# Original Report: Public Health

# Assessing the Likelihood of Having a Regular Health Care Provider among African American and African Immigrant Women

Fatema Binte Ahad, MPP<sup>1</sup>; Cathleen D. Zick, PhD<sup>2</sup>; Sara E. Simonsen, PhD, CNM, MSPH<sup>3</sup>; Valentine Mukundente<sup>4</sup>; France A. Davis<sup>5</sup>; Kathleen Digre, MD<sup>6</sup>

**Objective:** Immigrants, especially refugees, face unique barriers to accessing health care relative to native born Americans. In this study, we examined how immigration status, health, barriers to access, and knowledge of the health care system relate to the likelihood of having a regular health care provider.

**Methods:** Using logistic regression and data from a community-based participatory study, we estimated the relative likelihood that an African immigrant woman would have a regular health care provider compared with an African American woman.

**Results:** Immigrant status remains a powerful predictor of whether a woman had a regular health care provider after controlling for covariates. African immigrants were 73% less likely to have a regular health care provider than were otherwise similar African American women.

**Conclusion:** Expanding health care educational efforts for immigrants may be warranted. Future research should examine how cultural beliefs and time in residence influence health care utilization among US immigrants. *Ethn Dis.* 2019;29(2):253-260; doi:10.18865/ed.29.2.253

**Key Words:** African Immigrants; Health Care Provider; Health Literacy; Primary Care; Access; Refugee

 <sup>1</sup> Office of Institutional Research, Assessment and Planning; University of Massachusetts, Boston, Massachusetts
<sup>2</sup> Department of Family and Consumer Studies; University of Utah; Salt Lake City, Utah

<sup>3</sup> Department of Nursing, University of Utah; Salt Lake City, Utah

<sup>4</sup> Best of Africa, West Valley, Utah

### **INTRODUCTION**

Identifying and working with a regular health care provider can be an important factor in maintaining adult health. Recent studies have shown that individuals who have a primary health care provider incur fewer tests and have lower health care costs.<sup>1</sup> In addition, patients with a primary care physician have lower five-year mortality risks than patients whose source of usual care is a specialist<sup>2</sup> and they report relatively higher levels of patient satisfaction.<sup>3</sup>

Despite the positive associations between having a regular health care provider and adult health, only three in four Americans have a regular health care provider.<sup>4</sup> This figure masks considerable racial disparities, as one study found only 62% of African American adults have a regular health care provider compared with 77% of White Non-Hispanics.<sup>5</sup> These disparities exist despite the higher rates of chronic disease faced by African Americans (compared with non-Hispanic Whites).<sup>5</sup> Contributing factors to these differences likely include racial differences in trust of health care providers<sup>6,7</sup> and barriers to accessing care.

Data that distinguish health care utilization by race may also mask considerable differences between immigrant and native-born members of the same race. Health data on US immigrants are rarely stratified by country or region of origin. Instead, immigrant data are typically grouped broadly using a designation such as foreign-born.

Recent research has noted the absence of studies focusing specifically on US African immigrants.<sup>8</sup> Yet, in 2015, there were more than two million African immigrants living in the United States. Among all US immigrants, African immigrants have had the fastest rate of growth in recent years with a 41% increase in their US population between 2000 and 2013.<sup>9</sup> Approximately 22% of those immigrants were granted admission to the United States on humanitarian grounds because their refugee status.<sup>10</sup>

The social dimension of health

<sup>&</sup>lt;sup>5</sup> Calvary Baptist Church, Salt Lake City, Utah

<sup>&</sup>lt;sup>6</sup> Department of Neurology, Ophthalmology and Ob Gyn; University of Utah; Salt Lake City, Utah

Address correspondence to Cathleen D. Zick, PhD; 225 South 1400 East, Rm. 228, University of Utah. 801.581.3147 zick@fcs. utah.edu

status and health care needs for African immigrant refugees remains a largely unexplored area of inquiry. Adjustment to living in a new country after relocation can alter social and behavioral health factors.<sup>11</sup> For example, while anxiety and depression have been found to be common in African immigrants, especially refugees, mental health care may not be

