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Public Health Services Use in Latin America and the Caribbean

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Executive Summary. This *Insights* report examines individual-level factors that predict the use of public health services in 23 Latin American and Caribbean countries, which were surveyed via the 2014 AmericasBarometer. Across the region, there is significant variation in the percentage of citizens who access public health services. I find that women, those with a greater number of children, those living in rural areas, those who receive government assistance, and those who are poorer are more likely to use public health services. In addition, those who engage in their societies in other ways (e.g., voting) are more likely to access health services. Further, satisfaction with public health services is significantly related to public health care access: those who are more satisfied with its quality are more likely to access a public health service. These findings highlight important factors that governments might take into account when considering improvements to public health care access.

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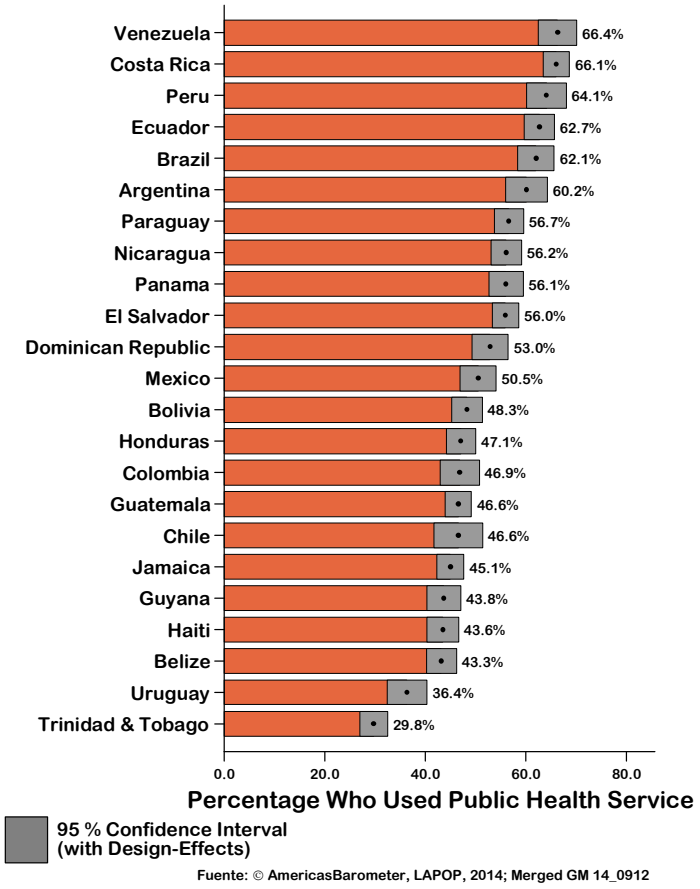
The provision of public healthcare services is an important function for many governments. The availability of public health services plays a key role in ensuring the health-related wellbeing of citizens. Moreover, the public health sector is one of the many tangible services provided by the government that citizens can evaluate, thereby shedding light on one aspect of the government's effectiveness. Prior research has shown that countries in some parts of the Americas fare poorly in comparison with other regions worldwide in terms of equitable outcomes in public health systems (Wallace and Gutiérrez 2005, 394).

A first step to understanding the public's relationship to government-provided healthcare services in the Americas is to assess the characteristics of individuals who currently are more likely to use public health services. Such an analysis can identify factors that governments can consider when seeking to bolster citizen access to these services as part of any effort to extend or improve government provision of social services.

In this *Insights* report[1], I present an analysis of the factors that predict reported citizen usage of public health services. Using data from the 2014 AmericasBarometer survey[2], I focus my research and analyses on the following question, asked of 39,246[3] respondents in 23 countries[4]:

Figure 1. Percent Accessing Public Health Services, 2014



EXC15: Have you used any public health services in the last twelve months?

