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Health Outcomes of the ‘Public Charge’ Rule for U.S. Latinx Children and Adults: A
Systematic Review

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2021

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Abstract

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Background: The 'Public Charge' rule assesses the likelihood of an immigrant becoming dependent on government assistance. This is assessed with an evaluation of cash-benefit programs use or likelihood of use. Being deemed a 'public charge' can render an immigrant's application for legal status inadmissible.

Methods: This systematic review aims to summarize the health outcomes of the public charge rule for U.S.-residing Latinx children and adults. Following PRISMA guidelines, literature was retrieved from PubMed, SCOPUS, and Web of Science. Articles that examined the public charge rule (exposure) and its association with health-related topics (outcome) among U.S. Latinx children and adults (population) were included. An initial 133 articles were retrieved across the three search engines. Covidence software was used for the screening process of literature. A total of 15 articles satisfied the final inclusion and exclusion criteria. Data were extracted using a table derived from the PICOS framework.

Results: A total of 11 studies examined the use of public assistance or healthcare programs (n=11, 73%). All of these studies documented the underutilization of services. This observation was made across three program scopes: 1) nutrition assistance, 2) perinatal care, and 3) health care. An overarching theme across studies that explained this behavior was fear of deportation/ legal consequences that stemmed from the public charge rule. Studies also found that misinformation, misperceptions, false rumors, and knowledge gaps surrounding the public charge rule influenced the health behaviors of Latinx individuals. Two studies (n=2, 13%) had results related to adverse birth outcomes including low birth weight and pre-term births. The rest of the literature focused on program utilization and access (n=13, 87%). The underutilization of social safety net programs persisted even among Latinx populations who qualified or were entitled to assistance.

Discussion: Evidence from this review suggests that the public charge rule has an unintentional impact on the utilization of non-cash benefit programs. Programs like WIC, SNAP, and Medicaid aim to close racial and socio-economic health disparities. However, fear stemming from the public charge rule is discouraging the use of these programs by Latinx individuals, which could be amplifying health inequalities.

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Acronyms and Abbreviations

CHIP.....	Children’s Health Insurance Program
PICOS.....	Population, Intervention, Comparison, Outcome, Study Design
PRISMA.....	Preferred Reporting Items for Systematic Reviews and Meta-Analysis
PROSPERO.....	International Prospective Register of Systematic Reviews
Qual.	Qualitative
Quant.	Quantitative
SNAP.....	Supplemental Nutrition Assistance Program
TANF.....	Temporary Assistance for Needy Families
WIC.....	Women, Infants, and Children

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1. INTRODUCTION

A “Public Charge” is someone who cannot financially provide for himself and therefore must depend on public assistance to sustain their livelihood. Through their use of public assistance this person is then considered a charge or responsibility of the public (Edwards & Jr, 2001). In the U.S, Citizenship and Immigration services has implemented what is known as the ‘Public Charge’ rule in order to assess the likelihood of an immigrant applicant becoming dependent on government-funded assistance. This assessment is made through past or potential use of cash benefit programs, income, health status, age, education, assets, and other similar factors. Being deemed a “public charge” can render an immigrant’s legal status application inadmissible, jeopardizing their possibility to obtain a green card or visa. The government has relied on the use of this assessment as a way to measure an immigrant's financial stability with the goal of admitting people in the U.S. who won’t overburden social welfare systems. Although this policy was introduced over a century ago, it was not formally defined until recently in May 1999 (Boundless, 2022). The new guidelines that were introduced in 1999 focused attention on labeling applicants as a public charge through receipts of cash assistance and long-term medical care use. The 1999 guidelines also specified that the use of non-cash benefit programs such as the Children’s Health Insurance Program (CHIP), Woman, Infants and Children (WIC), and Medicaid (non-institutionalized) should not be considered by immigration officials when making a public charge assessment (DHS, 2022). Regardless of these newly defined guidelines, the assessment process has largely remained ambiguous, allowing officials to use a lot of personal judgment in their ruling (Pillai & Published, 2022) . This ambiguity has instilled a lot of fear in

immigrants and traditionally deterred them from utilizing non-cash benefit programs in an effort to minimize their paper trail and maintain a clean record.

Because this policy targets undocumented individuals, it's important to understand the implications it has on one of the most vulnerable immigrant populations in the U.S., Latinos. In the U.S. immigrants account for about one-third of the Latinx population and about half of all Latinx adults (Moslimani, 2022). Looking at the population more broadly, Latinos are one of the fastest-growing minority groups in the U.S. Between 2000 and 2010 they accounted for a little over half of the country's population growth, reaching a presence of about 62 million people in 2020 (Funk & Lopez Hugo, 2022). Today, Latinos make up 19% of the U.S. population and are projected to account for 28% by 2060 (Zong, 2022). In other words, one out of every four U.S. individuals will identify as Latinx in a few decades. This group holds a significant presence in the U.S., despite being a minority race.

Although Latinx individuals have become such a huge part of American society, immigration policy and surveillance have traditionally been the most punitive against them. Across, the Bush, Obama, and Trump administrations, an average of 893,000 people were deported annually. The majority of the individuals deported were Latinx people (Scarborough, 2023). Specifically, during the Trump administration, a lot of negative sentiments toward Latino were shared and instilled through politics. For example, President Trump successfully advocated for government funding to be put towards re-vamping the southern border wall; a measure that neither improved border safety nor deterred people from immigrating (Miroff, 2022). The former president even ran his campaign rallying support by referring to Mexicans as "rapists, drug dealers, and gang members" (Reilly, 2016). In large part, the issue of immigration in the U.S. has

historically centered around targeting Latinx people and their families, even those who are documented.

During the Trump administration the public charge rule was expanded. Although non-cash benefit programs have traditionally been excluded from public charge assessments, the Trump cabinet aimed to include them. In 2019, the administration published updated guidelines that allowed determinations based on the use of both cash benefits and non-cash benefit programs such as non-emergency Medicaid for non-pregnant adults, Supplemental Nutrition Assistance Program (SNAP), and various forms of housing assistance (Pillai & Published, 2022). This new version of the public charge rule took effect in 2020 but was shortly blocked by courts in 2021 and later completely repealed by the Biden administration (Workie, 2022). Regardless, the proposed and briefly implemented expansive rule had what many scholars refer to as “chilling” effects. Chilling effects refers to people refraining from using social welfare programs due to fears of legal repercussions.

The chilling effects of the Trump public charge rule were immediately observed through disenrollment rates in Temporary Assistance for Needy Families (TANF), SNAP, and Medicaid (Batalova, 2020). Although the public charge rule aims to target immigrants, many Latinx individuals live in “mixed status” families. This is when a household has members with varying legal statuses such as a green card or visa holder, asylum seeker, citizen, or undocumented individual. In the case of Latinx families, it’s estimated that about one-quarter of children live with one undocumented immigrant parent (Clarke et al., 2017). Similarly, we know that nearly half of undocumented adults are parents to minors, including children with legal status (*Undocumented Americans*, 2013). Due to the mixed status families, policies that target Latinx immigrants are likely to have a much larger impact than what’s intended. When an

undocumented individual's access to health, food, and housing programs is disrupted, this has trickle-down effects on their family unit including documented children and adults.