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sought due to the stigma.<sup>12</sup> Refugee immigrants may be a more vulnerable population compared with US-born African Americans, as they may have poorer physical, psychological and/or social health, while lacking access to health care.<sup>13,14</sup> African immigrants likely face unique barriers to health care relative to African Americans, including language barriers, limited knowledge of the US health care system, cost, insurance, and access to transportation.<sup>12,15-17</sup> While some African immigrant groups are typically proficient in English,<sup>18</sup> others, such as refugees, who have had little or no exposure to English may find language to be a serious barrier.<sup>11</sup> This suggests that analyses of immigrant health issues should control for English language proficiency whenever possible.

While the existing literature provides important considerations on aspects of health care access and barriers, there are many questions still unanswered. Our study builds on previous studies by examining how immigration status, health status, barriers to access, and health literacy relate to the likelihood of having a regular health care provider in a group of women residing in urban Utah. We compare self-reported data from immigrant women from one region in Africa and African American women.

## **M**ETHODS

Data for this study came from the Coalition for a Healthier Community for Utah Women and Girls' (CHC-UWAG) study, a health intervention study targeted at improving the health behaviors of women and their families through the use of a gender-informed community wellness coaching program. Baseline interview data collected prior to intervention exposure were used for these analyses. Participants in the larger study included women aged ≥18 years who self-identified as African American, African Immigrant, American Indian/Alaskan Native, Hispanic/Latina, and Pacific Islander and who spoke English, Spanish, or Kirundi. The study was approved by the University of Utah's Institutional Review Board and the Indian Health Service Phoenix Area Institutional Review Board.

For the current investigation, we used data from the African American and African immigrant groups. There were 103 African American and 84 African immigrant women who completed the baseline survey. The African immigrant women arrived in Utah as refugees from Rwanda, Burundi, and the Democratic Republic of the Congo. These countries have had turbulent political, social, and economic circumstances over the past few decades that have contributed to a growing diaspora.<sup>19-20</sup> While the immigrant women in this study initially arrived in the United States as refugees, they prefer to be identified as immigrants and thus we use that term throughout the remainder of the article.

Women who were pregnant (n=7), aged  $\geq 65$  years (n=14), or had missing data on key measures (n=1) were excluded from analysis. Our final study size was thus 165. Immigrant women had the opportunity to take the survey in either English or Kirundi. Seventy-one of the 78 African immigrant women completed the survey in Kirundi. Thus, we could not construct a meaningful variable to differentiate among the African immigrant women based on English proficiency. All African American participants took the survey in English.

We explored how socio-demographics and health status, health literacy, and health care barriers mediated the observed relationship

