Published in final edited form as:

Am J Prev Med. 2017 June ; 52(6): 805–809. doi:10.1016/j.amepre.2016.12.020.

Lack of Lipid Screening Disparities in Obese Latino Adults at Health Centers

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Abstract

Introduction—In cross-sectional survey studies, obese Latinos are less likely to be screened for elevated serum cholesterol, despite their higher risk for hyperlipidemia and coronary artery disease. This study evaluated insurance and racial/ethnic disparities in lipid screening receipt among obese Latino and non-Hispanic white patients in Oregon community health centers (CHCs) over 5 years, using electronic health record data.

Methods—This retrospective cohort study evaluated obese (BMI ≥ 30 kg/m²), low-income, adult patients (aged 21–79 years) with at least one visit at an Oregon CHC during 2009–2013 (N=11,095). Odds of lipid screening in the study period (clinical data collected in 2009–2013) were measured, adjusting for age, sex, primary clinic, and comorbidities, stratified by utilization in the study period. Analysis was done in 2016.

Results—Sixty percent of the study population received at least one lipid screening in 2009–2013. There were no significant differences in screening between insured Latinos and insured non-Hispanic whites, except those with more than five visits over 5 years (OR=0.75, 95% CI=0.60, 0.94). Uninsured Latinos had higher odds of screening versus insured non-Hispanic whites among the low visit strata (OR=1.65, 95% CI=1.18, 2.30). Among Latinos, Spanish preference resulted in higher screening odds versus English preference in the two to five visit stratum (OR=1.63, 95% CI=1.12, 2.35).

Conclusions—Obese, low-income patients at CHCs underutilize cholesterol screening. However, screening differences by race/ethnicity and preferred language are minimal. Further research is necessary to understand how care delivered by CHCs may mitigate previously reported disparities in lipid screening.

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INTRODUCTION

Elevated serum cholesterol (or “lipids”) is a known, modifiable risk factor for coronary artery disease.^{1,2} Latino individuals are less likely to be screened for high cholesterol than non-Hispanic whites,³ even though they are at higher risk for the condition.^{4–6} Obesity, a known risk factor for high cholesterol,^{7,8} is more prevalent in the Latino population,^{6,9} but obese Latinos are less likely to be counseled on weight reduction,^{10,11} screened for elevated lipids,¹¹ and diagnosed with a lipid disorder.¹² Research in this area has largely utilized cross-sectional methods that are unable to track services over time, or has relied on surveys that are subject to recall and other biases,^{13–17} which have produced mixed findings.¹⁸ The purpose of this study was to examine the impact of race/ethnicity, insurance, and preferred language on lipid screening among at-risk Latinos seeking care at community health centers (CHCs) by using an objective electronic health record data set.

METHODS

This retrospective observational cohort study examined insurance and race/ethnic disparities in receipt of lipid screening among obese CHC adult patients during 2009–2013.

Data Sample

Electronic health record data were obtained from OCHIN, a 501(c)(3) network that centrally hosts an Epicare platform to >300 CHCs nationwide covering >2 million patients.^{19–23} Included patients had accessed one of the 23 OCHIN-affiliated CHCs in Oregon at least once²⁴ during 2009–2013 (N=11,095) and were aged 21–79 years, low-income (<100% federal poverty level), and obese (BMI ≥30 kg/m²) at every visit.

Measures

Variables included race/ethnicity (Hispanic/Latino versus non-Hispanic white), preferred language (Spanish, English, other), insurance status (dichotomized as insured with Medicare, Medicaid, or private insurance at any point in the study period versus no insurance) and CHC utilization (categorized as one, two to five, more than five visits over 5 years). The terms “Hispanic/Latino” and “Latino” were used interchangeably, acknowledging the limitations of these terms.

Outcome was receipt of a lipid test in the study period. Although “due for screening” status was not known (i.e., when their last lipid test occurred), the U.S. Preventive Service Task Force recommends testing at 5-year intervals or less as a “reasonable” frequency in this population,⁸ so the 5-year study period likely captures a high proportion of those “due” for this service, especially considering their known risk factor of obesity.

Covariates included age at study initiation, sex, home clinic (CHC the patient visited most often), diagnosis of diabetes, hypertension, and heart disease.