Given the recent expansion and repeal of the Trump public charge rule, it's important to understand how this policy has affected the largest minority group in the U.S. This systematic review aims to summarize the known health outcomes of the “public charge” immigration policy and discuss its implications for the US Latinx population. There is a general understanding that this policy creates deterrence from the use of public assistance programs. However, there is less knowledge about the specific program usage trends that stem from this rule and the resulting physical and mental health outcomes. This systematic review will synthesize current literature addressing this knowledge gap. The study population of interest will be Latinx children and adults residing in the U.S., regardless of legal status. This broader scope in population aims to capture the population-level impact of this policy as Latinx individuals often live in mixed legal status and multi-generational families. Capturing the health outcomes of this policy specific to children is also an important area to explore. The health consequences of the “public charge” rule come during a crucial time for the development of minors. Thus, is important to understand the potential implications for both Latinx adults and children.

2. METHODS

Introduction

The goal of this systematic review is to synthesize the health outcomes of the “Public Charge” rule for the U.S. Latinx population. In order to be thorough and report evidence-based information, this review adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines. The PRISMA guidelines detail steps for a systematic

review to limit bias and report comprehensive information on a topic. This review has also been registered with PRSPERO, an international database of systematic reviews related to health and other topics. The review was registered in the International Prospective Register of Systematic Reviews (PROSPERO) on December 2, 2024. Registration number ID: CRD42024507861.

Eligibility Criteria

Manuscript search was designed to identify all peer-reviewed studies that were published between January 1996 to December 13, 2024. This start date was chosen because it covered the year the “Public Charge” rule began to be defined through detailed guidelines by the Immigration and Naturalization Services (INS) agency. The end date aimed to include the most recent research based on recent policy changes. Articles were also included only if they were original peer-reviewed literature. Non-peer-reviewed research was excluded from the scope of this review, including grey literature, editorials, and opinion pieces, which were all excluded. Because of the population of interest concerning Latinx individuals, both English and Spanish papers were included in this review.

In the screening process, articles were only included if they satisfied the three criteria of population, exposure, and outcome. The population criteria included a discussion about U.S.-residing Latinx individuals. Research studies concerning Latinx populations outside of the U.S. were excluded. The exposure criteria was met if the paper aimed to study one or more outcomes of the “Public Charge” rule. Finally, the outcome criteria included a focus on any health-related topics such as physical health outcomes, mental health outcomes, health behaviors, health services access, perceptions of health services access, or health services usage. Based off this information, the following list of inclusion and exclusion criteria was developed:

Inclusion Criteria:

- The article must relate to U.S.-residing Latinx individuals, both children and adults, regardless of immigration status
- The article must aim to study the “Public Charge” rule.
- The article must address health-related outcomes related to the “Public Charge” rule such as physical health outcomes, mental health outcomes, health behaviors, access to health services, perceptions of access to health services, or usage of health or social welfare services.

Exclusion Criteria:

- Studies that did not relate to U.S. Latinx populations such as Latinx populations in Latin American, Hispanic, or Central American countries.
- Grey literature, non-peer-reviewed research, editorials, or opinion pieces
- Articles that studied immigration policy outside of the “Public Charge” rule
- Articles that did not discuss health-related outcomes.
- Studies published before January 1996
- Studies in a language other than English or Spanish

Information Services

Three databases were selected to search manuscripts using the same search algorithm: PubMed, Web of Science, and SCOPUS. All initial article searches were run on December 13, 2023. This search yielded 68 articles from PubMed, 32 from Web of Science, and 32 from SCOPUS, for a total of 132 articles. All literature was exported to Covidence, where the software identified and removed 48 duplicates, leaving 84 articles for the title and abstract screening process.

Search Strategy

The same search algorithm was used across all three databases. This included ("Public Charge" OR "carga pública" OR "public charge rule") AND (health OR "physical health" OR "mental health" OR physical health OR mental health) AND (Latin* OR Hispanic* OR Mexican* OR children OR adults). After initial article hits were exported to Covidence, they were screened using the selection process explained below.

Selection Process

An initial 133 article citations were exported to the Covidence software. After this the software was used to remove 48 duplicates. The main reviewer then went in to manually check for remaining duplicates and one article was removed. This brought the total number of articles to 84. These remaining 84 articles then went through an initial screening process. This screening consisted of reading the title and abstract of each article. Based on the information from these two sections, the inclusion and exclusion criteria were compared to exclude irrelevant literature.

After screening the articles for their titles and abstracts, they were compared to those screened independently by a second reviewer. Fifteen disagreements were identified between both reviewers. The disagreements were resolved through a third independent reviewer. During this initial screening, one additional duplicate was identified and removed leaving a total of 33 included studies from the initial 84 examined in the screening phase. Next, the remaining literature was screened through full-text reading using the same inclusion and exclusion criteria. For full-text screening, 10 randomly selected articles were also screened by a second independent reviewer. A total of six disagreements were identified between both reviewers through these 10 articles. Conflicts were resolved by the main reviewer. By the end of the full-text screening process, 15 articles were included, and 18 articles were excluded. This processed

is detailed in the PRISMA Flow Diagram presented in **Figure 1**. The 15 selected articles were used for data retrieval and analysis.

Data Collection Process

Data from the articles were extracted using an Excel sheet design following the Population, Intervention, Comparison, and Outcome (PICOS) framework. The final spreadsheet included the following data item categories: article ID, title, dataset/population, sample size, exposure, exposure measurement, age(s) at exposure, outcome, outcome measurement, age(s) at outcome, study design, statistical methods, main findings, secondary findings, quality assessment, qual or quant, multiple entries, category of safety net program or healthcare. All of this information was extracted from the 15 included research papers except for two articles that had missing data for the ages at exposure and outcome (Heckert, 2020; Yu et al., 2020).

Study Risk of Bias Assessment

To limit bias in the selection of literature, two reviewers screened articles through the titles and abstract phase. The initial article hits were exported to Covidence where both reviewers independently voted yes, no, or maybe using the defined inclusion and exclusion criteria listed above. For title and abstract screening, fifteen conflicts were marked between both reviewers and resolved using a third independent reviewer. For full-text reading, 10 articles were screened independently by both reviewers. A total of 6 voting conflicts emerged. These conflicts were resolved by the primary reviewer.

Quality Assessment

The quality of each article was assessed using a tool developed for this review that mirrors the Cochrane risk-of-bias tool. This modified tool ranked papers as having either ‘High’, ‘Low’, or ‘Some Concerns’ of quality. Rankings were assessed based off the following criteria:

1) Are there clear research questions? 2) Were Spanish speaking participants included in the study? 3) Did the study include marginalized Latinx populations (immigrants, low-income, uninsured, rural living, non-white, non-English speaking, disabled, LGBTQI+, or low levels of schooling)? 4) Does the study report significant or null findings? 5) Are missing data reported? 6) Is there coherence between the research question, data sources/collection, analysis, and interpretation? Each question was answered with either ‘Yes’, ‘Probably Yes’, ‘No’, ‘Probably No’, or ‘No Information’. All papers were ranked high in quality with the exception of the paper by Heckert., 2020, that was scored with ‘Some Concerns’. The study by Heckert lacked coherence and organization, but the main findings were clear and relevant to inclusion criteria of this review. The quality of articles was assessed after full text-screening and while data was being extracted.

