

Supplementary Appendix for
“Putting Out the ‘Unwelcome Mat:’ The Announced Public Charge Rule Reduced Safety
Net Enrollment among Exempt Noncitizens”

Section 1: Additional Background on the Public Charge Rule

After the public charge rule change was announced by the Department of Homeland Security (DHS) on September 21, 2018, it was formally published on October 10, 2018. Next, the public comment period opened, lasting almost a year. Following that, the public charge rule’s regulations were finalized and published in the Federal Register on August 14, 2019. The rule was set for implementation on October 15, 2019, but a nationwide injunction delayed the rule’s launch. The injunction was later overturned by the U.S. Supreme Court in January 2020. The federal government finally enacted the new public charge rule a month later, on February 24, 2020.

Throughout the rulemaking process several leaks of executive orders relating to the public charge rule spread fear and confusion. First, a leaked executive order about proposed changes to the public charge rule was made available on January 2017 and did not explicitly mention WIC. However, the ambiguity in the rule’s language around its application to “safety-net programs” exacerbated confusion for families enrolled or considering enrolling in WIC. This concern was further exaggerated by media reports indicating that WIC was included in the executive order (Lind, 2018).

On February, 8 2018 a draft Notice of Proposed Rulemaking (NPRM) written by the DHS was leaked that explicitly included WIC. DHS then sent its draft of the public charge rule to the White House Office of Management and Budget where it was published and subject to the standard 60-day comment period. Although an NPRM is not a proposed rule and carries no legal weight, we believe

this step taken by the administration further discouraged individuals to take up WIC benefits in addition to the ambiguity from the Executive Orders that we believe led to changes in uptake. Both the leaked Executive Order and published NPRM explicitly included WIC as a factor that would affect an immigrant's ability to obtain legal permanent residency and may have helped cause confusion about what the public charge announcement included (NWA 2017; 2018).

Section 2: Data

Total monthly enrollment in WIC by county was obtained for two states: California and Washington State from 2015 to mid-2019. Programs' enrollment share per county was calculated using 2015 – 2018 annual US Census population data by county. Data for population under 5 years old per county was used to calculate WIC child per capita enrollment, and total population was used for both WIC women and WIC total per capita enrollment (US Census Bureau, 2018). The non-citizen population variable included in the WIC regression model was constructed with 2016 total non-citizen population by county using data from the U.S. Census as well. Data on monthly enrollment in Minnesota SNAP is for each of the six geographic areas in Minnesota. Per capita enrollment for 2019 was calculated using 2018 data.

Seasonally adjusted monthly unemployment data by metropolitan area from the Bureau of Labor Statistics' (BLS) Local Area Unemployment Statistics (LAUS) was used for those counties in California and Washington State and regions in Minnesota located within a Core-Based Statistical Area (CBSA). For the rest of the counties and regions that are not within a CSBA, BLS' LAUS state level seasonally adjusted unemployment data was used (BLS, 2019).

Section 3: Empirical Analysis

a) WIC Difference-in-difference model:

To estimate the impact of the announced public charge rule, we hypothesize that any changes in WIC use would be observed differentially more in counties with larger noncitizen shares and after the announcement. Using a difference-in-differences model, we estimate the change in WIC enrollment using the following specification:

$$\begin{aligned} Enrollment_{ct} = & \alpha + \delta_1 Post_t + \delta_2 \%noncitizen_{c,2016} + \delta_3 Post_t * \%noncitizen_{c,2016} \\ & + unemployment_{ct} + state_s + year + month + unemployment_{ct} * state_s \\ & + year_t * state_s + \epsilon_{ct} \end{aligned}$$

where the outcome variable $Enrollment_{ct}$ is the percent of individuals in county c enrolled in WIC during month t between January 2016 and June 2020. The variable $\%noncitizen_{c,2016}$ represents the percentage of the population of a given county that was noncitizen in 2016. The term $Post_t$ is an indicator variable for whether a month occurred after September 2018, which we define as post-exposure based on the timing of the largest wave of media coverage related to the public charge rule.