Figure 1 shows the percentages of people who report using public health services over the last twelve months in 23 countries, based on the

[1] Prior issues in the *Insights* Series can be found at: http://www.vanderbilt.edu/lapop/insights.php.
The data on which they are based can be found at http://www.vanderbilt.edu/lapop/survey-data.php.

[2] Funding for the 2014 round mainly came from the United States Agency for International Development (USAID). Important sources of support were also the Inter-American Development Bank (IADB) and Vanderbilt University. This *Insights* report is solely produced by LAPOP and the opinions expressed are those of the author and do not necessarily reflect the point of view of USAID or any other supporting agency.

[3] **EXC15** is a two-part question. The first part is shown and analyzed here. The second part asks about bribe solicitation and is only asked of those who respond "yes" to the first part (that is, the filter). I code as health care users those who continued on to answer the bribery question (that is, those who say "yes" to the first part of EXC15) and I code as non-users those who did not continue on to answer the bribery question. I exclude respondents who indicated that they did not know or did not answer the bribery question.

[4] For the purposes of this analysis, which specifically examines the Latin American and Caribbean regions, I omit data from the United States and Canada. This decision is typical of many *Insights* reports. At the time of writing this report, data from three countries included in the 2014 AmericasBarometer were not yet available for analysis.

2014 AmericasBarometer. The estimated percentage of citizens using public health services in each respective country is denoted by a dot, and the shaded grey areas indicate the 95% confidence interval around that value. There is significant variation in the percentages of citizens who had recently (in the last year) used public health services: the rates of use range from 66.4% of those surveyed in Venezuela to a mere 29.8% of those surveyed in Trinidad & Tobago. In some ways, the cross-national distribution of responses to this survey question is interesting and perhaps surprising: the figure indicates that 46.6% of those surveyed in Chile, a "high income" country in comparison with the rest of the Latin American region (World Bank 2014a), used public health services, which is nearly identical to the rate of use in Haiti, a "low income" country (World Bank 2014b). Venezuela and Costa Rica are also economically disparate countries with very different political systems, yet their populations' use of public health services is similar at 66.4% and 66.1%, respectively. Despite the cross-national differences, statistical analysis reveals that little of that variation is due to country characteristics.[5] Evidently, there are socioeconomic, demographic, and other individual-level factors that should be explored in order to understand what predicts the use of public health services in Latin American and the Caribbean countries.

Who Uses Public Health Services?

There are a number of individual characteristics that could make one more or less likely to use public health services. In this section, I assess the influence of age, gender, skin tone, urban/rural residence, years of education, and household wealth on the use of public health services.[6]

Previous research suggests that the elderly are more likely to use public health services than those in younger age cohorts because of their greater medical needs (Wallace et al. 2005, 405). McGuire suggests an important connection between women and their children's health (2010, 30). It could thus be expected that on average, women might be more likely to use public health services than men due to their childcare responsibilities, as well as for their own prenatal, childbirth and postnatal care. According to the literature, skin tone[7] is a factor in the Americas that can subject an individual to a significant amount of societal discrimination, potentially having important implications for the use of public health services. Uhlmann et al. find that "preference for light skin and prejudice against dark skin is strongest in Latin America" (2002, 200). Additionally, Perreira and Telles relate the fact that "darker-skinned individuals report poorer physical, mental, and infant health outcomes than lighter-skinned individuals" (2014, 248). The implications of skin-tone are cross-cutting, in that those with darker skin tones might be

[5] Calculating the intraclass correlation shows that only 4.1% of the variance in health services usage is attributable to country-level characteristics; for this reason I focus on individual-level predictors in this report.

[6] Household income is also expected to be a significant predictor of the use of health services according to a broad survey of the literature (Makinen, Waters, Rauch, Almagambetova, Bitran, Gilson, McIntyre, Pannarunothai, Prieto, Ubilla, and Ram 2000; World Bank 2004, 136-137; Regidor, Martínez, Calle, Astasio, Ortega, and Domínguez 2008; Jankovic, Simic, and Marinkovic 2009); however, I focus on household wealth in place of household income because survey respondents tend to be more reluctant to report household income than household assets, leading to significant non-response rates for the income measure. For a more detailed discussion of the formation of the wealth index used as a variable in this report, see Córdova (2009).