3. RESULTS

A total of 133 articles were identified for this review through SCOPUS, Web of Science, and PubMed. After removing duplicates and following the PRISMA screening process, the pool of studies was narrowed to 15. Studies were often excluded for missing a focus on the Latinx population or being non-research papers, such as opinion pieces. Overall, the included studies focused on service utilization (n=11, 73%), and there were (n=4, 27%) studies that examined maternal health, more specifically prenatal/postnatal care (n=3, 20%) and birth outcomes (n=1, 7%). Service utilization studies investigated enrollment and engagement with health care services, Medicaid, SNAP, and other public health programs. Maternal health studies generally looked into the utilization of prenatal care. A PRISMA flow diagram depicting the selection and screening of studies is shown in **Figure 1**.

Data from the 15 included studies was collected using an Excel chart derived from the Population, Intervention, Comparison, Outcomes, and Study (PICOS) framework. About a third of the studies used qualitative research (n=5, 33%), and the rest had a quantitative methodology (n=9, 60%). Nearly all studies also had a cross-sectional design (n=14, 93%). One study incorporated a retrospective study approach (n=1, 7%).

Program Utilization and Access

Nutrition Assistance

The use of Nutrition Assistance programs was examined in 4 studies (n=4, 27%). Of these, all examined SNAP. Many studies grouped SNAP into a category that included other programs. For example, assessment categories included: (SNAP and WIC), (Medicaid and CHIP or SNAP), (SNAP and free or reduced school meals), and (Medicaid, SNAP, or public housing). Of these studies, one focused on child populations (n=1, 7%), two on household/family samples (n=2, 13%), and the fourth study focused on adults (n=1, 7%). Between Latinx adults and children, observations of the underutilization or under-enrollment of nutrition assistance programs were similar. For example, one study found that among households (n=51) with 1 SNAP-eligible child, 49% had no child enrolled in the nutrition assistance program (Pelto et al., 2020). This huge gap in enrollment supports the estimate from Dr. Zallman, that children most at risk of losing health or nutrition benefits due to the public charge rule were Hispanic (79.8%; 95% CI, 74.4%-85.1%; vs 19.9%; 95% CI, 16.8%-22.9%; $P < .001$) (Zallman et al., 2019). Similarly, studies that focused on adult or family samples found that participants often refrained from utilizing or enrolling in food assistance programs. Studies that documented these behaviors also had a similar focus on vulnerable subgroups or contexts relating to the Latinx population. For example, one study made this underutilization observation among a sample of new low-

income mothers (Pelto et al., 2020). A second study made the observation through the context of food insecurity during the COVID pandemic for rural living Latinx households (Payán et al., 2022). Across studies, an overarching theme that explained the conservative utilization of nutrition programs often related to misinformation or misunderstandings of the public charge rule. For example, one participant interviewed in a study to examine food insecurity during the pandemic shared, “I would like to get food stamps, but no. I say no because I would like my son to have the opportunity to submit an application [for legal status]. With Trump saying everyone is a public charge right?” (Payán et al., 2022). The participant expressed uncertainty over public charge assessment criteria at the end of his statement. This confusion and misinformation were found to have important implications in a separate study. In the Pelto et al., study, having heard of a rumor that SNAP/WIC participation makes immigrants vulnerable to being reported to the government was associated with an 85% lower enrollment rate (OR 0.15, 95% CI 0.03, 0.94) (Pelto et al., 2020). Overall, the lack of clear and consistent guidelines for the public charge rule was a huge barrier that affected the use of nutrition assistance programs. Evidence from these four studies found this consistent result among both Latinx children and adults. Additionally, the legal status across samples of these four studies was split between both documented and undocumented individuals. More specifically, the evidence related to U.S.-born individuals was mostly made up of documented children samples (Pelto et al., 2020; Zallman et al., 2019). On the other hand, adult-related results were predominately made up of undocumented immigrant populations (Payán et al., 2022; Sommers et al., 2020). This mix of results between documented and undocumented groups demonstrates the broad impact of the public charge rule and its association with food insecurity and disparities.

Healthcare

A total of three studies assessed the relationship between the public charge rule and healthcare utilization (n=3, 20%). All studies focused on examining undocumented adult Latinx populations. Of these, two used the approach of interviewing healthcare workers and other key informants in predominantly Latinx communities. The third study sampled a pool of Latinx parents in a hospital setting. All studies in this category also took place in the context of California with two focusing on the northern region and one on Los Angeles County. A similar result across all studies was that fear was the primary barrier that deterred individuals from health care services. For example, using a socioecological model, Dr. Alwan found that fear transpired all throughout policy, organizational, community, and individual levels (Alwan et al., 2021). This fear, mainly connected to legal ramifications associated with the public charge rule, deepened mistrust of the healthcare system among Latinx immigrants. As two studies found, immigrants commonly associated the utilization of services with a greater risk of being deported, even inside or near facilities. While the Alwan et al. study suggested that local policy was a mediator that could improve access to health services (otherwise restricted by national policy) results from Dr. Yu contradicted this conclusion. Healthcare workers from Yu et al. reported that although a county program improved access to health services by offering free primary-care services for uninsured individuals, regardless of legal status, appointments remained underutilized (Yu et al., 2020). Again, providers largely attributed this underutilization to fears and misconceptions related to the public charge rule.

Although fear was found to deter immigrant adults from utilizing services, one study found that this did not hold true for care related to children. Latinx parents from Lee et al. also expressed a lot of fear in utilizing healthcare. However, it did not prevent them from accessing

emergency and ambulatory care services for their children (Lee et al., 2021). While nutrition program utilization was disrupted for both children and adults, the evidence from Lee et al. suggests a different prioritization for children's use of health-related services among Latinx families. However, this is an observation that was documented in only one study.

Another contradiction that surged from two studies related to the topic of improving information on the public charge rule and immigration policy. The study by Lee et al. found that many parents commonly expressed the need to receive more information on up-to-date immigration policy information. More specifically, parents want to receive this information directly from medical providers (Lee et al., 2021). Healthcare workers from Yu et al. similarly recognized this patient need. However, many expressed feeling ill-equipped and trained to handle these concerns (Yu et al., 2020). Additionally, participants expressed that fears and underutilization behaviors persisted even among well-informed immigrants. While one study referenced a theme of improving policy knowledge and information as a way to mitigate trust in the healthcare setting, a second study spoke to the reality of this intervention. Sometimes informing patients of the public charge rule guidelines still instilled fears that resulted in conservative healthcare access behaviors (Yu et al., 2020).

