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Profile of the Older Population Living in Miami-Dade County, Florida

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Profile of the Older Population Living in Miami-Dade County, Florida

An Observational Study

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Abstract: Florida has the greatest proportion (19%) of older population (65 years or older) in the United States. The age distribution of its residents, in conjunction with a major shift in the leading cause of death within all age groups from acute illnesses to chronic disease, creates unprecedented health care challenges for the state. The objective of this study is to profile the older population living in Miami-Dade County (MDC) using 3 population-based, household-based surveys conducted over the past 5 years.

This study examined cross-sectional data (demographics, health outcomes, risk factors, health assess, and utilization) collected from probability-sampled, household-based surveys conducted in 3 areas of MDC: north Miami-Dade, Little Haiti, and South Miami. The questionnaire was administered face-to-face by trained interviewers in English, Spanish, French, or Creole. Analyses were restricted to households containing at least 1 member aged 65 years or older (n = 935). One consenting adult answered the questionnaire on behalf of household members.

The mean age of the respondent (60% females) was 60 years. Overall, respondents were predominantly African-Americans, Hispanics, and blacks of Haitian origin. One-third of all households fell below the US poverty thresholds. One-quarter of all households had at least 1 member who was uninsured within the year before the survey. Twenty percent of households had at least 1 member with an acute myocardial infarction or stroke during the year before the survey. Bone density tests and blood stool tests were strikingly underutilized. The health outcomes most prevalent within household members were cardiovascular diseases followed by cancer, anxiety/depression, obesity, asthma, and bone fractures. Twenty percent of households reported having at least 1 current smoker. Overall, emergency rooms were the most commonly used places of care after doctor's offices.

Findings of 3 household-based surveys show a predominantly elderly, female, uninsured, and poor minority populations living in MDC, FL. The reported use of preventive services was constrained, and emergency room use was often reported as a main resource for health care. Cardiovascular disease, cancer, bone fractures, and related risk factors were the most prevalent health outcomes.

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Abbreviations: BST = blood stool test, CI = confidence interval, FIU = Florida International University, HS = high school, HWCOM = Herbert Wertheim College of Medicine, IRB = institutional review board, MDC = Miami-Dade County, NHW = non-Hispanic White, SD = standard deviation, SPSS = Statistical Package for Social Sciences, US = United States.

INTRODUCTION

During the 20th century, effective public health strategies and advances in medical treatment in the United States contributed to a dramatic increase in average life expectancy (78.8 years)[1]; the 30-year gain in life expectancy within the span of a century had never been achieved before.[2] In 2012, about 1 in every 7 Americans (14.1%) is 65 years old or older. By 2030, older adults will account for roughly 20% of the US population.[3] Florida has the greatest proportion of older population (18.7%) as compared with the other states.[4] In Miami-Dade County (MDC), the population of older adults will double from 394,328 in 2015 to 674,264 in 2040.[5] In addition, females outnumber males at older ages in the United States (50.8%), Florida (51.1%), and in MDC (51.4%).[3,4]

In 2010, 80.0% of older adults in the United States were non-Hispanic whites (NHW). By 2030, that percentage will have declined to 71.2%, and Hispanics will make up 12%, non-Hispanic blacks 10.3%, and Asians 5.4% of the older population.[6] By 2050, NHW adults, long deemed the ''majority population,'' will account for approximately 58% of the total population aged 65 years or older, a decline of >20% from 2010.[7] In Florida, NHWs account for approximately 65% of the entire population followed by Hispanics (17%) and African-Americans (16%).[8] In MDC, the race and ethnic diversity are quite different than in the United States or Florida. NHWs comprise only 15.4% of the county population, whereas the majority is either Hispanic (66%) or African-American (19%).[9]

During the past century, a major shift has occurred in the leading causes of death for all age groups, including older adults, from infectious and acute illnesses to degenerative and chronic diseases. People living with ≥1 chronic diseases often experience diminished quality of life, generally reflected by a long period of decline and disability associated with their disease.[10] Two of every 3 older Americans have multiple chronic conditions, and treatment for this population accounts

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for 66% of the country's health care budget.[11] In Florida, 62.6% of adults aged 65 years or older have been told they have high blood pressure and 24.8% were obese in 2013.[12] In MDC, information on the distribution of chronic disease conditions is scarce and usually outdated. For example, the most recent available annual prevalence data of chronic diseases for MDC is 2002.[13] The Florida International University (FIU) Herbert Wertheim College of Medicine (HWCOM) has a strong foundation in the community and supports prevention efforts through its backbone community-based program, the Green Family Foundation Neighborhood HELP (described elsewhere).[14] Through the program, the HWCOM's Department of Medical and Population Health Sciences Research has developed intense and extensive coverage of underserved, underprotected areas in MDC and has conducted 3 population-based surveys that have provided knowledge and needs assessments for these 3 communities. The purpose of this study is to describe the population in 3 areas of interest in MDC for the community programs of the FIU HWCOM between 2009 and 2013, and to provide a profile of the older population living on these areas.