Variable	Total, N=165	African Immigrants, %, N=78	African Americans, %, N=87	Bivariate Difference Test
Age				
18-39	48.48	64.10	34.48	$\chi^2 = 14.45^a$
40-64	51.52	35.90	65.52	
Marital status				
Not married	58.79	51.28	65.52	$\chi^2 = 3.44$
Married	41.21	48.72	34.48	
Education				
≤ High school	35.15	56.41	16.09	$\chi^2 = 29.33^{a}$
>High school	64.85	43.59	83.91	
Employment				
Not employed	40.61	57.69	25.29	$\chi^2 = 17.91^a$
Employed	59.39	42.31	74.71	
Mean number of children, aged <18 yrs	1.63	2.72	.66	t=-9.29 <sup>a</sup>
Mean number of adults, aged $> 64$ yrs	.84	.11	.057	t=-1.04
Self-assessed health				
≥Good	63.03	55.13	20.69	χ <sup>2</sup> =20.93 <sup>a</sup>
<good< td=""><td>36.97</td><td>44.87</td><td>79.31</td><td>K</td></good<>	36.97	44.87	79.31	K
BMI				
≥25.0	75.76	32.05	17.24	χ <sup>2</sup> =4.91 <sup>a</sup>
<25.0	24.24	67.95	82.76	X
Tobacco use		07.00	020.0	
No	94.55	97.44	91.95	$\chi^2 = 2.40$
Yes	5.45	2.56	8.05	χ 2.10
High blood pressure	5.15	2.50	0.05	
Yes	22.42	5.13	37.93	χ <sup>2</sup> =25.44
No	77.58	94.87	62.07	χ 23.11
PHQ-2 depression score	77.50	51.07	02.07	
$\geq 2.0$	56.36	43.59	67.82	χ <sup>2</sup> =9.81 <sup>a</sup>
<2.0	43.64	56.41	32.18	χ = 5.01
Person most likely to get information to make health	45.04	50.41	52.10	
decisions				
Self	72.73	60.26	83.91	$\chi^2 = 11.60^a$
Other household member	27.27	39.74	16.09	X
Mean health literacy score (range 4-20)	15.42	12.51	18.03	t=9.43ª
Health insurance				
Private	47.27	15.38	75.86	$\chi^2 = 63.89^{a}$
Medicaid / Medi-Cal	37.58	65.38	12.64	Y course
No insurance	15.15	19.23	11.49	
Good public transit access	.5.15			
Yes	68.48	65.38	71.26	χ <sup>2</sup> =.66
No	31.52	34.62	28.74	v .00
Has a regular health care provider?	51.52	51.02	20.7 T	
Yes	62.42%	42.31%	80.46%	$\chi^2 = 25.52^{a}$
No	37.58%	57.69%	19.54%	λ -23.32
	57.50/0	57.05/0	19.97/0	-

Table 1. Descriptive statistics of study population, N=165

between group membership and the likelihood of having a regular health care provider. Our outcome variable was based on responses to the survey question, "Do you have a regular health care provider (primary care provider) that you see for regular care?" We utilized logistic regression analysis to predict the likelihood of having a regular health care provider as a function of immigrant status using a mediation model. In the first model, we controlled only for socio-demographic factors. In the second model, we controlled for health status measures, health literacy, and possible barriers to health care access that may have mediated the relationship between immigrant status and having a regular health care provider. Review of collinearity diagnostics revealed no causes for concern about possible multicollinearity. All analyses were conducted in SAS 9.3.

For other variables examined, we used a health literacy scale as the sum of respondents' answers to four questions that each had a 5-point scale. The questions were: 1) How often do you have problems learning about your medical conditions because of difficulty understanding written information? 2) How often do you need to have someone help you read hospital materials or papers you receive from your doctor or clinic? 3) How confident are you filling out medical forms by yourself? 4) How confident are you in following directions your doctor or health care provider gives you? Higher scores indicate greater self-assessed health literacy. To assess public transit access, we asked participants whether they strongly agreed, somewhat agreed, neither agreed nor disagreed, somewhat disagreed or strongly disagreed with the statement, "Bus and/or Trax [light rial] lines are easily available." Those women who responded that they somewhat agreed or strongly agreed were coded as having good access to public transit. For depression, we used the Patient Health Questionnaire-2 (PHQ-2), a validated two-item depression screener with a scoring range of 0-6.21

## RESULTS

Descriptive information about the two groups used in the analyses appears in Table 1. African immigrant women differed significantly from African American women on several socio-demographic characteristics. In particular, the immigrant women were younger, less educated, less likely to be employed outside of the home, and had more minor children in the

Slightly more than 80% of the African American women reported having a regular health care provider compared with only 42% of the African immigrant women.

home than their African American counterparts. We also observed striking differences in their health measures. While the African immigrant women were less likely than the African American women to rate their health as good or better, they were also relatively less likely to report having high blood pressure and less likely to be overweight or obese (ie, to have a body mass index (BMI) > 25.0). In terms of health-related knowledge, the African immigrant women had lower levels of health literacy and a smaller proportion reported they were the individual responsible for gathering information to guide health care decisions for their families. Finally, while both groups were equally likely to report having good access to public transit, the African immigrant women were more likely to be uninsured. Immigrant women's higher probability of being uninsured and lower levels of health literacy may both serve as greater barriers to accessing regular health care compared with their African American counterparts.