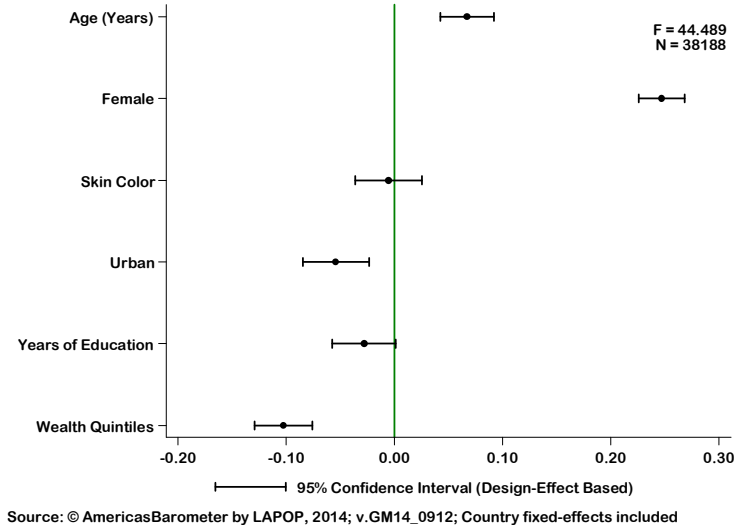
[7] This variable is based upon the **COLORR** question in the survey. This measure is unique in that interviewers discretely use a standardized color palette to determine the number on a scale from 1 to 11 that most closely matches the interviewee's skin color, with 1 representing the lightest skin tones and 11 representing the darker skin tones. The question in the survey is: "When the interview is complete, WITHOUT asking, please use the color chart and circle the number that most closely corresponds to the color of the face of the respondent."

more marginalized[8] and thus less likely to access public services but, at the same time, might face greater needs.

In a study conducted in Greece, researchers found that being located in urban (versus rural) areas provides individuals with a greater availability of public health services (Lahana, Pappa, and Niakas 2011). Thus, it might follow that in Latin America and the Caribbean, the same pattern holds, and a reasonable expectation is that provided with greater sources of public health services, urban residents might be more likely than rural residents to access such services. Jankovic et al. (2009, 394) find that higher levels of education predict use of public health services in their research in Serbia, due to the tendency that education instills in individuals to seek health care when necessary. The same logic could apply to Latin America and the Caribbean. Finally, wealth is a variable that previous scholarship suggests can lead to either greater or lesser use of public health services. On the one hand, some research conducted by the World Bank notes that richer groups are associated with higher use of public health services than are poor groups (2004, 136-137). On the other hand, others identify a tendency among wealthier groups towards the private over the public health sector for certain services (World Bank 2004, 136-137; Regidor et al. 2008).

To assess the relevance of these variables – age, gender, skin tone, urban residence, education, and wealth – on access to public health care in the Americas in 2014, I conduct a logistic regression analysis. Figure 2 presents the results. The dots represent estimated standardized coefficients and bars represent the 95% confidence interval for each estimate. If the dot and its corresponding bar fall to the left of the zero line, then the relationship between the independent and dependent variables is interpreted to be both statistically significant and negative; however, if the dot and the bars fall to the right of the zero line, then the relationship between the socioeconomic and demographic predictors and the use of public health services is interpreted to be both positive and statistically significant.

Figure 2. Socioeconomic and Demographic Predictors of Use of Public Health Services, 2014



The results show that being female has a positive and statistically significant effect on the use of public health services, consistent with the expectations mentioned above. Age has a similarly positive relationship, consistent with findings noted in previous scholarship, although its effect is not as strong as that of gender. Skin tone is not a significant predictor of the use of public health services, which may confirm that the cross-cutting effects of discrimination and marginalization, on the one hand, and need, on the other hand, cancel each other out on average.