Perceptions About the Public Charge Rule

Three studies in this review (n=3, 20%) examined perceptions about the public charge rule. Two of these focused on how these perceptions affected healthcare utilization (Galletly et al., 2023; Wolwowiecz-Lopez et al., 2023) and the third had a broader focus on assessments of the public charge rule (Sommers et al., 2020). Although all of these studies aimed to understand attitudes and beliefs about the public charge rule, only one study used qualitative research methods. The other two used quantitative methodology. Sample sizes in the quantitative studies

ranged between 130 to 1,103 participants. The first similarity in results came from two studies that asked their participants the same question. When asking individuals if they had ever heard of the public charge rule, only 48% (n=498) answered yes in the study by Wolwicz-Lopez et al., (Wolwicz-Lopez et al., 2023) and 61.7% (n=192) in the study by Sommers et al. (Sommers et al., 2020). On average, a little over 50% of these participants indicated awareness of the public charge rule, demonstrating a huge gap in knowledge regarding the policy. Both studies also had a lower adjusted probability of this knowledge for younger respondents. In the study by Wolwicz-Lopez 15.6% (95% CI 3.1-28.2) of adults aged 18-24 years old were aware of the public charge rule (Wolwicz-Lopez et al., 2023). Meanwhile Sommers et al., document knowledge of the public charge rule among 41.1% (95% CI 29.9-52.3) of 19-30 year old adults (Sommers et al., 2020). This provides important context behind what age groups are most aware of the public charge rule and consequently may be driven to behave differently when it comes to utilizing programs and services. The sample populations of these studies included both undocumented and documented Latinx adults. One study restricted participant criteria to those with citizenship (Sommers et al., 2020), the second study collected results at a Mexican consulate, a setting with a lot of immigrant traffic(Wolwicz-Lopez et al., 2023).

The only study in this category that used qualitative methods offered a unique insight that contextualized some fear related to the public charge rule. Through focus groups, Galletly et al. discovered that several participants shared an unfound concern over being diagnosed with a “costly” diagnosis that could lead to their deportation (Galletly et al., 2023). Many studies in this review found that individuals feared their utilization of services would result in deportation. However, this article uniquely observed that fear was also rooted in being diagnosed with a perceived “serious” medical diagnosis that could also lead to deportation. In other words, fear of

the public charge rule went as far as to manifest in the way Latinx individuals perceived a health diagnosis.

Finally, some results from this category were found to support evidence across previous sections. For example, Galletly et al. found a theme about the way access to information on immigration laws and healthcare resources or even misinformation easily influenced healthcare utilization (Galletly et al., 2023). This finding was also observed in the studies by Lee et al, Yu et al., Alwan et al., and Pelto et al. (Alwan et al., 2021; Lee et al., 2021; Pelto et al., 2020; Yu et al., 2020). This adds to the growing pile of evidence that suggests the need to prioritize the communication and dissemination of information related to the public charge rule. As multiple studies are finding, information or misinformation related to the public charge can easily swing between serving as a barrier or facilitator to improving the utilization of programs and services.

Medicaid

The use of Medicaid was assessed in two studies (n=2, 13%). One of these studies estimated the effects on Medicaid use from the proposed 2019 Public Charge rule leak (Zallman et al., 2019). The second study investigated the same thing but looked into the period after the expansive rule was implemented (Bustamante et al., 2022). Both of the studies used quantitative methods and survey data for their analysis. While one used a national household survey, the other study focused on data from California residents. Across both studies, authors found that Latinx populations experience the highest vulnerability of losing and underutilizing Medicaid compared to other ethnic groups. For example, Dr. Zallman's study analyzed the risk of losing Medicaid and CHIP/SNAP across 5 ethnic categories. Out of all groups, Hispanic children were the most likely to be at risk of losing benefits (79.8%; 95% CI, 74.4%-85.1%; vs 19.9%; 95% CI, 16.8%-

22.9%; $p < 0.001$) (Zallman et al., 2019). Similarly, Dr. Bustamante's study found that between 107,956 and 192,905, Latinx immigrants in California avoided enrolling for Medicaid compared to 1294 and 4702 among Asian immigrants (Bustamante et al., 2022). Again, when compared to a different ethnic group, there was a larger number of Latinos affected by the changes to the public charge rule. This provides important evidence to compare the impact of the public charge rule across different races.

Maternal Health

Perinatal Care

The effects of the public charge rule on perinatal care were uniquely recorded across four studies ($n=4$, 27%). Of these four articles, two focused on Medicaid perinatal enrollment, the third on Medicaid or CHIP enrollment, and the fourth on CHIP or WIC utilization. Three of the studies analyzed the “post-leak” period of the 2018 public charge rule (Choi, 2023; Heckert, 2020; S. S. Wang et al., 2022). The third study assessed the period before the leak, the period immediately after the leak, and the “post-leak” years (Choi et al., 2023). Across all articles, researchers found a decrease in the use of government perinatal care programs among pregnant Latinx immigrant women. For example, Dr. Wang and Dr. Choi both found that after the leak of the proposed changes to the public charge rule, Latinx mothers delayed the use of initiating Medicaid perinatal care both in the first and second trimesters. In one study this was observed as a 12.5% decrease (OR:0.875; 95% CI:0.804, 0.954) (Choi et al., 2023). While the second study also found a positive association, the results lacked statistical significance (R. Y. Wang et al., 2022). However, similar data between both studies provides evidence to support the association between the public charge rule and delayed perinatal care. Adding context to these quantitative

results, a qualitative study by Dr. Heckert found an important pattern that could explain this Medicaid underutilization among pregnant mothers. When speaking to healthcare professionals and immigrant women both groups explained a similar usage behavior of perinatal care following the leak of the Trump-era public charge rule. Participants explained the abandonment of cost-free government perinatal services for private and out-of-pocket care (Heckert, 2020). As one woman shared, “Patients who I’ve seen previously at [the hospital], because they had CHIP or Medicaid, are now in community clinics paying by visit or getting some sort of discount there” (Heckert, 2020). To provide some context, Medicaid perinatal services have always remained a zone of exclusion from the public charge assessment. Although all Latinx mothers, regardless of legal status, are eligible for cost-free pregnancy services, the study by Dr. Heckert found that some women still avoided using these available resources and opted for private, out-of-pocket care. Data across this category was also geographically diverse. One study used national survey data, while the last two focused on New York and El Paso, Texas. Although most authors also recruited insured U.S.-born Latinx mothers as a comparison group, results found among immigrant mothers did not apply to those with legal status.

Adverse Birth Outcomes

Two studies documented important results related to adverse birth outcomes following the leak of the proposed public charge rule (n=2, 13%). One study looked into pre-term births (Choi, 2023) while the second study focused on low birth weight among newborns (S. S. Wang et al., 2022). Both of the articles had statistically significant results that were associated with negative birth outcomes. However, only one of these results can be specifically attributed to the Latinx population. The study by Dr. Choi, exclusively using a sample of Latinx mothers, found that the odds of pre-term birth among women increased by 6.2% (OR:1.062; 95% CI:1.016,

1.110) after the public charge leak. The article by Wang et al. also found concerning birth outcomes following the leak period. In his sample of participants, low birth weight among newborns of immigrant mothers increased by an average of 37.08 grams (95% CI= -73.31g-0.86 g). However, these results are mixed between 6 ethnic categories, although Latinx mothers do make up the biggest percentage across groups.

