georgetown University Center for Children and Families; 2019 Oct [cited 2020 Aug 17]. Available from: https://ccf.georgetown.edu/wpcontent/uploads/2019/10/ Uninsured-Kids-Report.pdf
- 2 Department of Agriculture, Food and Nutrition Service. Supplemental Nutrition Assistance Program participation and costs (data as of July 10, 2020) [Internet]. Washington (DC): USDA; 2020 Apr [cited 2020 Aug 27]. Available from: https://fnsprod.azureedge.net/sites/default/ files/resource-files/SNAPsummary-7.pdf
- Department of Agriculture, Food and Nutrition Service. WIC program participation and costs (data as of July 10, 2020) [Internet].
 Washington (DC): USDA; 2020 Apr [cited 2020 Aug 27]. Available from: https://fns-prod.azureedge.net/ sites/default/files/resource-files/ wisummary-7.pdf
- **4** Miller S, Wherry LR. The long-term effects of early life Medicaid coverage. J Hum Resour. 2019;54(3): 785–824.
- 5 Hoynes H, Schanzenbach DW, Almond D. Long-run impacts of childhood access to the safety net. Am Econ Rev. 2016;106(4):903–34.
- **6** Hoynes H, Page M, Stevens AH. Can targeted transfers improve birth outcomes? Evidence from the introduction of the WIC program. J Public Econ. 2011;95(7–8):813–27.
- 7 National Academies of Sciences, Engineering, and Medicine. A roadmap to reducing child poverty.
 Washington (DC): National Academies Press; 2019 Aug 16.
- 8 We use the term "misinformation" to convey that the Trump administration, through its leaked draft executive order of January 23, 2017, spread vague information that the coming public charge rule would apply widely. Although signaling an intention to substantially expand the safety-net programs covered by the rule, the administration did nothing to provide accurate information or clarify what groups of noncitizens would be affected. In doing so, the administration forced noncitizens and their families to bear the psychological burden of understanding exactly how the rule would (or would not) affect them. Signaling broad applicability while failing to inform

citizens on how the rule would affect them and their families is both a form of misinformation and an administrative burden.

- **9** Herd P, Moynihan DP. Administrative burden: policymaking by other means. New York (NY): Russell Sage Foundation; 2019.
- **10** Department of Justice, Immigration and Naturalization Service. Field guidance on deportability and inadmissibility on public charge grounds. Fed Regist. 1999;64(101): 28689–93.
- 11 A determination on whether a noncitizen is likely to become a public charge is made when applying for admission to the US or for adjustment of immigration status (for example, applying for legal permanent residence, commonly referred to as a green card). The announced rule expanded the safety-net programs considered in this determination to noncash assistance such as Medicaid, the Supplemental Nutrition Assistance Program, and federal housing assistance (Section 8).
- 12 State of New York et al. v. DHS, et al. [Internet]. New York (NY): US District Court Southern District of New York; 2020 Jul 29 [cited 2020 Aug 17]. Available from: https://www .nilc.org/wp-content/uploads/ 2020/07/MTRNY-v-Cuccinelliorder-2020-07-29.pdf
- 13 US Citizenship and Immigration Services. Injunction of the inadmissibility on public charge grounds final rule [Internet]. Washington (DC): USCIS; 2020 Jul 29 [last updated 2020 Aug 4; cited 2020 Aug 17]. Available from: https://www .uscis.gov/green-card/green-cardprocesses-and-procedures/ public-charge/injunction-of-theinadmissibility-on-public-chargegrounds-final-rule
- 14 The same court blocked the public charge rule in October 2019, only to be overturned by the US Supreme Court in February 2020. This time, the judge cited the national health emergency caused by COVID-19 to justify the injunction. It is likely that a Trump administration appeal will again be decided by the US Supreme Court. Uncertainty about whether the block will remain combined with preexisting misinformation and confusion about the rule's previous application suggests that the injunction itself will not be sufficient to substantively change fear among noncitizens regarding the danger of

using safety-net benefits.