Statistical Analysis

Joint race/ethnicity and insurance disparities in receipt of lipid screening were examined by comparing the odds of lipid testing between four cohorts: insured Latinos, uninsured

Latinos, insured non-Hispanic whites, and uninsured non-Hispanic whites. Stratified analyses by CHC utilization (one, two to five, more than five visits) were performed to account for differences in disparities by CHC utilization. Comprehensive morbidity data were unavailable; thus, visit utilization was used as a proxy.²⁵ Multivariable logistic regression was used to estimate AORs, with home clinic introduced as a fixed effect to account for clustering of patients within clinics and to capture any clinic-level differences in outcomes across the study period. Secondary analyses examined preferred language on the receipt of lipid screening among obese Latinos only ($n=2,696$) through multivariable logistic regression with receipt of lipid screening as the outcome and preferred language as the main independent variable. For this analysis, the same CHC utilization stratification and covariate adjustment was implemented as in the first analysis. Statistical tests were two-sided with significance at $p<0.05$. Statistical analyses were performed in 2016 using Stata, version 12.1. This study was approved by the IRB of Oregon Health & Science University.

RESULTS

Study patient characteristics by cohort in Table 1 indicate white patients were generally older than Latino patients, and a higher proportion of Latino patients were privately insured. Insured patients were most likely to have more than five visits in 2009–2013, whereas the uninsured more likely to have two to five. Nearly 40% of patients ($n=4,381$) did not have a lipid panel.

Figure 1 displays adjusted relative odds of receiving a lipid screen by race-ethnicity/insurance groups, stratified by visit frequency. Among patients with more than five visits, insured Latinos had lower adjusted odds of receiving lipid testing (OR=0.75, 95% CI=0.60, 0.94) versus insured non-Hispanic whites. Uninsured, non-Hispanic whites exhibited lower odds of receiving lipid screening (OR=0.55, 95% CI=0.43, 0.72) compared with insured non-Hispanic whites. Among patients with two to five visits, uninsured Latinos had higher odds of receiving lipid screening than insured whites (OR=1.26, 95% CI=1.02, 1.56). A similar, but more pronounced, effect was seen for uninsured Latino patients with one visit (OR=1.65, 95% CI=1.18, 2.30). Conversely, uninsured non-Hispanic whites with one visit had lower odds of lipid screening versus insured whites (OR=0.72, 95% CI=0.54, 0.95).

Figure 2 reports language disparities among Latinos stratified by visit frequency. Among Latinos with two to five visits, those who preferred language was Spanish had higher odds of lipid testing compared with English-preferring Latinos (OR=1.63, 95% CI=1.12, 2.35). There was no apparent language difference among Latinos in the other visit frequency strata.

These race-ethnicity/insurance findings did not differ when patients were stratified by age (rather than adjusting for age) or when stratified by diagnosed lipid disorder (data not shown).

DISCUSSION

Findings were notable for a lack of widespread disparities by race/ethnicity and language in a high-risk obese population. Generally, insured Latinos had similar odds of screening as insured non-Hispanic whites, with the exception of those with the highest visit frequency.

This is counterintuitive, as one might expect insured Latinos with the most frequent access to have the lowest odds of disparities. It's possible unmeasured confounding is affecting screening in this group.

Uninsured Latinos generally did not differ from the reference group in most analyses. Uninsured Latinos in Oregon include undocumented immigrants,^{26–28} a group with barriers to health care.^{29–35} These findings suggest that CHCs provide care in a manner that mitigates prevention disparities, a finding that has been demonstrated in studies³⁶ and with other services.^{37,38} CHC care might mitigate these disparities with workflows, staff, and services geared toward vulnerable patients. These hypotheses require further research. Also, it is possible that the population accessing CHCs is different than populations in other disparity studies; understanding the differences in low-income and minority subpopulations (those who can access care and those who cannot) also requires additional investigation. The finding that Spanish-speaking individuals have higher odds of lipid screening may reflect the provision of adequate language concordant care in CHCs,³⁹ but certainly warrants further research.

Of note, almost 40% of obese CHC patients had not received lipid screening over the 5-year study period. National data show that 24% of adult patients nationally have never been screened.⁴⁰ The *Healthy People 2020* goal is that 82% of adults should have a cholesterol screening within the past 5 years.⁴¹ Though lifetime screening in the general population and screening of low-income CHC patients are not directly comparable,⁴² this overall rate suggests room for improvement.

