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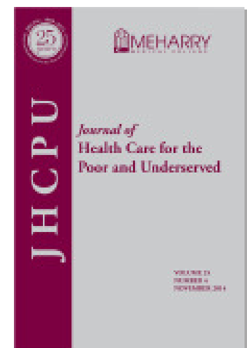

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Changes in Use of County Public Health Services Following Implementation of Alabama's Immigration Law

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Abstract: Several states have enacted legislation restricting undocumented immigrants' access to publicly funded health benefits not protected by federal law. Using electronic health records from 140,856 county health department visits, we assessed the monthly change in Latino patients' visits compared to non-Latinos 12 months before and after implementation of Alabama's immigration law. We used ICD–9 diagnosis codes to determine whether visits included services exempt under the law: immunizations, testing and treatment for sexually transmitted infections (STIs) and communicable diseases, and family planning. Differences between groups in the mean percent change were assessed with t-tests. Among children younger than 18 years, there were no significant differences by ethnicity. Visits among Latino adults decreased by 28% for communicable diseases, 25% for STIs, and 13% for family planning; this was significantly different from changes among non-Latino adults ($p < .05$). State-level legislation may reduce immigrants' access to protected benefits, which could adversely affect the broader public's health.

Key words: Immigrants; Hispanic/Latino; access to care; immigration policy.

Undocumented immigrants are ineligible for many federal public benefit programs, such as Medicaid, and individuals applying for these programs must prove lawful U.S. residence before receiving services. Exceptions are made for emergency medical care, some public health programs (e.g., immunizations, testing and treatment for communicable diseases) and other services necessary to protect life and safety (e.g., child and adult protective services).[1] Although some states and local communities fill gaps in coverage by subsidizing health care for the uninsured who do not qualify for federal programs (regardless of immigration status), other states have recently moved

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to restrict access to publicly funded benefits further.[2,3] For example, since 2011, Alabama, Georgia, Indiana, South Carolina and Utah have passed omnibus immigration laws requiring proof of lawful U.S. residence to receive state and local public benefits, other than those protected by federal law.[4]

Studies suggest that laws intended to limit undocumented immigrants' eligibility for publicly funded programs, such as California's Proposition 187 and the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (also known as welfare reform), lead to decreases in immigrants' use of a range of public health services and benefits.[5–9] However, it is not well-known whether these laws are also associated with declines in immigrants' use of health services specifically exempted from the laws' legal residency documentation requirements. Findings from a qualitative study of Latina immigrant mothers in Alabama suggest that women were largely unaware of health service exemptions in that state's immigration law, and many believed they were ineligible for care at public clinics, resulting in some not seeking care even when eligible.[10] Given the potential adverse effects that failure to seek care can have on an individual's and the public's health,[5,11] it is important to understand whether changes in immigrants' health service use after implementation of these laws also extends to protected benefits.

The purpose of this study is to explore changes in Latino immigrants' use of publicly funded health services in Jefferson County, Alabama following the September 2011 implementation of the state's immigration law, the Alabama Taxpayer and Citizen Protection Act (House Bill 56). We focus on Latinos because they account for the largest percentage of the foreign-born population in Alabama, and many of these immigrants are not citizens and may be undocumented.[12,13] Jefferson County hosted the state's largest Latino population in 2010.[14] The Jefferson County health department's six community clinics serve as the primary safety net for low-income, uninsured, and underinsured county residents. These clinics provide services which are both exempt (e.g., immunizations) and not exempt (e.g., primary medical care) from Alabama's immigration law's documentation requirements. Therefore, our analysis provides important insight into the impact of the law on Latinos' use of a range of health services.

Methods

We obtained electronic health record (EHR) data for 140,856 patient visits that occurred between September 1, 2010 and August 30, 2012, which corresponds to one year before and one year after implementation of Alabama's immigration law. The EHR data included information on patient age, sex, race/ethnicity, ICD–9 diagnosis codes for each service provided during the visit, insurance or payer status for each service (Medicaid, private insurance, other), and date of the visit.

Beginning in September 2011, patients presenting for care at county health department clinics were asked if they were citizens or legal residents or had insurance (e.g., Medicaid) indicating their legal status had already been determined before they received any services; those unable or unwilling to sign a declaration stating that they were a citizen or lawfully present in the U.S. were asked about their reasons for seeking care so clinic staff could determine if the service was exempt. Consistent with the law, we considered a visit to be exempt if there was an ICD–9 code for immunizations or

testing or treatment for communicable diseases (e.g., sexually transmitted infections [STIs], tuberculosis). Although state and federal law exempt testing and treatment for communicable disease symptoms—even if such symptoms are later found not to be the result of a diagnosed communicable disease—we included any (primary or secondary) ICD–9 diagnosis code for communicable diseases because we did not have information on presenting symptoms. Since the health department receives Title X funding to provide family planning, and verification of immigration status is not required for this federal program, we also considered visits exempt if there was an ICD–9 diagnosis code for contraceptive services, Pap smears, and gynecologic exams. If none of these services were provided during the visit, it was classified as non-exempt. Visits that included at least one exempt service, in addition to a non-exempt service (20.3% of visits), were classified as exempt.