METHODS

Study Population, Sampling, and Participant Recruitment

This study utilized data from random-sample, community-based surveys conducted in 3 areas of MDC, FL: north Miami-Dade, Little Haiti, and South Miami (Figure 1). A 2-stage design was employed. Two strata were used for the first stage (single family homes/townhouse/duplex and multifamily units). Survey design and weighting were applied during data analysis to account for the likelihood of a household being selected. Details of the survey conducted in each study area are briefly discussed below.

North Miami-Dade

Households residing in the most vulnerable communities of the county were surveyed between October 2009 and April 2010: the city of Miami Gardens, a portion of the city of Opa Locka, and areas of Unincorporated Miami-Dade. Households were randomly selected, and were statistically representative of single family homes, duplexes, and mobile homes in the area. Mobile homes were oversampled to increase the power of analyses conducted within mobile home communities. A total of 2334 households were randomly selected, with a survey completion rate of 78.9%. Of the 1845 households that completed the survey, 639 were completed at a replaced address because the original household refused to participate (67.9%), the original house was abandoned (11.6%), or other reasons (20.5%).

Little Haiti

Households residing in 20 US census tracts with a Haitian population of 30% to 49% were surveyed between November 2011 and December 2012. These census tracts approximated the Little Haiti community of MDC. A total of 1798 households residing in single family homes and townhomes were randomly selected using random probability sampling, of which 951 (52.9%) completed the survey, 634 (35.3%) refused participation, and 213 (11.8%) were unreachable. A minimum of 7 attempts to interview a household member were made before deeming a household unreachable, alternating the day of the week and time of day for each attempt.

South Miami

Households residing in 4 US census tracts within close proximity to South Miami Hospital were surveyed between February 2013 and June 2013. The selected census tracts comprised the area of greatest need, as defined by the study's Community Advisory Board. The sampling frame consisted of 1811 households residing in single-family homes and apartment units, from which 753 households (573 single-family homes and 180 apartment units) were randomly selected. Apartment units were oversampled to increase the power of analyses conducted within the units. Of the 753 households selected, 428 (56.8%) completed the survey, 216 (28.7%) refused participation, and 109 (14.5%) were unreachable. A minimum of 7 attempts to interview a household member were made before deeming a household unreachable, alternating the day of the week and time of day for each attempt.

Data Collection

The specific aim of the surveys was to collect baseline household and individual health and wellness indicators for families residing in the study areas. The survey consisted of a 156-item general questionnaire for the areas of north Miami-Dade and Little Haiti; households residing in Little Haiti completed an additional 22-item supplement that was designed to assess the direct and indirect impact of the 2010 Haiti earthquake. Households residing in the area of South Miami completed an extended 162-item general questionnaire. All questionnaires collected data on demographics (age, sex, socioeconomic status), previous health conditions (asthma, cancer, heart disease, and hypertension), risk factors (diabetes, smoking, anxiety and depression, obesity, and lack of physical activity), and health care access and use. The questionnaire was administered face-to-face by a team of 2 trained interviewers in English, Spanish, French, or Creole based on the respondents' preferences. One consenting adult of at least 18 years of age completed the questionnaire on behalf of the entire household.

Ethical Review

All participants underwent an informed consent process and gave written consent for participation. Taking part in the surveys was strictly voluntary and participants were assured of anonymity at all times. Confidentiality of participants was maintained by using deidentified data without any personal identification for all analyses. Although the initial surveys were approved by the FIU institutional review board (IRB), the present study—a secondary analysis of anonymous data—was exempt from IRB review by the FIU IRB under exemption category #4 (''Existing data, documents, and records specimens'').