Barriers and Facilitators

Amidst all the evidence of program and service underutilization, it's important to understand exactly what barriers and facilitators influence these health behaviors. A total of seven studies had results related to this (n=7, 47%) (Alwan et al., 2021; Chen et al., 2023; Lee et al., 2021; Pelto et al., 2020; Sommers et al., 2020; Wolwicz-Lopez et al., 2023; Yu et al., 2020). Overall, all of these studies covered the overarching theme of deportation fears as a barrier to health service and program underutilization. Latinx patients commonly associated the utilization of services with deportation consequences or changes to their legal status. Other barriers identified between studies included perceptions of clinical spaces as unsafe, feeling poorly informed about immigration policy, encounters with law enforcement, logistical issues, and limited information on accessible health resources and services. While many of these barriers were commonly discussed throughout studies, few ways to mitigate them were researched. However, the qualitative study by Alwan et al. provided a lot of insight into ways to improve the perception of clinical spaces as a safer environment in the context of the public charge rule. For example, clinical facilities were more likely to be perceived as welcoming if they had diverse worker teams, implemented trauma-informed care, had community partnerships, and incorporated cultural interventions such as the use of *promotoras* (Alwan et al., 2021). Looking at the policy level, the same study found that although the public charge policy

imposed nationally restrictive access to programs, local policy played a huge role in mediating this barrier. As one participant in the study shared, “We’re really lucky that we’re in San Francisco and that there are policies regardless of your documentation status if you’re a resident, you do have access to a primary care doctor.” (Alwan et al., 2021). In the context of this study, living in a proclaimed sanctuary city and having unique resident health programs helped patients feel like they had more access to healthcare options. This helped off-put some of the restrictions of the public charge rule. Finally, many studies covered immigration policy misinformation as a barrier to the utilization of social welfare services. Often, Latinx participants wanted more information on the public charge and related policy. Rumors and false perceptions of the public charge were found to commonly circulate in many of the communities studied (Alwan et al., 2021; Chen et al., 2023; Galletly et al., 2023; Heckert, 2020; Payán et al., 2022; Pelto et al., 2020; Sommers et al., 2020; Wolwowitz-Lopez et al., 2023; Yu et al., 2020). This almost always led people to act in a more prohibitive way as to avoid legal penalizations or legal status consequences.

4. DISCUSSION

The introduction of the public charge assessment in the immigration process has instilled a lot of fears in the Latinx community. It has prompted many individuals to avoid healthcare (Choi et al., 2023; Heckert, 2020; S. S. Wang et al., 2022; Yu et al., 2020) and social safety net services (Bustamante et al., 2022; Chen et al., 2023; Payán et al., 2022; Pelto et al., 2020; Zallman et al., 2019) in order to avoid being assessed as a public charge. Although this policy is generally understood to create deterrence from programs, specific service utilization trends are not well documented. Given the important health promotion social safety net programs address,

it's important to contextualize the public charge rule in terms of health associations. This review aimed to summarize both the physical and mental health outcomes of the public charge rule for U.S.-residing Latinx children and adults. Of the 15 studies that were included in this review, two examined the family/household level, (Payán et al., 2022; Pelto et al., 2020) 12 examined adult populations, (Bustamante et al., 2022; Chen et al., 2023; Choi, 2023; Choi et al., 2023; Galletly et al., 2023; Heckert, 2020; Lee et al., 2021; Sommers et al., 2020; S. S. Wang et al., 2022; Wolwicz-Lopez et al., 2023; Yu et al., 2020) and only one study exclusively examined Latinx children (Zallman et al., 2019). Most used quantitative research methods (n=9, 60%) compared to qualitative methodology (n=6, 40%). Nearly all studies used a cross-sectional design (n=14, 93%). For analysis, articles were categorized based on three emerging study themes: Program Utilization and Access, Maternal Health, and Barriers and Facilitators. Overall, it was consistently observed that both health related services and social welfare programs were underutilized due to the public charge rule. Underutilization was consistently documented even among those who were qualified and entitled to social safety net programs or had access to them.

Underutilization of social welfare programs and health services

Although the public charge rule sought to deter only the use of cash benefit programs, consistent evidence across studies proved that this policy also deterred Latinx individuals from utilizing non-cash benefit programs. For example, the underutilization of health related or social welfare services were recorded in 10 studies (Chen et al., 2023; Choi et al., 2023; Galletly et al., 2023; Heckert, 2020; Payán et al., 2022; Pelto et al., 2020; Sommers et al., 2020; S. S. Wang et al., 2022; Wolwicz-Lopez et al., 2023; Yu et al., 2020). This observation was documented across a range of program scopes including nutrition assistance (Heckert, 2020; Payán et al., 2022), Medicaid (Bustamante et al., 2022; Zallman et al., 2019), perinatal care (Choi, 2023; Choi

et al., 2023; Heckert, 2020; S. S. Wang et al., 2022), and health care (Galletly et al., 2023; Lee et al., 2021; Yu et al., 2020). The most common explanation for underutilization was related to fear of either being deported while accessing services or fear of being assessed as a public charge jeopardizing one's legal status. Although the first fear seems unrelated to the public charge, researchers often found that this fear was heightened due to recent changes of the public charge rule. Evidence to support the underutilization of nutrition assistance programs existed for both children and adults. Pelto et al., found that in households (n=51) with 1 SNAP eligible child, nearly half had no children enrolled in the program (Pelto et al., 2020). Among adults, two studies also found patterns of the underutilization of nutrition assistance programs related to either SNAP, WIC, or local food assistance (Payán et al., 2022; Pelto et al., 2020). For Medicaid, data to support the avoidance of the program was only produced among adult populations. Bustamante et al. found that after the reversal of the 2019 public charge rule, between 107,956 and 192,905 Latinx California residing immigrants avoided enrolling in Medicaid (Bustamante et al., 2022). This avoidance was found regardless of the State's effort to expand coverage for undocumented individuals. Finally, perinatal care was an unexpected underutilization category of this review. Although these services have always remained a zone of exclusion from the public charge rule, Latinx mothers were found to have underutilized both pre- and post-natal care. Two studies observed a delay in prenatal Medicaid services (Choi, 2023; Choi et al., 2023), while a third observed the underutilization of both pre- and post-natal services (Heckert, 2020). These observations were made as a result of recent assessment expansions of the public charge rule.

The association between the public charge rule and the underutilization of programs and services could be amplifying negative health outcomes. Non-cash benefit programs like WIC, SNAP, Medicaid, and TANF are designed to close racial and socio-economic health disparities.

However, the public charge rule could be limiting the success of these programs by increasing food insecurity and health inequity through service deterrence. Previous studies have shown that when individuals face food insecurity they are more likely to experience depression, anxiety, suicide ideation, iron deficiency, asthma, lower cognitive performance, diabetes, hypertension, and have a higher BMI (Gundersen & Ziliak, 2015; Pan et al., 2012). Nationally, Latinx families already experience food insecurity at twice the rate of non-Hispanic households (Potochnick et al., 2019). By discouraging this already vulnerable population from using nutrition assistance programs, negative health outcomes among Latinx individuals could be increasing. Similarly, the underutilization of Medicaid and healthcare services linked to the public charge rule could be making Latinx individuals unhealthier and placing higher financial constraints on them. When individuals do not access health and medical services in a timely manner they delay diagnosis, worsen chronic conditions, and experience higher morbidity and mortality (Gertz et al., 2022). Further, the observed underutilization of Medicaid could be placing greater financial burdens on Latinx individuals who opt to use private insurance or out-of-pocket care. Financial strain could be making individuals more prone to falling into low socioeconomic status, a known causal factor that leads to negative health outcomes (Ansari et al., 2003).