We observed significant differences in the likelihood of having a regular health care provider between the two groups. Slightly more than 80% of the African American women reported having a regular health care provider compared with only 42% of the African immigrant women.

After controlling for socio-demographic characteristics, immigrant status remained a powerful predictor of having a regular health care provider (Table 2). In this model, African immigrant women were 89% less likely (OR=.11, CI=.04-.32) to report having a regular health care provider compared with African American woman. When we added the measures of health status, health literacy, and barriers to access in Model 2, the estimated odds changed only modestly to 73% less likely (OR=.27, CI=.08-.91).

We observed interesting relationships between health literacy and having a regular health care provider. For each additional one-point increase on the health literacy scale, the likelihood of having a regular health care provider increased by 15%. In addition, women who reported being responsible for gathering information to guide family health care decisions were more likely to have a regular health care provider compared with

Independent Variables	Model 1		Model 2	
	Odds Ratios	95% CI	Odds Ratios	95% CI
African immigrant, 1=yes	.11 <sup>b</sup>	.0432	.27 <sup>b</sup>	.0891
Age 18-39, 1=yes	.28 <sup>b</sup>	.1360	.35 <sup>b</sup>	.1489
Married, 1=yes	.72	.34-1.55	.69	.28-1.68
>High school education, 1=yes	1.84	.78-4.33	3.92 <sup>b</sup>	1.35-2.70
Employed, 1=yes	1.08	.49-2.41	1.01	.37-2.70
Number of children < Age 18	1.23	.94-1.60	1.47 <sup>b</sup>	1.08-2.01
Number of adults > Age 64	2.50	.72-8.71	3.50	.83-14.77
Self-assessed health ≥Good, 1=yes			.45	.15-1.37
BMI >25.0, 1=yes			2.19	.83-5.73
Tobacco use, 1=yes			5.78	.56-59.77
High blood pressure, 1=yes			8.57 <sup>b</sup>	1.45-50.73
PHQ-2 depression score $\geq 2.0$			.41°	.15-1.17
Person in household most likely to get information to make health decisions is respondent, 1=yes			.32 <sup>b</sup>	.1189
Health Literacy Scale, range 4-20			1.11 <sup>b</sup>	1.02-1.30
Medicaid or Medi-Cal health insurance, 1=yes <sup>a</sup>			.20 <sup>b</sup>	.0670
No health insurance, 1=yes <sup>a</sup>			.30 °	.08-1.06
Access to good public transit, 1=yes			1.20	.46-3.17
Model $\chi^2$	44.59 <sup>b</sup>		73.40 <sup>b</sup>	

b. P<.05. c. P<.10.

those without that responsibility.

Finally, access to public transportation did not facilitate having a regular health care provider. However, having private health insurance clearly reduced access barriers relative to having Medicaid or no health insurance. Women with Medicaid or Medi-Cal were 75% less likely than their counterparts with private insurance to have a regular health care provider, while those with no health insurance were 66% less likely.

## DISCUSSION

In this study, African immigrant women, who arrived in the United States as refugees, had statistically significant differences in many attributes that past studies have linked to greater health care barriers and poorer utilization compared with African American women. These included socio-demographic differences in age, education, employment status and number of minor children. In addition, the African immigrant women differed in their health-related measures as captured by BMI, high blood pressure, health insurance coverage, and health literacy. But most importantly, they differed in their likelihood of having a regular health care provider and this difference persisted in multivariate analyses that controlled for socio-demographics and various health-related measures that approximate barriers to health care access, suggesting that these factors had little mediating effect.