Limitations

The analysis was performed in a single state and networked electronic health record, which limits generalizability to those outside the network. The system may have not included lipid tests done outside the network, although CHCs are the least expensive locations for low-income patients to have this testing. Additional comorbidities that could have confounded the findings could not be measured, although visit frequency was utilized as a proxy for medical complexity,²⁵ and previous research in the network has demonstrated that patients do not leave the clinics for services.⁴²

CONCLUSIONS

Among obese patients accessing Oregon CHCs, approximately 60% have been screened for elevated serum lipids. Widespread differences were not found in screening by race/ethnicity, preferred language, or insurance status. Study findings suggest that care delivered at CHCs is successful at mitigating some preventive care disparities, especially in cardiovascular disease prevention.

Acknowledgments

The authors would like to acknowledge the clinicians and staff of the OCHIN Practice Based-Research Network, whose daily clinical care and oversight made this analysis possible. This work was funded by Grant No. K08 HS21522-03 from the Agency for Healthcare Research and Quality and Grant No. 1K23DA037453-01A1 from the National Institute on Drug Abuse.

No financial disclosures were reported by the authors of this paper.

References

1. Helfand, M., Carson, S. Screening for Lipid Disorders in Adults: Selective Update of 2001 U.S. Preventive Services Task Force Review. Rockville, MD: Agency for Healthcare Research and Quality; 2008. Report No.: 08-05114-EF-1
2. Marino M, Li Y, Pencina MJ, D'Agostino RB Sr, Berkman LF, Buxton OM. Quantifying cardiometabolic risk using modifiable non-self-reported risk factors. *Am J Prev Med.* 2014; 47(2): 131–140. <https://doi.org/10.1016/j.amepre.2014.03.006>. [PubMed: 24951039]
3. CDC. Prevalence of cholesterol screening and high blood cholesterol among adults--United States, 2005, 2007, and 2009. *MMWR Morb Mortal Wkly Rep.* 2012; 61(35):697–702. [PubMed: 22951451]
4. Daviglus ML, Talavera GA, Aviles-Santa ML, et al. Prevalence of major cardiovascular risk factors and cardiovascular diseases among Hispanic/Latino individuals of diverse backgrounds in the United States. *JAMA.* 2012; 308(17):1775–1784. <https://doi.org/10.1001/jama.2012.14517>. [PubMed: 23117778]
5. Derby CA, FitzGerald G, Lasser NL, Pasternak RC. Application of national screening criteria for blood pressure and cholesterol to perimenopausal women: prevalence of hypertension and hypercholesterolemia in the Study of Women's Health Across the Nation. *Prev Cardiol.* 2006; 9(3): 150–159. <https://doi.org/10.1111/j.1520-037X.2006.04757.x>. [PubMed: 16849878]
6. Zhang H, Rodriguez-Monguio R. Racial disparities in the risk of developing obesity-related diseases: a cross-sectional study. *Ethn Dis.* 2012; 22(3):308–316. [PubMed: 22870574]
7. Diaz VA, Mainous AG 3rd, Koopman RJ, Geesey ME. Undiagnosed obesity: implications for undiagnosed hypertension, diabetes, and hypercholesterolemia. *Fam Med.* 2004; 36(9):639–644. [PubMed: 15467941]
8. United States Preventive Services Task Force. [Accessed June 5, 2016] Final Recommendation Statement Lipid Disorders in Adults (Cholesterol, Dyslipidemia): Screening. 2008. www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/lipid-disorders-in-adults-cholesterol-dyslipidemia-screening
9. Daviglus ML, Pirzada A, Talavera GA. Cardiovascular disease risk factors in the Hispanic/Latino population: lessons from the Hispanic Community Health Study/Study of Latinos (HCHS/SOL). *Prog Cardiovasc Dis.* 2014; 57(3):230–236. <https://doi.org/10.1016/j.pcad.2014.07.006>. [PubMed: 25242694]
10. Powell-Wiley TM, Ayers CR, Banks-Richard K, et al. Disparities in counseling for lifestyle modification among obese adults: insights from the Dallas Heart Study. *Obesity (Silver Spring).* 2012; 20(4):849–855. <https://doi.org/10.1038/oby.2011.242>. [PubMed: 21818156]
11. Willson MN, Neumiller JJ, Sclar DA, Robison LM, Skaer TL. Ethnicity/race, use of pharmacotherapy, scope of physician-ordered cholesterol screening, and provision of diet/nutrition or exercise counseling during U.S. office-based visits by patients with hyperlipidemia. *Am J Cardiovasc Drugs.* 2010; 10(2):105–108. <https://doi.org/10.2165/11532820-000000000-00000>. [PubMed: 20334447]
12. Burroughs VJ, Nonas C, Sweeney CT, et al. Self-reported comorbidities among self-described overweight African-American and Hispanic adults in the United States: results of a national survey. *Obesity (Silver Spring).* 2008; 16(6):1400–1406. <https://doi.org/10.1038/oby.2008.61>. [PubMed: 18369344]
13. Clark MA, Rogers ML, Allen SM. Conducting telephone interviews with community-dwelling older adults in a state Medicaid program: differences by ethnicity and language preference. *J Health Care Poor Underserved.* 2010; 21(4):1304–1317. [PubMed: 21099081]
14. McKinnon ME, Vickers MR, Ruddock VM, Townsend J, Meade TW. Community studies of the health service implications of low back pain. *Spine (Phila Pa 1976).* 1997; 22(18):2161–2166. <https://doi.org/10.1097/00007632-199709150-00014>. [PubMed: 9322327]
15. Mannisto S, Pietinen P, Virtanen M, Kataja V, Uusitupa M. Diet and the risk of breast cancer in a case-control study: does the threat of disease have an influence on recall bias? *J Clin Epidemiol.* 1999; 52(5):429–439. [https://doi.org/10.1016/S0895-4356\(99\)00010-4](https://doi.org/10.1016/S0895-4356(99)00010-4). [PubMed: 10360338]