Inadequate information on the public charge rule

Studies observed that the underutilization of services and programs were commonly driven by inadequate information on the public charge rule. Often times, participants expressed uncertainty over public charge guidelines or underutilized programs based off inaccurate understandings of the regulations. As participants in the qualitative study by Galletly et al., shared, some avoided seeking healthcare because they feared they could be deported if they received a costly or grave diagnosis (Galletly et al., 2023). This argument has never been used by

immigration officials in making public charge assessments. Misinformation was often found to originate from false rumors circulating in communities. In Pelto et al, having heard of a false rumor related to the public charge was associated with an 85% lower enrollment rate in either WIC or SNAP (OR 0.15, 95% CI 0.03, 0.94)(Pelto et al., 2020). In total, six studies (n=6, 40%) found an association with the underutilization of programs or services due to misinformation on the public charge rule (Choi et al., 2023; Galletly et al., 2023; Heckert, 2020; Payán et al., 2022; Pelto et al., 2020; Yu et al., 2020). In addition, in some cases huge knowledge gaps about the public charge were found. Two studies that tested knowledge about the rule found that on average, half of their participants demonstrated not knowing about the policy (Sommers et al., 2020; Wolwicz-Lopez et al., 2023). This knowledge gap is alarming given that under the public charge rule, lawfully permanent residents (LPR) become qualified for CHIP and Medicaid after a five-year waiting period (*Health Coverage for Lawfully Present Immigrants*, n.d.). Finally, improving access to information related to immigration policy was either an expressed need or suggested mediator across five studies (n=5, 33%)(Chen et al., 2023; Galletly et al., 2023; Lee et al., 2021; Sommers et al., 2020; Wolwicz-Lopez et al., 2023). Overall, participants who had misunderstandings or knowledge gaps of the public charge rule practice more conservative utilization of social welfare programs and health services, increasing their risk for adverse physical and mental health outcomes as well as their financial strains due to healthcare expenses.

Misunderstandings of the public charge rule are eroding the trust of Latinx individuals in government and institutions which could be exacerbating health disparities and efforts to address health inequalities. As was found across several studies, many Latinx people associated the utilization of healthcare services with legal ramifications. This fear in the healthcare system is

deep rooted and has been commonly understood to form due to barriers related to language, cultural differences, socioeconomic needs, a lack of diversity in the medical field, and discrimination (Escobedo et al., 2023). In fact, in a recent study 40% of Hispanics reported a lack of trust in the healthcare system (O'Brien, 2023). Distrust in the healthcare system is strongly associated with 40% higher likelihood of having poor health (OR: 1.4; CI 95%: 1.12-1.75) (Armstrong et al., 2006). The public charge rule is only adding another layer to this mistrust between Latinx individuals and U.S. medical services. People are now worried about being assessed as a public charge or being deported during appointments. While recent efforts in California have been made to expand Medicaid coverage and increase free primary care services for immigrants, people are still reluctant of utilizing these services (Bustamante et al., 2022; Yu et al., 2020). As one study documented even these efforts to address health disparities continue to fail due to the amplified mistrust the public charge rule has contributed to (Yu et al., 2020). This suggests that simply addressing misinformation or access to services related to the public charge may not be an adequate or sufficient solution. Because the rule contributes to a deep-rooted fear in the healthcare system, solutions to address this barrier have to address its various layers. Proposed solutions include making healthcare teams more diverse, providing more culturally competent care, and as participants in two studies expressed, providing immigration policy counseling in healthcare facilities (Lee et al., 2021; Yu et al., 2020).

Recommendations

The diversity of Latinx groups and geographic contexts provides substantial evidence to support the association between the public charge rule and the underutilization of programs and services. Most research focused on immigrant adult populations. However, many Latinx individuals live in “mixed-status” families; the underutilization behaviors of one immigrant

member can affect those with legal status within their family; especially if a child is documented and incapable of making program utilization decisions on their own. Future research should explore public charge rule associations among both documented and undocumented Latinx populations. **Table 1** introduces recommendations to address key gaps in the literature of health implications associated with the Public Charge Rule that were identified in this review.

Limitations

Although this review followed thorough guidelines, there are still some important limitations that surged and should be considered when interpreting results. During the screening process of studies, two independent reviewers voted to include articles based off detailed inclusion and exclusion criteria. While voting conflicts for the abstract and title screening were resolved by a third reviewer, this was not the case for conflicts from the full-text screening. Instead, the primary reviewer went back and resolved full-text voting conflicts. However, at this stage of article screening inclusion and exclusion criteria was more easily assessed and understood by the primary reviewer.

A second limitation of this review deals with the generalizability of results. Most of the data from articles was collected in regions that have had historically large Latinx populations. For example, a lot of studies focused on states like California, Texas, and New York. However, the Latinx population has immense diversity that represents a wide range of ethnic backgrounds and have a wider geographic context. Migration patterns within the Latinx populations have shifted a lot in recent years. States in the South and Midwest have experienced some of the fastest growth in Latino population rates (Zong, 2022). No studies included in this review specifically focused on these regions. However, the use of national data in the studies by Choi et al.,2023, Choi et al.,2023, Bustamante et al.,2022, helps off put this limitation.

Lastly, while this review aimed to summarize health outcomes for both documented and undocumented Latinx individuals, most data available pertained to undocumented immigrants. This limited evidence to support the impact of the public charge rule on legally residing Latinx groups.

Conclusion

The public charge rule aims to assess an individual's likelihood of becoming dependent on the use of cash-benefit programs. Evidence from this review showed that the public charge rule also impacts the use of many non-cash benefit programs that are not considered in the 'public charge' assessment. The underutilization of programs was observed for Medicaid (Bustamante et al., 2022; Zallman et al., 2019), nutrition assistance (Heckert, 2020; Payán et al., 2022), perinatal care (Choi, 2023; Choi et al., 2023; Heckert, 2020; S. S. Wang et al., 2022), and healthcare services (Galletly et al., 2023; Lee et al., 2021; Yu et al., 2020). Many of these studies found that fear of deportation stemming from the public charge was the main reason people avoided utilizing programs and services. Another common observation made was that inadequate information on the public charge rule heavily influenced the use of programs and services. Sources of inadequate information included misunderstandings of the rule, false rumors circulating, and knowledge gaps. Inadequate information, in turn, contributed to underutilization of social safety net programs. Evidence from this review introduced insightful information on how to support the Latinx population amid recent public charge policy changes. Across studies individuals expressed the need to receive immigration policy counseling inside healthcare settings. These kinds of interventions have the potential to improve the uptake of health programs and services among Latinx people. Lastly, several gaps in the literature were identified.

Future research is needed to continue to understand how the public charge rule affects children, non-immigrants Latinx populations, and the mental health outcomes of individuals.