We computed the frequency of visit-level characteristics for the observation period overall and by ethnicity. We compared all non-Latino patients with Latinos since we did not expect non-Hispanic Whites and African Americans to be affected by the law; non-Hispanic Asians, who accounted for 1% of patient visits, were also included in the comparison group because they are likely to be legal residents.[15] Next, we computed the percent change in the number of non-Latino and Latino visits that occurred each month following implementation of the law (September 2011–August 2012) relative to the same month the previous year. We computed the percent change for all visits and by specific services received, and used independent sample t-tests to determine whether the mean monthly percent change in visits after the law was implemented was significantly different for Latinos compared to non-Latinos. Based on Alabama immigrant women's narratives of health service use following passage of the law,[10] we expected to find larger changes in visits among adults compared to children, since many Latino children were U.S. citizens and eligible for services. Therefore, we dichotomized patient's age as 18 years or older or less than 18 years and conducted the analyses for percent change in service use for non-Latino and Latino adults and children, separately. We did not assess changes in STI or family planning visits for children since there were few visits that included these services.

This study was approved by the institutional review boards at the first author's university and by the Jefferson County Department of Health and the Alabama Department of Public Health.

Results

The majority of clinic visits during the study period were among non-Latinos, females, patients younger than 18 years old, paid by public insurance, and included at least one exempt service (Table 1). Just over half (53.7%) of Latino visits included at least one exempt service, while 65.6% of non-Latino visits included these services. Additionally, visits that included exempt services were more common among Latino (71.8%) and non-Latino adults (75.2%) than among Latino and non-Latino children (49.9% and 55.8%, respectively) (not shown).

In the first four months following implementation of the law (September-December 2011), total monthly visits, as a percentage relative to the same months the previous

Table 1.

CHARACTERISTICS OF COUNTY HEALTH DEPARTMENT VISITS, SEPTEMBER 1, 2010–AUGUST 30, 2012

	Total N=140,856 (%)	Latino visits n=20,524 (%)	Non-Latino visits n=120,332 (%)
Female	87,399 (62.1)	11,382 (55.5)	76,017 (63.2)
Age < 18 years	76,386 (54.2)	16,922 (82.5)	59,464 (49.4)
Paid by public insurance	79,262 (56.3)	14,838 (72.3)	64,424 (53.5)
Included exempt services	89,996 (63.9)	11,026 (53.7)	78,970 (65.6)

year, were lower overall for both Latino and non-Latino children, and then increased slightly beginning in January 2012 (Figure 1a). Over the entire one-year period after the law went into effect (September 2011–August 2012), the number of visits each month declined by an average of 8% relative to the previous year among Latino children and 7% among non-Latino children (Figure 2). There were no significant differences between Latino and non-Latino children in the mean percent change in visits for all service types.

Among Latino adults, total monthly visits were at least 20% lower relative to the same month in the previous year for most of the period between September 2011 and August 2012, with the largest decreases observed in the first six months after the law was implemented (Figure 1b). For all service types, the number of visits each month decreased relative to the previous year (Figure 2). Although there also was some monthly variation in visits for any service among non-Latino adults, overall there was a 2% increase in visits by this group in the 12 months after the law was implemented compared to an overall decrease of 30% among Latino adults. Monthly visits for communicable diseases, STIs and immunizations among non-Latino adults decreased in this period, while visits for family planning and non-exempt services increased. For total visits and four of the five specific visit types, the mean monthly percent change differed significantly for Latino adults *vs.* non-Latino adults ($p<.01$). There was a 48% decrease in immunizations for Latino adults and a 28% decrease for non-Latinos ($p=.054$).

Discussion

Our exploratory study indicates that Latinos were less likely to use county public health services in the first year after implementation of Alabama's immigration law, adding further evidence that laws restricting immigrants' eligibility for services reduces health care utilization.[5–7,16,17] The observed declines primarily occurred among Latino adults and, unlike in a recent study of health service use following Arizona's immigration law,[18] there were no significant changes among Latino children. Additionally, we found marked decreases in Latino adult visits that included services exempt from the law's legal residency requirements, particularly STIs, communicable diseases, and family