Our treatment effect δ_3 represents the differential change in WIC enrollment (total, women, and child) post-announcement and as a county's noncitizen share increases. If a differentially large percentage decline in enrollment is observed in counties with higher noncitizen populations after the public charge announcement, this would provide evidence that the public charge announcement caused a

participation decline. Additional controls such as state and year fixed effects, unemployment rate, and state by year and state by unemployment interactions are also included. For counties within metropolitan statistical areas, the variable *unemployment_{ct}* represents the monthly unemployment rate in that county's metropolitan area calculated by BLS. For non-metropolitan counties, the monthly state unemployment rate from the BLS is used.

b) SNAP Difference-in-difference model:

To calculate the change in relative SNAP enrollment in Minnesota across the three citizenship categories after the public charge rule announcement, we use the following equation:

$$\frac{Enrollment_{rgt}}{Enrollment_{rgt=Q1\ 2016}} =$$

$$\alpha + \delta_1 Post_t + \delta_2 X_g + \delta_3 Y_g + \delta_4 Post_t * X + \delta_5 Post_t * Y + unemployment_{rt} + year \\ + month + region_g + \epsilon_{rgt}$$

where *Enrollment_{rgt}* represents SNAP enrollment for group g in region r and during month t and *Enrollment_{rgt=Q1 2016}* is average SNAP enrollment for group g in region r from January to March 2016. This dependent variable is referred to as relative enrollment. Subscript g indexes the three citizenship groups included: citizens, noncitizens likely not subject to the public charge rule, and noncitizens likely subject to the public charge rule.

Variable X_g represents an indicator for enrollment among the group of noncitizens likely exempt from the public charge rule, while Y_g represents an indicator variable for enrollment among noncitizens likely subject to the public charge rule. The coefficients of interest are δ_5 and δ_6 , which reflect the differential change in relative enrollment for these two groups in comparison to citizens after the announcement of the public charge rule. $Post_t$ is defined as above. Additional controls are included for monthly unemployment ($unemployment_{rt}$) at the metropolitan or at the state level depending on whether each region is located within the Minneapolis-St. Paul metropolitan area; year, month and region fixed effects are included as well. Calculations are clustered by the total population within each region, which was calculated by adding the 2016 population for those counties included within each region using data from the U.S. Census.

Table S.1: Effect of the Public Charge Rule Announcement on WIC Monthly Enrollment in California and Washington State (January 2015 - June 2019)

	Children b/se	Women b/se	Total b/se
Post exposure	0.544 (0.392)	0.034 (0.029)	0.202 (0.139)
Non-citizens per county(%)	0.216** (0.104)	0.014** (0.006)	0.075*** (0.028)
Post exposure*Non-citizens per county	-0.064** (0.027)	-0.005** (0.002)	-0.026** (0.010)
Unemployment rate	0.788*** (0.281)	0.085*** (0.026)	0.396*** (0.125)
Constant	0.986 (1.968)	-0.030 (0.185)	-0.487 (0.869)
R-squared	0.526	0.587	0.591
N	5088	5088	5088

* p<0.10, ** p<0.05, *** p<0.010

Source: Author's calculations

Notes: OLS regressions include state, month, year, and state by year fixed effects; county level data is included for both states; calculations weighted by 2016 county population.

Table S.2: Effect of the Public Charge Rule Announcement on SNAP Monthly Enrollment in Minnesota (January 2016 - June 2019)

	b/se
Non-citizen - not subject to Public Charge	5.181** (1.849)
Non-citizen - subject to Public Charge	3.498 (5.290)
Non-citizen - not subject to Public Charge*Post-exposure	-4.545** (1.756)
Non-citizen - subject to Public Charge*Post-exposure	-11.384** (3.930)
Post-exposure	1.101 (1.556)
Unemployment rate	8.337* (3.982)
Constant	59.206*** (12.527)
R-squared	0.563
N	738

* p<0.10, ** p<0.05, *** p<0.010

Source: Author's calculations

Notes: OLS regression includes region, month and year fixed effects; calculations weighted by 2016 population within each region.

References

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