16. Solberg LI, Beth Plane M, Brown RL, Underbakke G, McBride PE. Nonresponse bias: does it affect measurement of clinician behavior? *Med Care*. 2002; 40(4):347–352. <https://doi.org/10.1097/00005650-200204000-00010>. [PubMed: 12021690]
17. Chang ET, Smedby KE, Hjalgrim H, Glimelius B, Adami HO. Reliability of self-reported family history of cancer in a large case-control study of lymphoma. *J Natl Cancer Inst*. 2006; 98(1):61–68. <https://doi.org/10.1093/jnci/djj005>. [PubMed: 16391372]
18. Fiscella K, Holt K. Impact of primary care patient visits on racial and ethnic disparities in preventive care in the United States. *J Am Board Fam Med*. 2007; 20(6):587–597. <https://doi.org/10.3122/jabfm.2007.06.070053>. [PubMed: 17954867]
19. Devoe JE, Sears A. The OCHIN community information network: bringing together community health centers, information technology, and data to support a patient-centered medical village. *J Am Board Fam Med*. 2013; 26(3):271–278. <https://doi.org/10.3122/jabfm.2013.03.120234>. [PubMed: 23657695]
20. Devoe JE, Gold R, McIntire P, Puro J, Chauvie S, Gallia CA. Electronic health records vs Medicaid claims: completeness of diabetes preventive care data in community health centers. *Ann Fam Med*. 2011; 9(4):351–358. <https://doi.org/10.1370/afm.1279>. [PubMed: 21747107]
21. Devoe JE, Gold R, Spofford M, et al. Developing a network of community health centers with a common electronic health record: description of the Safety Net West Practice-based Research Network (SNW-PBRN). *J Am Board Fam Med*. 2011; 24(5):597–604. <https://doi.org/10.3122/jabfm.2011.05.110052>. [PubMed: 21900444]
22. Heintzman J, Bailey SR, Hoopes MJ, et al. Agreement of Medicaid claims and electronic health records for assessing preventive care quality among adults. *J Am Med Inform Assoc*. 2014; 21(4):720–724. <https://doi.org/10.1136/amiajnl-2013-002333>. [PubMed: 24508767]
23. OCHIN. [Accessed June 6, 2016] OCHIN's Fiscal Year 2013 Annual Report 2014. <https://ochin.org/media/2013-Annual-Report-140424.pdf>
24. Calman NS, Hauser D, Chokshi DA. “Lost to follow-up”: the public health goals of accountable care. *Arch Intern Med*. 2012; 172(7):584–586. <https://doi.org/10.1001/archinternmed.2012.219>. [PubMed: 22493465]
25. Foster A, Jordan K, Croft P. Is frequent attendance in primary care disease-specific? *Fam Pract*. 2006; 23(4):444–452. <https://doi.org/10.1093/fampra/cml019>. [PubMed: 16675502]
26. Heintzman, J., Bailey, SR., DeVoe, J., et al. In Low-Income Latino Patients, Post-Affordable Care Act Insurance Disparities May Be Reduced Even More than Broader National Estimates: Evidence from Oregon. *J Racial Ethn Health Disparities*. In press. Online April 22, 2016. <https://doi.org/10.1007/s40615-016-0232-1>
27. U.S. DHHS. [Accessed June 10, 2016] Summary of Current Immigrant Eligibility Restriction under Current Law. 2009. <http://aspe.hhs.gov/hsp/immigration/restrictions-sum.shtml>
28. Zimmerman, C. [Accessed November 21, 2016] Undocumented Immigrants, Left Out of Health Reform, Likely to Continue to Grow as a Share of the Uninsured. 2011. www.hcfo.org/files/hcfo/HCFBriefDec2011.pdf
29. Berk ML, Schur CL. The effect of fear on access to care among undocumented Latino immigrants. *J Immigr Health*. 2001; 3(3):151–156. <https://doi.org/10.1023/A:1011389105821>. [PubMed: 16228780]
30. Berk ML, Schur CL, Chavez LR, Frankel M. Health care use among undocumented Latino immigrants. *Health Aff (Millwood)*. 2000; 19(4):51–64. <https://doi.org/10.1377/hlthaff.19.4.51>. [PubMed: 10916960]
31. Cavazos-Rehg PA, Zayas LH, Spitznagel EL. Legal status, emotional well-being and subjective health status of Latino immigrants. *J Natl Med Assoc*. 2007; 99(10):1126–1131. [PubMed: 17987916]
32. Echeverria SE, Carrasquillo O. The roles of citizenship status, acculturation, and health insurance in breast and cervical cancer screening among immigrant women. *Med Care*. 2006; 44(8):788–792. <https://doi.org/10.1097/01.mlr.0000215863.24214.41>. [PubMed: 16862042]
33. Fuentes-Afflick E, Hessol NA. Immigration status and use of health services among Latina women in the San Francisco Bay Area. *J Womens Health (Larchmt)*. 2009; 18(8):1275–1280. <https://doi.org/10.1089/jwh.2008.1241>. [PubMed: 19627243]