[8] Indigenous identity is a factor that is also important to consider with respect to skin tone, as those who identify as indigenous often have darker skin tones than those who do not identify as such. Those who identify as indigenous are often excluded from many important social services (Lucero 2011); this supports the notion that darker skin tone may be negatively correlated with the use of public health services.

Interestingly, being an urban resident has a negative, statistically significant, effect on the use of public health services in the Americas, which means that those in rural areas are more likely to access public health care services. This result goes against the earlier-stated expectations found in the literature. A possible explanation for the incongruence between those expectations and the results is the notion that those who live in rural settings tend to be poorer; have less ability to seek and additionally less access to private services; and thus have little choice but to use public services when they need to seek health care. An article from *The Economist* discusses the health care landscape in Brazil, in which poorer groups "live in remote rural areas" and "must either pay out of pocket or take their chances in crowded hospital emergency rooms" (Health care in Brazil 2011). However, the article also notes, "private provision mainly covers a rich and young minority" (Health care in Brazil 2011). The article is perhaps microcosmic of the region as a whole. Thus, in the Latin America and Caribbean region, where spending on public health care surpasses that of private health care (Davies and Mazza, 7; Suárez-Berenguela and Vigil-Oliver 2012, 1), it appears that the fact that rural residents are more likely to use public health services than urban residents can be explained by lack of alternative (private) options in rural areas across the Americas.

Also contrary to the expectations derived from my examination of the literature, education is not statistically significant in terms of predicting the use of public health services in the Americas. Household wealth has a comparatively substantial negative and statistically significant relationship with the use of public health services. Likely due to the availability of private options (World Bank 2004, 136-137; Regidor et al. 2008), those who are wealthier are much less likely to access public health services in the Americas than those who are poor.

Additional Socioeconomic and Demographic Factors as Predictors of Use of Public Health Services

In order to further test which factors predict the use of public health services in the Latin America and Caribbean region, I examine four additional individual-level variables and test their relationship with reported use of public health services. These variables are the number of children that an individual has; receipt of government assistance; whether he or she voted; and satisfaction with public health services.

The number of children that an individual has[9] is expected to influence the use of public health services in a positive way, as those with more children are likely to need to seek care more often than those who either have fewer children or do not have children at all.[10] The dependency of children on their parents, especially for health care, would logically influence an individual's need to seek public health services; as McGuire suggests, parents tend to "care for their children in ways that promote health" (2010, 30).

In addition, considering a second variable associated with the need to seek health services, I expect receipt of government assistance[11] to positively correlate with use of public health services, especially given the subsidized nature of public health systems and

[9] The corresponding survey question is **Q12**, which states, "Do you have children? How many?"

[10] There is an additional question in the survey, **Q12Bn**, which states, "How many children under the age of 13 live in this household?" I also tested this variable in place of the **Q12** variable in Figure 2, and the results were nearly identical.

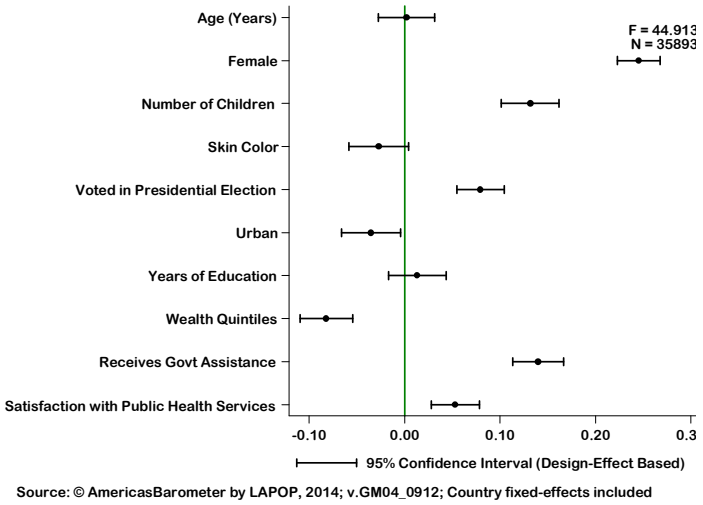
[11] The corresponding survey question is **WF1**: "Do you or someone in your household receive regular assistance in the form of money, food, or products from the government, not including pensions/social security?" For the purposes of this analysis, I recoded the responses with 0 indicating no welfare received, and 1 indicating welfare is received.