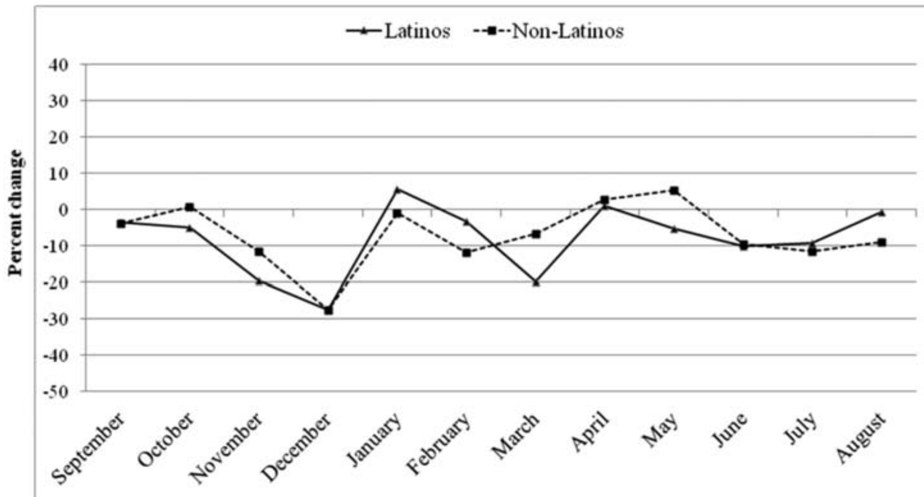

Figure 1a. Children

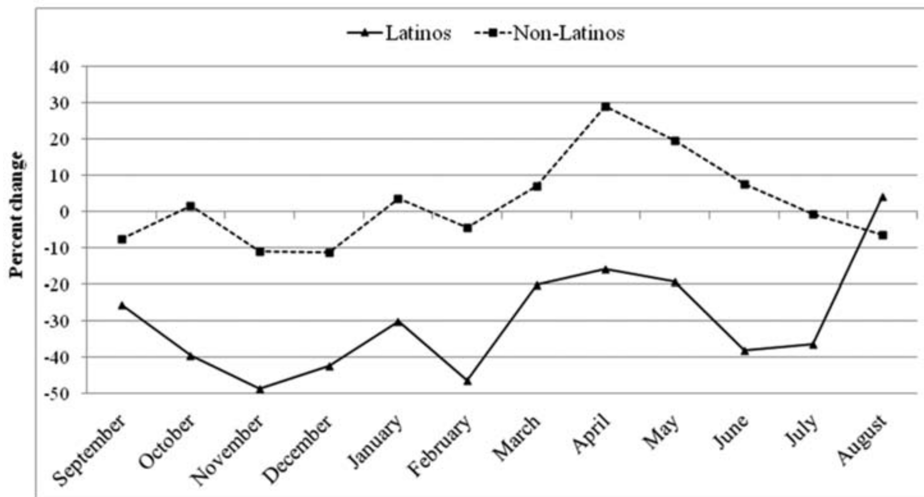

Figure 1b. Adults

Figure 1. Percent change (Percent change in number of visits relative to the same month in the previous year) in monthly county health department visits for all services following implementation of Alabama's immigration law, by ethnicity.

planning. These results suggest that state-level immigration laws may have unintended consequences by reducing Latinos' use of services for which they are eligible.

There are several possible reasons for the observed declines in Latino adult visits. It may be that Latino immigrants who relied on county health services left the community after passage of the law due to fear of repercussions (including detention and deportation). Although stories of Latinos leaving the state were reported by news media and in a research study conducted with Latina immigrants after the law was

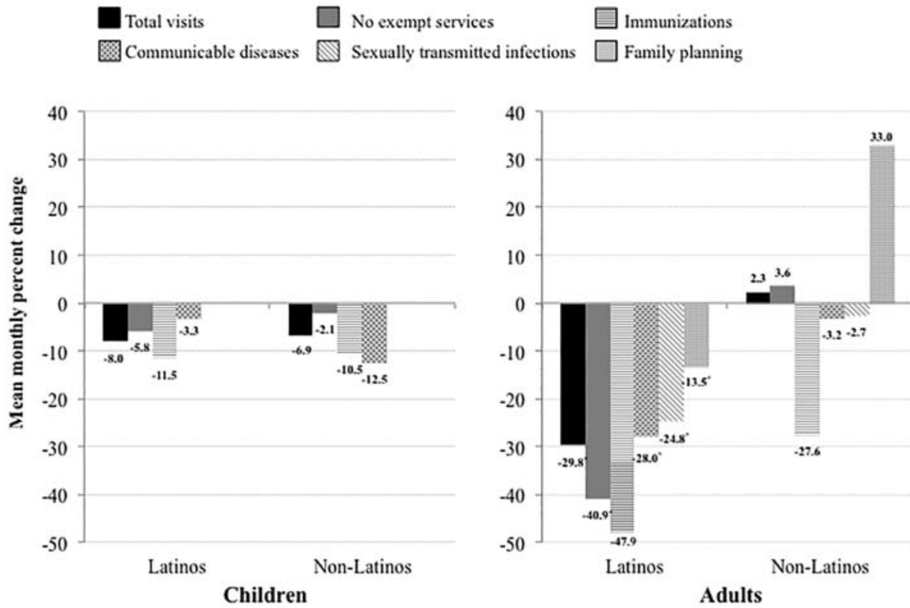

Figure 2. Mean monthly percent change in county health department visits following implementation of Alabama's immigration law, by ethnicity and type of service.
*p<0.01, Latinos compared to non-Latinos

passed,[10,19,20] it is difficult to determine the extent of the decline in service use that can be attributed to outmigration.