34. Maldonado CZ, Rodriguez RM, Torres JR, Flores YS, Lovato LM. Fear of discovery among Latino immigrants presenting to the emergency department. *Acad Emerg Med*. 2013; 20(2):155–161. <https://doi.org/10.1111/acem.12079>. [PubMed: 23406074]
35. Nandi A, Galea S, Lopez G, Nandi V, Strongarone S, Ompad DC. Access to and use of health services among undocumented Mexican immigrants in a U.S. urban area. *Am J Public Health*. 2008; 98(11):2011–2020. <https://doi.org/10.2105/AJPH.2006.096222>. [PubMed: 18172155]
36. Sadowski D, Devlin M, Hussain A. Better care at safety net providers? Utilization of recommended standards of diabetes care for rural Latinos in one Midwestern state. *J Health Care Poor Underserved*. 2011; 22(3):995–1013. <https://doi.org/10.1353/hpu.2011.0067>. [PubMed: 21841292]
37. Appel A, Everhart R, Mehler PS, MacKenzie TD. Lack of ethnic disparities in adult immunization rates among underserved older patients in an urban public health system. *Med Care*. 2006; 44(11):1054–1058. <https://doi.org/10.1097/01.mlr.0000228017.83672.c3>. [PubMed: 17063138]
38. Heintzman J, Bailey SR, Cowburn S, Dexter E, Carroll J, Marino M. Pneumococcal Vaccination in Low-Income Latinos: An Unexpected Trend in Oregon Community Health Centers. *J Health Care Poor Underserved*. 2016; 27(4):1733–1744. <https://doi.org/10.1353/hpu.2016.0159>. [PubMed: 27818435]
39. U.S. Government. [Accessed June 10, 2016] Grants for Community Health Centers: 51c Sect. 3031. 1976. www.ecfr.gov/cgi-bin/text-idx?SID=4655ec57c96e5c9d9a016de226b0bb7c&node=42:1.0.1.4.27&rgn=div5#se42.1.51c_1
40. Office of Disease Prevention and Health Promotion. [Accessed November 21, 2016] Healthy people 2020: HDS-6. Increase the proportion of adults who have had their blood cholesterol checked within the preceding 5 years. www.healthypeople.gov/2020/topics-objectives/topic/heart-disease-and-stroke/objectives
41. Bailey SR, O'Malley JP, Gold R, Heintzman J, Likumahuwa S, DeVoe JE. Diabetes care quality is highly correlated with patient panel characteristics. *J Am Board Fam Med*. 2013; 26(6):669–679. <https://doi.org/10.3122/jabfm.2013.06.130018>. [PubMed: 24204063]
42. O'Malley JP, O'Keefe-Rosetti M, Lowe RA, et al. Health Care Utilization Rates After Oregon's 2008 Medicaid Expansion: Within-Group and Between-Group Differences Over Time Among New, Returning, and Continuously Insured Enrollees. *Med Care*. 2016; 54(11):984–991. <https://doi.org/10.1097/MLR.0000000000000600>. [PubMed: 27547943]