5. TABLES AND FIGURES

Figure 1: PRISMA Flow Diagram

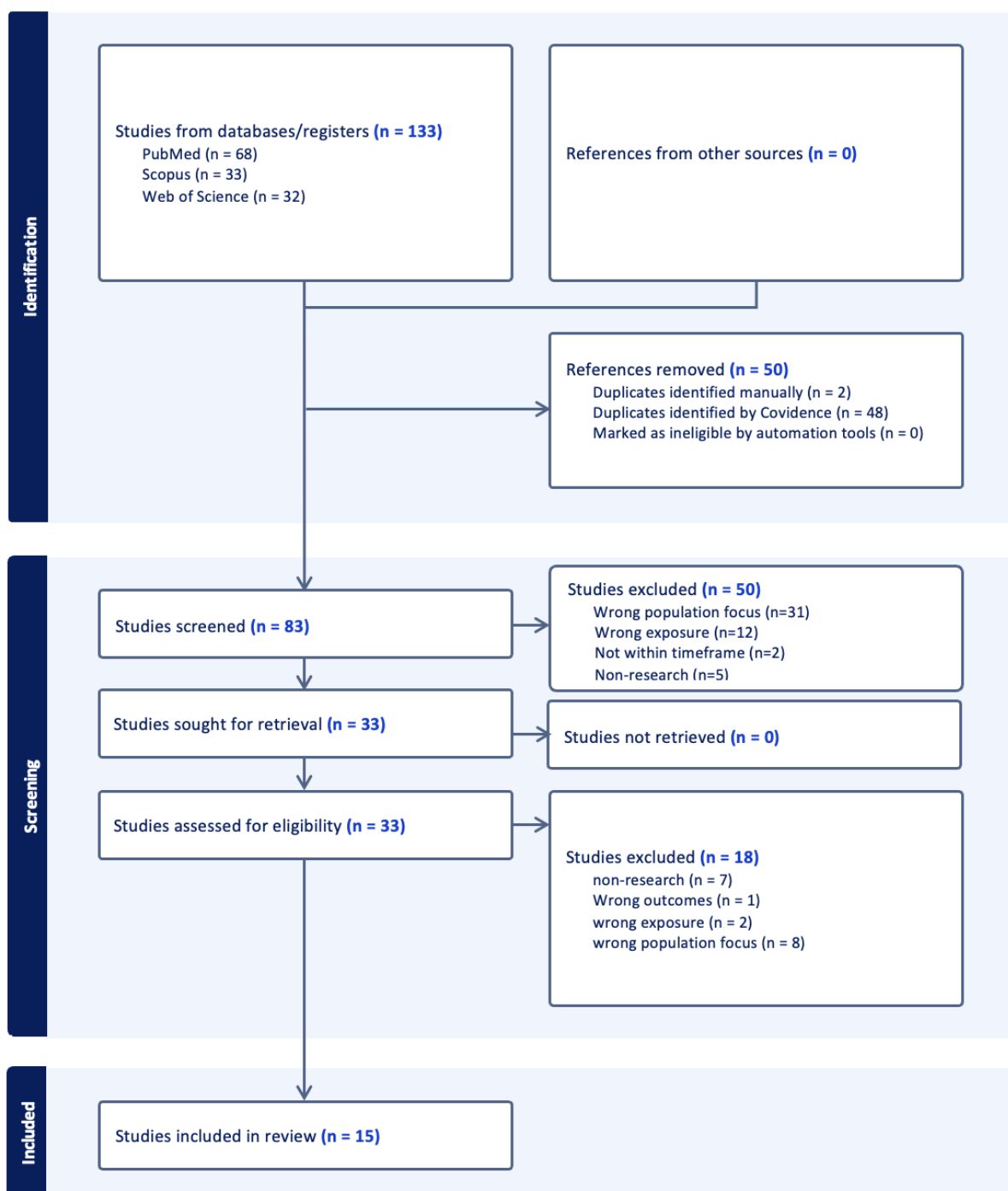


Table 1. Overview of Included Studies

Study ID	Population	Study Design	Exposure Measurement	Primary Outcomes	Study Topic	Methodology
Program Utilization and Access						
#6, Payán 2022	Latinx immigrants living in a rural or agricultural community. Average age=45 years, 65% female	Cross-Sectional	Five core security elements: availability, accessibility, acceptability, adequacy, agency	Food availability was impacted by the closure of schools and lost family income. Food distribution programs helped mitigate this food insecurity. However, barriers to accessing government assistance nutrition programs included: concerns about legal status, stigma and the public charge rule.	Nutrition /Food	Qual.
#53, Pelto 2020	Latin American-born immigrants and Latin American born pregnant, postpartum, and breast-feeding women in New York City. Median Age=35 years	Cross-Sectional	survey	Nearly half of households with 1 SNAP eligible child had no child enrolled. Reasons included repercussion fears (6 rumors measured) and logistical barriers. One of the rumors was associated with an 85% lower enrollment rate in SNAP/WIC	Nutrition /Food	Quant.
#18, Lee 2021	Latino parents 18 years or age or older who had a child registered in the pediatric ER	Cross-Sectional	self-administered survey and follow-up Interviews	2 themes on health care utilization: fear of detention and deportation in health care settings, and barriers to pediatric primary care 2 themes on how pediatric providers can best support Latinos: information and guidance on immigration policies, and reassurance and safety during visits	Health Care	Qual.

Study ID	Population	Study Design	Exposure Measurement	Primary Outcomes	Study Topic	Methodology
#20, Yu 2020	19 Key informant health care workers in Los Angeles County	Cross-Sectional	In-depth interviews	1) all sites reported readily available primary care appointments for undocumented immigrants, but services remained underutilized, (2) fears, misinformation and misperceptions about immigration policy (mostly public charge rule related) may reduce program enrollment and access, (3) frontline health care workers feels ill-equipped to address patients fears and misinformation	Health Care	Qual.
#30, Galletly 2023	adults (18+), non-citizen Latinx immigrants, living in the US for at least 6 months in one of four US Metropolitan areas: Chicago, IL, Los Angeles, CA, Phoenix, AZ, Raleigh, NC	Cross-Sectional	16 focus group discussions	1. participants attributed the limited resources available for affordable healthcare for many uninsured US Immigrants to the US gov.'s view of immigrants as burdens on public resources and its subsequent unwillingness to dedicate funds for their care 2. participants expressed concerns about negative immigration ramifications arising from diagnosis with health conditions perceived to be serious/expensive 3. participants noted some immigrants avoided using health programs and services because of immigration concerns 4. access to information on immigration laws and healthcare resources, and misinformation, influenced healthcare utilization	Health Care	Qual.

Study ID	Population	Study Design	Exposure Measurement	Primary Outcomes	Study Topic	Methodology
#7, Sommers 2020	citizens 19-64 years old in Texas with family incomes below 138% of the federal poverty level	Cross-Sectional	survey	58.9% of respondents had heard of the public charge rule. Most had heard about it through a news (50.2%) or social media source (28.7%). Only 0.8% of respondents heard about it through a physician's office or hospital. 11.6% of respondents reported knowing of friends or family who had avoided participating in Medicaid, SNAP, public housing, or visiting a physician or hospital due to immigration related concerns.	Perceptions of the Public Charge rule	Quant.
#4, Wolwoicz-Lopez 2023	Adults, aged 18-59, recruited at the Mexican consulate and living in the state of Oregon	Cross-Sectional	survey	48% reported awareness of the public charge, among those who knew of the rule 14.6% had disenrolled themselves or a family member for public health care programs and 12.1% were hesitant to seek care due to concerns about the public charge. Younger respondents had a lower adjusted probability of awareness of the public charge. Higher education was associated with a higher adjusted probability of awareness of the public charge rule.	Perceptions of the Public Charge rule + healthcare utilization	Quant.