Our findings should be viewed in light of our study limitations. Women who participated in the study were not randomly sampled. Rather, they likely agreed to participate because they wanted to improve their health behaviors. Thus, women in both groups may have been more likely than non-participants to have had a regular health care provider, making our estimates conservative. Additionally, while the survey included questions about several health conditions, we were only able to control for high blood pressure because of the low frequency of reporting other conditions. Finally, information on the duration of time the immigrant women had been in the United States was not collected and its omission may have biased our estimates.

We found that 80% of the African American women in our study had such a provider compared with

only 42% of African immigrant women. These percentages are especially alarming given that our study group consisted of women who were likely highly motivated to improve their health. Traditional racial/ethnic categories used in larger surveys<sup>22</sup> do not allow for such nuanced distinctions in group membership. Yet, we observed potentially important differences in several factors by differentiating between African Americans and African immigrants rather than using the more general racial classification scheme of "Black non-Hispanic." Thus, we conclude that when trying to identify the underlying forces that may be contributing to health disparities, attention to more detailed classifications of race/ ethnic/group identities may be key.

We also uncovered differences in health literacy and health insurance coverage that appeared to contribute modestly to the group disparity in having a regular health care provider. The relative difference in health literacy is not surprising given that the African immigrant women have had less exposure to the US health care system and face language barriers. The explanation for the impact of health insurance is more complicated and relates to public policy.

The African immigrant women in our sample are more likely to have Medicaid than African American women because of structural policy factors. Specifically, refugees who enter the United States are eligible for Medicaid coverage provided by the Refugee Financial Assistance for eight months after their date of entry.<sup>23</sup> After eight months, they may stay on Medicaid if other eligibility criteria are satisfied since "qualified non-citizens" (ie, refugees) are exempted from the five-year waiting period Medicaid eligibility rule that non-refugee immigrants face.<sup>24</sup> Alternatively, they may enroll in other health insurance programs, if available through their employer.

If we take African refugee immigrants' greater likelihood of having Medicaid as a given, it raises two possible explanations for the observed results. First, African immigrants navigating the Medicaid insurance system have spent less time in the United States than their African American counterparts and thus are more likely to have less experience with this system, Therefore, they may be somewhat unsure of how to find a health care provider and how Medicaid coverage works. Moreover, they may fear the burden of unknown health care costs. In addition, refugee immigrant women may find access to information challenging as the resources of the resettlement agencies are limited, preventing them from providing support for a long period of time. Second, studies have found that primary care physicians are less inclined to accept Medicaid patients,<sup>25</sup> typically because of low Medicaid reimbursement rates but also because of the additional time spent on Medicaid paperwork.<sup>26</sup> Thus, even if women with Medicaid insurance want to identify a regular health care provider, it may be challenging to find one.

## CONCLUSION

In summary, we observed relatively large, statistically significant differences in the odds of having a

regular health care provider by group membership. Given the growth in African refugee immigrants to the United States in recent years,<sup>9-10</sup> the negative consequences associated with not having a regular health care provider are likely to grow. Other research has suggested that African immigrant women may view health differently<sup>12</sup> and this may lead them to downplay the value of having a regular health care provider. At the same time, researchers have found that African immigrants have different chronic disease risk profiles than African Americans.<sup>27</sup> Taken in combination, these findings suggest that more health care educational efforts directed at immigrants may be warranted, especially for those who came to the United States because of humanitarian considerations. Attention to such factors as time since arrival as a refugee in the United States, assimilation challenges, trust in the health care system, and beliefs associated with health care utilization should be given both educational and research priority going forward.

Our findings are also consistent with the proposition that, when it is possible, health-related analyses should go beyond race/ethnicity segmentation or grouping all immigrants together in a category labeled foreign-born. Our understanding of health care utilization broadly could be enhanced by undertaking more focused analyses of specific racial, ethnic, and cultural groups.

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#### Likelihood of a Health Care Provider - Ahad et al

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### Conflict of Interest

No conflicts of interest to report.