- 15 Ellwood MR, Ku L. Welfare and immigration reforms: unintended side effects for Medicaid. Health Aff (Millwood). 1998;17(3):137–51.
- 16 Fix M, Capps R. Leaked draft of possible Trump executive order on public benefits would spell chilling effects for legal immigrants [Internet]. Washington (DC): Migration Policy Institute; 2017 Feb [cited 2020 Aug 27]. Available from: https://www.migrationpolicy.org/ news/leaked-draft-possible-trumpexecutive-order-public-benefitswould-spell-chilling-effects-legal
- 17 Weixel N. Critics fear widespread damage from Trump "public charge" rule. The Hill [serial on the Internet]. 2019 Aug 24 [cited 2020 Aug 17]. Available from: https://thehill .com/policy/healthcare/458627critics-fear-widespread-damagefrom-trump-public-charge-rule
- 18 Evich HB. Immigrants, fearing Trump crackdown, drop out of nutrition programs. Politico [serial on the Internet]. 2018 Sep 3 [cited 2020 Aug 17]. Available from: https:// www.politico.com/story/2018/09/ 03/immigrants-nutrition-foodtrump-crackdown-806292
- 19 Kenney GM, Haley JM, Wang R. Proposed public charge rule could jeopardize recent coverage gains among citizen children [Internet]. Washington (DC): Urban Institute; 2018 Dec [cited 2020 Aug 27]. Available from: https://www.urban .org/research/publication/ proposed-public-charge-rule-couldjeopardize-recent-coverage-gainsamong-citizen-children
- **20** Qualified noncitizens include legal permanent residents, refugees and asylees, and Cuban/Haitian entrants, among others.
- 21 Centers for Medicare and Medicaid Services. Immigrants: coverage for lawfully present immigrants [Internet]. Baltimore (MD): CMS; [cited 2020 Aug 17]. Available from: https://www.healthcare.gov/ immigrants/lawfully-presentimmigrants/
- 22 Capps R, Gelatt L, Greenberg M. The public-charge rule: broad impacts, but few will be denied green cards based on actual benefits use [Internet]. Washington (DC): Migration Policy Institute; 2020 Mar [cited 2020 Aug 17]. Available from: https://www.migrationpolicy.org/ news/public-charge-denial-greencards-benefits-use

- 23 Lou C, Lei S. Part of us: a data-driven look at children of immigrants.
 Washington (DC): Urban Institute; 2019 Mar 14 [cited 2020 Aug 17].
 Available from: https://www.urban .org/features/part-us-data-drivenlook-children-immigrants
- 24 Other safety-net policies were changing during this time that also could have affected enrollment, such as Medicaid expansion and Supplemental Nutrition Assistance Program waivers for able-bodied adults without dependents (ABAWD). Sections 3.c.iii and 3.c.iv in the appendix clarify that both of these policies either do not vary (Medicaid expansion) or vary little (ABAWD waivers) across the states and time frame analyzed, which meant that we could not add controls for these policies into our statistical models. (The online appendix contains more detail on this point; see note 32.)
- 25 Artiga S, Garfield R, Damico A. Estimated impacts of final public charge inadmissibility rule on immigrants and Medicaid coverage [Internet]. San Francisco (CA): Henry J. Kaiser Family Foundation; 2019 Sep [cited 2020 Aug 17]. Available from: http://files.kff.org/ attachment/Issue-Brief-Estimated-Impacts-of-Final-Public-Charge-Inadmissibility-Rule-on-Immigrantsand-Medicaid-Coverage
- 26 Batalova J, Fix M, Greenberg M. Chilling effects: the expected public charge rule and its impact on legal immigrant families' public benefits use [Internet]. Washington (DC): Migration Policy Institute; 2018 Jun [cited 2020 Aug 17]. Available from: https://www.migrationpolicy.org/ research/chilling-effects-expectedpublic-charge-rule-impact-legalimmigrant-families
- Zallman L, Finnegan KE, Himmelstein DU, Touw S, Woolhandler S. Implications of changing public charge immigration rules for children who need medical care. JAMA Pediatr. 2019;173(9): e191744.
- 28 Henry J. Kaiser Family Foundation. Total monthly Medicaid and CHIP enrollment [Internet]. San Francisco (CA): KFF; 2018 [cited 2020 Aug 17]. Available from: https://www.kff .org/health-reform/state-indicator/ total-monthly-medicaid-and-chipenrollment/?currentTimeframe= 26&sortModel=%7B%22colId%22: %22Location%22,%22sort%22: %22asc%22%7D
- 29 Center on Budget and Policy Priorities. Policy basics: the Supplemental Nutrition Assistance Program (SNAP) [Internet]. Washington (DC): CBPP; 2019 Jun 25 [cited 2020 Aug 17]. Available from: https://

www.cbpp.org/research/foodassistance/policy-basics-thesupplemental-nutrition-assistanceprogram-snap