The decreases in Latino adult visits may also be due to challenges at the clinics during the transition phase of the implementation of the law, such as perceived ambiguities among clinic staff regarding new protocols for determining citizenship or lawful residence and eligibility for services. This may have contributed to previous findings where Latina mothers in Alabama reported negative experiences accessing care at clinics located within the county.[10] However, it is unknown if and how many patients were unsuccessful in their attempts to seek care for exempt services.

The relatively small change in the number of visits among Latino children compared with the change for adults points to another possible explanation. Specifically, it may be that Latino families remained in the area and continued to bring their children for care, but the adults did not seek care for themselves. Without accurate information about the law, Latino parents (who are more likely to be non-citizens[21]) may believe they are no longer eligible for care at public clinics; they also may fear driving for reasons they do not view as essential in order to reduce their risk of being stopped by police.[10,22] Additionally, it is possible that Latino immigrants turned to the private sector for care; however, based on interviews with Latina mothers reported elsewhere,[10] it seems unlikely that this occurred widely since immigrants experienced greater economic insecurity following passage of the law which limited their ability to pay the higher cost of private care.

Even though we do not know what percentage of Latino health department clients

who remained in the area did not seek care or were turned away, any failure to obtain these exempt services may adversely affect public health. For example, some Latinos may not be getting diagnosed for communicable diseases or remain untreated for these conditions. This may expose others—both within and outside the Latino community—to the risk of infection. Additionally, declines in family planning visits suggests that some Latinas may have had inconsistent contraceptive coverage or discontinued their method after the law, putting them at risk of unintended pregnancy. Fewer visits may also mean that they are not getting screened for cervical cancer, which could increase the burden of disease in a population that is less likely to get routine screening and has higher rates of cancer incidence and mortality.[23] Efforts to increases Latino immigrants' and clinic staff's awareness of the law's health service exemptions may help reduce these unintended consequences.

Although the decline in non-exempt services among Latino adults is not surprising given the specific provisions of the law, it is also a concern since undocumented Latino immigrants have lower rates of preventive and primary health service use than Latino citizens.[24–26] By prohibiting undocumented immigrants from receiving affordable services because they are subsidized by public funds, these laws may, in fact, increase public expenditures.[3] Lack of screening and failure to treat complications of chronic conditions may exacerbate immigrants' health problems and result in greater use of emergency services, for which they are still eligible.[27] Since state and local revenue cover a large percentage of these costs, policymakers may have an incentive to amend laws that restrict immigrants' access to comprehensive care.

This study has several limitations, which highlight the challenges in evaluating the impact of these kinds of policies on health care use. For example, we were unable to identify undocumented immigrants in the EHR data and, therefore, do not know the extent to which the declines we observed occurred in this group alone. Proxy indicators, such as having Medicaid, lacked sensitivity in adult patients since those without Medicaid may not have qualified for the program based on income rather than immigration status. As noted above, the EHR data did not include information on patients' symptoms when presenting for care. Therefore, our residual category of non-exempt services also may have included some exempt conditions, and the impact of the law on Latino patients' use of county health department services is likely an underestimate.

Finally, we were unable to use more rigorous study designs since only those who were successful in receiving care were observed in the EHR data. Given the difficulties in tracking the Latino population in the area due to previous periods of rapid growth and frequent shifts in residence,[28] it would be difficult to measure change through other existing data sources. Our design also makes it difficult to rule out the possibility that the decline in visits was due to some other factor besides the immigration law; for example, the decreases we observed in immunization visits for both Latino and non-Latino adults may be due to administrative changes affecting the adult immunization program rather than the immigration law. However, the significant decreases in other services among Latino adults compared with non-Latinos suggest these declines are likely due to the law, and they correspond with qualitative findings that Latina immigrants were reluctant to seek care after the law was passed.[10]

Despite these challenges and limitations, our findings add new information that

exempting services from legal residency requirements may not be sufficient to preserve health care access in a context of broad sweeping reform. There has been little political support for providing undocumented immigrants with publicly funded health care benefits beyond those already permitted, and public support for expanded access also appears limited.[29] However, as the United States comes to an important juncture in health and immigration reform, it is important to consider lessons that can be learned from the impact of state-level initiatives on access to services which benefit the broader public's health.

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