care in the Americas. Conditional cash transfer programs are a form of welfare that is particularly common in Latin America, and receipt of this government aid is actually conditional upon compliance with using certain social services, public health services included (Rawlings 2004, 1).

I also expect indicators of societal engagement to matter. In this case, I examine whether or not a person votes,[12] and I expect it to influence the use of public health services in a positive way. Intuitively, engagement in one aspect of society should translate into participation in other aspects, and if one votes, he or she might be likely to also engage and use social services provided by the government, like public health services.[13]

Finally, I examine the relationship between satisfaction with public health services and access. I expect that satisfaction with public health services[14] might be positively related to the use of public health services, given the fact that if one is satisfied with the public health services available, he or she is more likely to use those services than a dissatisfied individual. However, there is a second way in which such a relationship could be interpreted: it may be that individuals who access public health services find them effective and report greater satisfaction with the quality of those services compared to those who have not had first-hand experience. Given the nature of the analyses in this report, it is only possible to assess whether there is a significant relationship between satisfaction and use, recognizing that such a relationship could be the result of more than one causal process.

Figure 3. The Effect of Individual-Level Factors on the Use of Public Health Services



Source: © AmericasBarometer by LAPOP, 2014; v.GM04_0912; Country fixed-effects included

Using a logistic regression model similar to that of Figure 2, I test the relationship of the variables just mentioned with use of public health services. The model presented in Figure 3 includes these four new variables in addition to the six variables presented in Figure 2. As before, the dots represent the estimated standardized coefficients and the bars represent the 95% confidence interval for those estimates.

The effects for the gender, skin tone, urban resident, years of education, and quintiles of wealth variables are unchanged with the addition of these four new individual-level factors; however, the effect of age, which was previously statistically significant, is now statistically insignificant, which may suggest that some of its effects are mediated by the variables that are newly included in Figure 3.

Figure 3 reveals that the number of children, consistent with the above expectations, has a

[12] The coding for the voting variable was based on the **VB2** survey question, which reads, "Did you vote in the last presidential election?" The responses were recoded, with 0 indicating that the respondent did not vote, and 1 indicating that the person voted.

[13] McGuire also points out that "considerable evidence is found to suggest that democracy is associated with the more widespread utilization of a range of basic social services" (2010, 51). Thus, it could be that a country-level variable such as the level of democracy may have a positive correlation with access of services such as health care.

[14] **SD6NEW2**, "And the quality of public medical and health services? Are you.." is the survey question from which I recoded the responses. On my scale, 0 indicates dissatisfied or very dissatisfied with the quality of public health services, and 1 indicates satisfied or very satisfied.

positive association with the use of public health services. Furthermore, receipt of government assistance, voting, and satisfaction with public health services each have a positive and statistically significant relationship with the use of public health services, also consistent with earlier-stated expectations.

Conclusion

In this report, I use data from the 2014 AmericasBarometer to examine ten individual-level factors that predict the use of public health services in the Americas.

In the Latin America and Caribbean region, women; respondents with (more) children; respondents who reported voting in the last presidential election; recipients of government assistance; and those who are satisfied with public health services are the most likely to use public health services. Conversely, urban residents and the wealthy are among those less likely to use public health services in the Americas. Age, skin tone, and years of education appear to have no statistically significant relationship with the use of public health care.