#### Author Contributions

Research concept and design: Ahad, Zick, Simonsen, Mukundente, Davis, Digre; Acquisition of data: Simonsen, Mukundente, Davis; Data analysis and interpretation: Ahad, Zick, Simonsen, Davis; Manuscript draft: Ahad, Zick, Simonsen, Davis, Digre; Statistical expertise: Ahad, Zick; Acquisition of funding: Simonsen, Digre; Administrative: Simonsen, Mukundente, Davis, Digre; Supervision: Simonsen, Davis, Digre

#### References

- Friedberg MW, Hussey PS, Schneider EC. Primary care: a critical review of the evidence on quality and costs of health care. *Health Aff (Millwood)*. 2010;29(5):766-772. https://doi.org/10.1377/hlthaff.2010.0025 PMID:20439859
- Franks P, Fiscella K. Primary care physicians and specialists as personal physicians. Health care expenditures and mortality experience. *J Fam Pract.* 1998;47(2):105-109. PMID:9722797
- 3. Fenton JJ, Jerant AF, Bertakis KD, Franks P. The cost of satisfaction: a national study

of patient satisfaction, health care utilization, expenditures, and mortality. *Arch Intern Med.* 2012;172(5):405-411. https:// doi.org/10.1001/archinternmed.2011.1662 PMID:22331982

- 4. Patients' Perspectives on Health Care in the United States: A Look at Seven States and the Nation. NPR/Robert Wood Johnson Foundation/Harvard TH Chan School of Public Health, publishers. February 2016. Last accessed March 7, 2019 from https://www. rwjf.org/en/library/research/2016/02/patientsperspectives-on-health-care-in-the-unitedstates.html
- The Kaiser Family Foundation. Eliminating Racial/Ethnic Disparities in Health Care: What Are the Options? October 2008. Last accessed March 7, 2019 from https://www.kff.org/ disparities-policy/issue-brief/eliminatingracialethnic-disparities-in-health-care-what/
- Arnett M, Thorpe R Jr, Gaskin D, Bowie J, LaVeist T. Race, medical mistrust, and segregation in primary care as usual source of care: findings from the Exploring Health Disparities in Integrated Communities Study. *J Urb Health;* 2016; 93(3); 456-467. PMCID: PMC4899337, https://doi.org/10.1007/ s11524-016-0054-9
- Halbert CH, Armstrong K, Gandy OH Jr, Shaker L. Racial differences in trust in health care providers. *Arch Intern Med.* 2006;166(8):896-901. https:// doi.org/10.1001/archinte.166.8.896 PMID:16636216
- Commodore-Mensah Y, Himmelfarb CD, Agyemang C, Sumner AE. Cardiometabolic health in African immigrants to the United States: a call to re-examine research on African-descent populations. *Ethn Dis.* 2015;25(3):373-380. https://doi. org/10.18865/ed.25.3.373 PMID:26675140
- Anderson M. African Immigrant Population in U.S. Steadily Climbs. FACTTANK – News in Numbers. Washington, DC: Pew Research Center; 2017.
- McCabe K. African Immigrants in the United States. Migration Policy Institute; 2011. Last accessed March 7, 2019 from https://www. migrationpolicy.org/article/african-immigrants-united-states
- Pavlish CL, Noor S, Brandt J. Somali immigrant women and the American health care system: discordant beliefs, divergent expectations, and silent worries. *Soc Sci Med.* 2010;71(2):353-361. https://doi. org/10.1016/j.socscimed.2010.04.010 PMID:20494500
- Filippi MK, Faseru B, Baird M, Ndikum-Moffor F, Greiner KA, Daley CM. A pilot study of health priorities of Somalis living in Kansas City: laying the groundwork for CBPR. *J Immigr Minor Health*. 2014;16(2):314-320. https://doi.org/10.1007/ s10903-012-9732-1 PMID:23124631