Study ID	Population	Study Design	Exposure Measurement	Primary Outcomes	Study Topic	Methodology
#11, Zallman, 2019	children 17 or younger living with a non-citizen adult who participated in the 2015 Medical Expenditure Panel Survey	Cross-Sectional	Children living with at least 1 noncitizen adult who have a medical need. Additionally, the 2018 proposed public charge rule was used as exposure to changes of the rule.	8.3 million children who are enrolled in Medicaid and Children's Health Insurance Program or Supplemental Nutrition Assistance Program, of whom 5.5 million have specific medical need, are at risk of losing health and nutrition benefits. Between .8 and 1.9 million children with medical needs could be disenrolled from these benefits. Those at risk of losing benefits were more likely to be Hispanic (79.8%) and to have family incomes less than 250% of the federal poverty level (88.4%).	Medicaid SNAP CHIP	Quant.
#133, Bustamante 2022	2017-2020 California Health Interview Survey Data for non-green card holders ages 18-64 yrs. old who were either Latinx or Asian immigrants	Cross-Sectional	survey	Between 107,956 and 192,905 Latino Immigrants and 1294 and 4702 Asian immigrants in California likely avoid Medicaid enrollment due to fears about their immigration status.	Medicaid	Quant.
Maternal Health						
#5, Choi 2023	All live singletons born in hospitals across 47 states and D.C. between 2014-2019 from Latinx birthing	Cross-Sectional	changes to the public charge rule measured across three time periods: (1) 1 January 2014 to 31 December	After the publication of the proposed public charge rule in 2018, the odds of preterm birth among uninsured foreign-born Latinx birthing people increased by 6.2% compared to privately insured foreign born Latinx birthing people. Also, the odds of preterm births among	Maternal Health	Quant.

Study ID	Population	Study Design	Exposure Measurement	Primary Outcomes	Study Topic	Methodology
	people ages 15-44 years.		2016; (2) 1 January 2017 to 31 October 2018; and (3) 1 November 2018 to 31 December 2019	uninsured US-born Latinx birthing people did not significantly increase after the publication of the proposed rule compared with privately insured US-born Latinx birthing people. These findings suggest that the public charge rule proposed in 2018 may be associated with adverse birth outcomes among uninsured foreign-born Latinx birthing people in the US.		
#31, Choi et al., 2023	All immigrant birthing people 15 to 44 years old who delivered a singleton in a hospital located in the 47 states (not including CT,NJ,RI) and D.C. from Jan. 1st, 2024- Dec. 31st, 2019	Cross-Sectional	(1) the period prior to the leak, from Jan. 2014-Dec. 2016;(2) the period after the leak from Jan. 2017- Sept. 2018; and (3) post proposal, from Oct. 2018-Dec. 2019.	After the proposal of the public charge rule in 2018, the odds of initiating prenatal care in the first trimester decreased among uninsured immigrants by 12.5% compared to privately insured immigrants. The odds of second trimester initiation of prenatal care was also negatively associated with the leak of the draft executive order.	Maternal Health	Quant.
#56, Heckert 2020	Foreign-born or 2 nd generation pregnant and postnatal immigrant women living with a foreign-born family member or intimate partner.	Cross-Sectional	Sem Structured Interviews and Border Community and Immigration Stress Survey (BCISS)	Health care bureaucracy functions as a source of exclusion from prenatal programs even when women qualify for them. When they are accessed, they can be a source of stress as women worry how their usage will affect their legal status.	Maternal Health	Qual.

Study ID	Population	Study Design	Exposure Measurement	Primary Outcomes	Study Topic	Methodology
	Also, 8 health-oriented service providers.					
#41, Wang 2022	NYC low-income immigrant mothers who joined Medicaid during pregnancy from 2014-2019	Cross-Sectional	January 2014-Dec 2016 Pre-announcement, January 2017-2019 post announcement	There was an immediate statewide delay in prenatal Medicaid enrollment by immigrant mothers (OR 1.49). Using predicted citizenship, there were larger declines in birth weight (-56 grams) among infants of immigrant mothers.	Maternal Health	Quant.
Barriers and Facilitators						
#3, Chen 2023	Latinx and Asian immigrant adult who completed the California RIGHTS survey between September 2018-February 2019. Average age of respondents=49 years	Cross-Sectional	survey, 7 independent variables that measured distinct type of experience of law enforcement	Direct encounters with various forms of law enforcement, including being asked to show proof of citizenship by law enforcement, staying inside to avoid police or immigration officials, and having known someone who had been deported, were associated with immigrants' avoidance of public benefits due to public charge concerns. Latinx immigrants were more likely to be concerned about the public charge than Asians.	Access of public benefits and services	Quant.

Study ID	Population	Study Design	Exposure Measurement	Primary Outcomes	Study Topic	Methodology
#49, Alwan 2021	Health care providers or community-based organization leaders in the San Francisco Bay area.	Cross-Sectional	semi-structured in-depth interviews	1. Fear is an overarching barrier that transcended at multiple levels of the socio-ecological model 2. At the policy level (public charge), gov policies limit access to services but local measures counteract and mediate these limitations 3. Organizational level: patients identify unsafe clinical spaces as a barrier (i.e. border patrol or law enforcement in clinics creates a lack of safety) but culturally concordant sites, diverse provider teams, and other factors are described by participants as creating welcoming spaces 4. Community engagement and partnerships build trust and credibility. Overall, at every level there are both barriers and facilitators.	Health Services	Qual.

Table 2. Recommendations for Future Research on the Public Charge Rule

Research Recommendation	Description
Investigate mental health outcomes of the public charge rule	No research exists to understand how the public charge rule is associated with mental health problems or improvements among the Latinx population. This is an important area to explore given the known chronic stress Latinx individuals commonly endure as a result of punitive immigration policy in the U.S.
Assess the physical health outcomes of the public charge rule	More research is needed to understand how this policy affects the physical health profile of Latinx individuals. Additional studies are needed to examine the association of an individual's exposure to the public charge rule with their physical health status.
Explore the association between the utilization of housing assistance programs and the public charge rule	No studies exclusively measured the utilization of housing assistance programs. Given that underutilization of other non-cash benefit programs was discovered, exploring this area would contribute to a fuller picture of the unintentional consequences of this policy.
Analyze health outcomes of the public charge rule among children	Only one study exclusively examined the association of the public charge rule with a Latinx child population. More evidence is needed to help support these results. More research should focus on exploring the associations of the public charge rule with young and adolescent Latinx groups.
Investigate the health associations of the public charge rule among documented and undocumented individuals	More research is needed to understand the impact of the public charge rule on non-immigrant Latinx populations (i.e. citizens). Much of the literature from this review focused on immigrants. However, many Latinx people live in "mixed-status" families which could suggest a broader impact of this policy.

Assess if “chilling effects” ¹ from the Trump-era public charge rule are still relevant today (over 4 years since the former president introduced expansive guidelines)	The Trump administrations effort to expand public charge guidelines was a huge catalyst for underutilization trends described in this review. It’s important to understand how these changes from 2019 might or might not continue to influence health outcomes today.
Understand how public charge health associations differ by age groups across the Latinx population	Future research should aim to understand the impact of the public charge rule among children, adults, and even seniors. Current studies predominantly analyzed adults in age 18-56 years of age.

¹ “Chilling Effects” refers to the phenomenon where individuals refrain from exercising their legal rights due to a threat of legal sanctions. During the Trump presidency, his proposed public charge rule created “chilling effects” by scaring people from accessing programs and services.

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