Urban residents and the wealthy are among those less likely to use public health services in the Americas.

The scope (and, quality) of access to public health services in Latin America and the Caribbean is important, for it is a measure of governmental provision of an important social service. Citizens' experiences with public health care may have important political implications. By attempting to access and using public health services, citizens have one mean by which to evaluate the ability of the government to effectively deliver social services.

If governments wanted to increase the percentage of their citizens using public health services, they might focus their efforts on females and individuals with children, in addition to engaging those already involved in other ways with the government, such as those who vote and those who receive welfare. These types of individuals appear, according to the analyses presented here, as obvious candidates for the use of public health care services in the Americas. On the other hand, the negative relationship of urban residency and wealth to the use of public health services suggests there may be a need to improve the quality of and access to public health services as well.

My results also highlight important questions for future research. In order to further examine other individual-level socioeconomic and demographic factors and their relationship with the use of public health services, it would be worth considering an individual's location within the economy (e.g., formal or informal sector and extent of employment or job security). Such an analysis could provide further insight into the types of groups most likely to use public health services. It would also be interesting to consider whether having to pay a bribe to access health services decreases the likelihood an individual attempts to secure such care. Finally, further research might explore the specific services that individuals are accessing when they use public health services. Such research could provide ways to extend the account of citizen usage of public health care that has been provided here in this report.

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Appendix

Table 1. Predictors of Use of Public Health Services, 2014

	Coefficient	**t**	**Coefficient**	**t**
Quintiles of Wealth	-0.103*	-7.52	-0.082*	-5.88
Years of Education	-0.028	-1.88	0.013	0.86
Urban Resident	-0.054*	-3.46	-0.035*	-2.22
Skin Tone	-0.005	-0.35	-0.027	-1.70
Female	0.247*	22.72	0.245*	21.53
Age (Years)	0.067*	5.32	0.002	0.13
Satisfaction with Public Health Services			0.047*	3.47
Receipt of Government Assistance			0.146*	10.26
Voting			0.080*	6.32
Number of Children			0.132*	8.57
Guatemala	-0.040*	-2.19	-0.034	-1.87
El Salvador	0.031	1.66	0.034	1.84
Honduras	-0.034	-1.74	-0.026	-1.33
Nicaragua	0.038	1.95	0.039*	1.98
Costa Rica	0.122*	6.11	0.125*	6.26
Panama	0.054*	2.69	0.056*	2.72
Colombia	-0.025	-1.20	-0.027	-1.31
Ecuador	0.103*	5.22	0.104*	5.17
Bolivia	-0.025	-0.92	0.011	0.43
Peru	0.111*	4.92	0.110*	4.84
Paraguay	0.047*	2.43	0.053*	2.65
Uruguay	-0.117*	-5.23	-0.078*	-3.47
Chile	-0.028	-1.10	-0.012	-0.47
Brazil	0.093*	4.37	0.096*	4.46
Venezuela	0.133*	5.90	0.137*	6.02
Argentina	0.077*	3.33	0.109*	4.54
Dominican Rep.	0.018	0.89	0.012	0.60
Haiti	-0.069*	-3.41	-0.056*	-2.75
Jamaica	-0.040*	-2.12	-0.024	-1.28
Guyana	-0.062*	-2.97	-0.053*	-2.52
Trinidad & Tobago	-0.272*	-8.41	-0.242*	-7.33
Belize	-0.066*	-3.32	-0.068*	-3.41
Constant	0.005	0.30	0.077*	4.71
F	*44.49*		*44.91*	
Number of Observations	*38,188*		*35,893*	

* p<0.05

Note: Coefficients with an asterisk are statistically significant at p<0.05, two-tailed.
Country of Reference: Mexico