- **30** Department of Agriculture. Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) [Internet]. Washington (DC): USDA; 2020 [cited 2020 Aug 17]. Available from: https://fns-prod.azureedge .net/sites/default/files/resourcefiles/37WIC_Monthly-6.pdf
- **31** Henry J. Kaiser Family Foundation. Population distribution by citizenship status [Internet]. San Francisco (CA); KFF; 2016 [cited 2020 Aug 17]. Available from: https://www.kff .org/other/state-indicator/ distribution-by-citizenship-status/ ?dataView=1¤tTimeframe= 2&sortModel=%7B%22c0Ild%22 %3A%22Location%22%2C%22 sort%22%3A%22asc%22%7D
- **32** To access the appendix, click on the Details tab of the article online.
- Bureau of Labor Statistics. Local area unemployment statistics: smoothed seasonally adjusted metropolitan area estimates [Internet].
 Washington (DC): BLS; 2019 Apr [last updated 2020 Jun 3; cited 2020 Aug 17]. Available from: https:// www.bls.gov/lau/metrossa.htm
- 34 Henry J. Kaiser Family Foundation. Health insurance coverage of children 0–18 [Internet]. San Francisco (CA): KFF; [cited 2020 Aug 17]. Available from: https://www.kff .org/other/state-indicator/children-0-18/?activeTab=graph¤t Timeframe=0&startTimeframe= &&selectedDistributions=medicaid &sortModel=%7B%22coIId%22: %22Location%22,%22sort%22: %22asc%22%7D
- **35** Henry J. Kaiser Family Foundation. Status of state Medicaid expansion decisions: interactive map [Internet]. San Francisco (CA): KFF; 2020 Aug 17 [cited 2020 Sep 11]. Available from: https://www.kff.org/ medicaid/issue-brief/status-of-statemedicaid-expansion-decisionsinteractive-map/
- 36 Henry J. Kaiser Family Foundation. Medicaid income eligibility limits for adults as a percent of the federal poverty level [Internet]. San Francisco (CA): KFF; 2020 Jan [cited 2020 Aug 17]. Available from: https://www.kff.org/health-reform/ state-indicator/medicaid-incomeeligibility-limits-for-adults-as-apercent-of-the-federal-poverty-level/ ?currentTimeframe=0&sortModel= %7B%22colId%22:%22Location %22,%22sort%22:%22asc%22 %7D
- **37** Smeeding T, Jolliffe D, Tiehen L. The effect of SNAP on poverty. Lexington (KY): University of Kentucky, Center

for Poverty Research; 2013. (Discussion Paper Series, No. DP2013-06).

- 38 Department of Agriculture, Food and Nutrition Service. Monthly data state level participation by category and program costs [Internet]. Alexandria (VA): USDA; 2018 Jan [cited 2020 Sep 11]. Available from: https://www.fns.usda.gov/pd/wicprogram
- 39 California Department of Health Care Services. SB 75-full scope Medi-Cal for all children [Internet]. Sacramento (CA): DHCS; 2019 [last updated 2019 Jul 19; cited 2020 Aug 17]. Available from: https://www .dhcs.ca.gov/services/medi-cal/ eligibility/Pages/SB-75.aspx
- **40** Of the five states, only New Jersey reported child enrollment including the Children's Health Insurance Program. Our estimates may therefore underestimate enrollment declines.
- 41 Brooks T, Park E, Roygardner L. Medicaid and CHIP enrollment decline suggest the child uninsured rate may rise again [Internet]. Washington (DC): Georgetown University Health Policy Institute Center for Children and Families; 2019 May [cited 2020 Aug 27]. Available from: https://ccf.georgetown.edu/wpcontent/uploads/2019/05/ Medicaid-and-CHIP-Enrollment-Decline_Report.pdf
- 42 Centers for Medicare and Medicaid Services. How much do states spend per Medicaid enrollee? [Internet]. Baltimore (MD): CMS; [cited 2020 Aug 17]. Available from: https:// www.medicaid.gov/state-overviews/ scorecard/how-much-states-spendper-medicaid-enrollee/index.html
- 43 Welfare reform refers to two laws passed in 1996: the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 and the Illegal Immigration Reform and Immigrant Responsibility Act of 1996. The former made permanent residents ineligible for a range of federal public benefits during their first five years in the country. Conversely, the latter amended the law governing the definition of a public charge such that noncitizens considered likely to become a public charge became ineligible for admission or adjustment of immigration status. For Medicaid, studies have estimated that these policies resulted in 15-35 percent lower enrollment for noncitizens receiving government health insurance.
- **44** The other two studies mentioned were not directly comparable because they did not estimate effects for children specifically.