- Derose KP, Escarce JJ, Lurie N. Immigrants and health care: sources of vulnerability. *Health Aff (Millwood)*. 2007;26(5):1258-1268. https://doi.org/10.1377/ hlthaff.26.5.1258 PMID:17848435
- 14. Argeseanu Cunningham S, Ruben JD, Narayan KM. Health of foreign-born people in the United States: a review. *Health Place*. 2008;14(4):623-635. https://doi. org/10.1016/j.healthplace.2007.12.002 PMID:18242116
- Shipp MP, Francis S, Fluegge K, Asfaw S. Perceived health issues: A perspective from East-African immigrants. *Health, Culture* and Society. 2014;6(1):13-32. Last accessed March 7, 2019 from https://doi.org/10.5195/ HCS.2014.113
- 16. Mirza M, Luna R, Mathews B, et al. Barriers to healthcare access among refugees with disabilities and chronic health conditions resettled in the US Midwest. *J Immigr Minor Health*. 2014;16(4):733-742. https:// doi.org/10.1007/s10903-013-9906-5 PMID:24052476
- Chaumba J. Health status, use of health care resources, and treatment strategies of Ethiopian and Nigerian immigrants in the United States. *Soc Work Health Care*. 2011;50(6):466-481. https://doi.org/10.1080/ 00981389.2011.581999 PMID:21774587
- Okafor M-TC, Carter-Pokras OD, Picot SJ, Zhan M. The relationship of language acculturation (English proficiency) to current selfrated health among African immigrant adults. *J Immigr Minor Health.* 2013;15(3):499-509. https://doi.org/10.1007/s10903-012-9614-6 PMID:22488117
- Mahecic A. United States to open doors to thousands of Burundian refugees. Washington, DC: UNHCR (UN Refugee Agency) News; 2006. Last accessed March 7, 2019 from https://www.unhcr.org/news/ latest/2006/10/45365a5c4/united-statesopen-doors-thousands-burundian-refugees. html
- Resettlement Service Division of International Protection, UNHCR Projected Global Resettlement Needs, 2011. Geneva: UN HCR. 2011. Last accessed March 7, 2019 from https:// www.unhcr.org/4c31e3716.pdf
- Kroenke K, Spitzer RL, Williams JB. The Patient Health Questionnaire-2: validity of a two-item depression screener. *Med Care*. 2003;41(11):1284-1292. https://doi. org/10.1097/01.MLR.0000093487.78664.3C PMID:14583691
- US Census Bureau. Current Population Survey, 2014 and 2015: Annual Social and Economic Supplements. 2015. Last accessed March 7, 2019 from https://www.census.gov/programssurveys/saipe/guidance/model-input-data/ cpsasec.html
- 23. Utah Department of Health. Refugee Medicaid. n.d.

## Likelihood of a Health Care Provider - Ahad et al

- 24. Center for Medicare and Medicaid Services. Eligibility for Non-Citizens in Medicaid and CHIP. November 2014. Last accessed March 7, 2019 from https://www.medicaid.gov/ medicaid/outreach-and-enrollment/downloads/overview-of-eligibility-for-non-citizensin-medicaid-and-chip.pdf
- Decker SL. Two-thirds of primary care physicians accepted new Medicaid patients in 2011-12: a baseline to measure future acceptance rates. *Health Aff (Millwood)*. 2013;32(7):1183-1187. https:// doi.org/10.1377/hlthaff.2013.0361 PMID:23836732
- 26. Long SK. Physicians may need more than higher reimbursements to expand Medicaid participation: findings from Washington State. *Health Aff (Millwood)*. 2013;32(9):1560-1567. https:// doi.org/10.1377/hlthaff.2012.1010 PMID:24019360
- Back EE, Bachwani AS, Strogatz DS, Sherman ZM. Profile of diabetes mellitus among immigrants from Guyana: epidemiology and implications for community action. *Ethn Dis.* 2012;22(4):473-478. PMID:23140079