Figure 1.

Adjusted relative odds of receiving a screening lipid test during the 5-year study period by race-ethnicity/insurance groups stratified by CHC utilization (number of visits).
NHW, non-Hispanic white

Figure 2.

Among obese Latinos (N=2,696), adjusted relative odds of receiving a screening lipid test during the 5-year study period by preferred language stratified by CHC utilization (number of visits).

Table 1

Patient Characteristics by Race-Ethnicity/Insurance Groups (Column %)

Demographic	Non-Hispanic white Insured (n=5,911)	Non-Hispanic white Uninsured (n=2,488)	Latino Insured (n=1,219)	Latino Uninsured (n=1,477)	Overall <i>p</i> -value
Female	4,091 (69.2)	1,409 (56.6)	925 (75.9)	991 (67.1)	<0.001
Age (in years) at study initiation					<0.001
21–30	1,496 (25.3)	635 (25.5)	444 (36.4)	391 (26.5)	
31–40	1,466 (24.8)	595 (23.9)	373 (30.6)	560 (37.9)	
41–50	1,432 (24.2)	763 (30.7)	198 (16.2)	306 (20.7)	
51–60	1,038 (17.6)	457 (18.4)	120 (9.8)	153 (10.4)	
61–64	218 (3.7)	32 (1.3)	34 (2.8)	29 (2)	
>65	261 (4.4)	6 (0.2)	50 (4.1)	38 (2.6)	
Insurance status					N/A
Ever private	703 (11.9)	0 (0)	210 (17.2)	0 (0)	
Only public	5,208 (88.1)	0 (0)	1,009 (82.8)	0 (0)	
Uninsured at every encounter	0 (0)	2,488 (100)	0 (0)	1,477 (100)	
Language					<0.001
English	5,452 (92.2)	2,426 (97.5)	506 (41.5)	224 (15.2)	
Spanish	9 (0.2)	23 (0.9)	704 (57.8)	1,248(84.5)	
Other	450 (7.6)	39 (1.6)	9 (0.7)	5 (0.3)	
Office visits from 2009–2013					<0.001
1	702 (11.9)	819 (32.9)	150 (12.3)	329 (22.3)	
2–5	1,636 (27.7)	1,117 (44.9)	366 (30)	618 (41.8)	
>5	3,573 (60.4)	552 (22.2)	703 (57.7)	530 (35.9)	
Lipid panel					<0.001
Never	1,959 (33.1)	1,329 (53.4)	491 (40.3)	602 (40.8)	
Once	1,598 (27)	792 (31.8)	340 (27.9)	452 (30.6)	
More than once	2,354 (39.8)	367 (14.8)	388 (31.8)	423 (28.6)	
Hypertension					<0.001
Diagnosis	2,726 (46.1)	866 (34.8)	348 (28.5)	334 (22.6)	
Diabetes					<0.001
Diagnosis	1,416 (24)	352 (14.1)	267 (21.9)	313 (21.2)	

Demographic	Non-Hispanic white Insured (n=5,911)	Non-Hispanic white Uninsured (n=2,488)	Latino Insured (n=1,219)	Latino Uninsured (n=1,477)	Overall <i>p</i> -value
Heart disease					<0.001
Diagnosis	528 (8.9)	104 (4.2)	50 (4.1)	32 (2.2)	
Lipid disorder					<0.001
Diagnosis	2,598 (44)	641 (25.8)	369 (30.3)	435 (29.5)	

Notes: Boldface indicates statistical significance ($p < 0.05$). *P*-value estimated from chi-square test.

N/A, not applicable