Study Variables

All demographic and health-related variables were self-reported by the respondent on behalf of the entire household. Respondents provided data on the educational attainment, marital status, and employment status of the head of the household and data on their own age, sex, race/ethnicity, primary language, physical activity, dietary habits, and use of alternative medicines. All other variables were reported at the

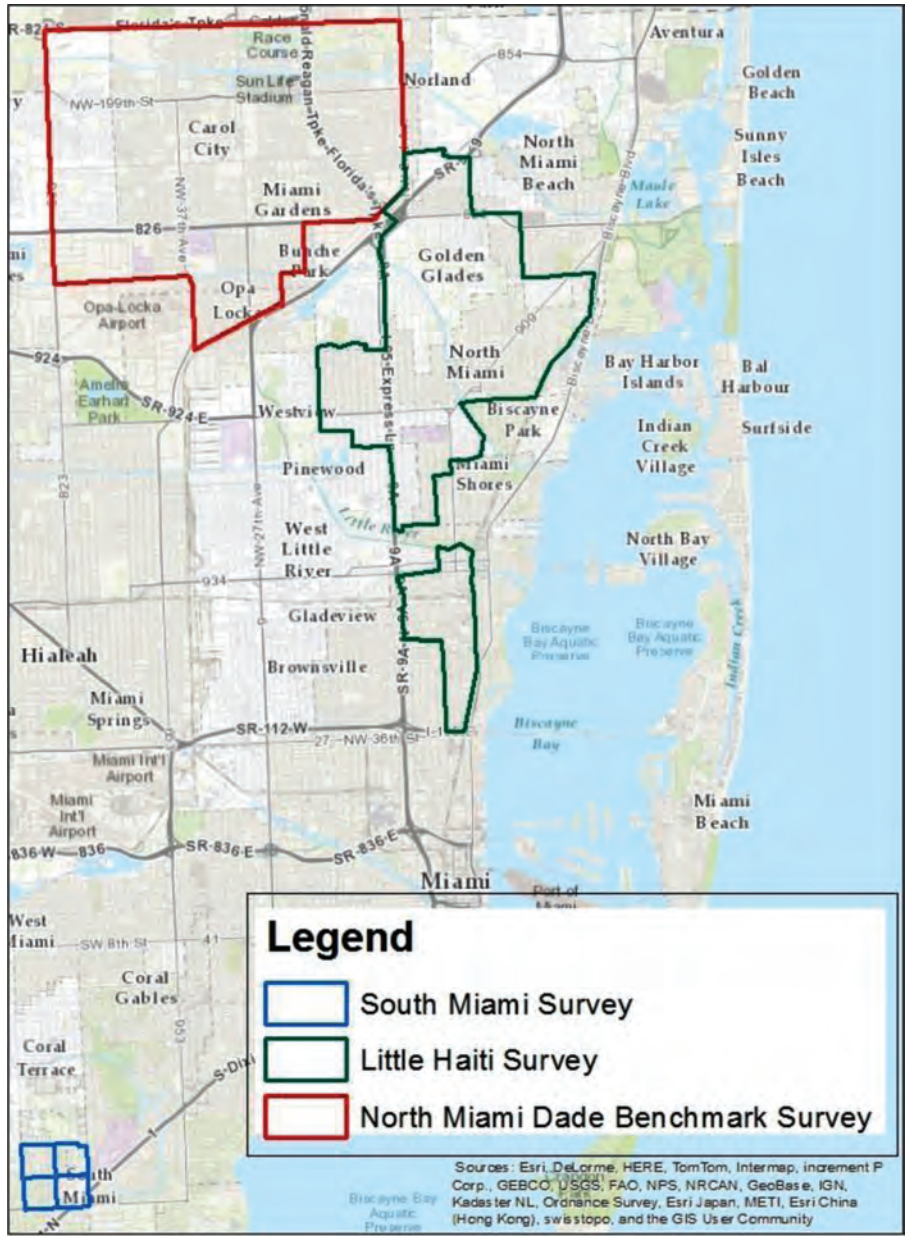

FIGURE 1. Map of 3 survey areas conducted by the department of medical and population health sciences research during 2010 to 2014—Miami-Dade County, Florida, United States.

household-level (eg, ''Has any member of the household. . .''). Poverty was defined using the 2014 US poverty thresholds, which are a function of household income, household size, and the number of children younger than 18 years residing in the household.[15] Households were defined as uninsured if at least 1 household member lacked health insurance at any time within the year before the survey. The surveys collected information on the most recent use of each preventive care service by any household member, or eligible household member for breast, prostate, and colorectal cancer screening. Compliance with each preventive care service was based on recommended guidelines for older adults at the time of the survey. Compliance with physical examination, blood pressure check,[16,17] cholesterol check,[18,19] and dental examination were defined as any household member having had completed the corresponding examination/check within the year before the survey. Households were deemed compliant with breast cancer screening if at least 1 female member had completed a mammogram within the 2 years before the survey.[20] Owing to insufficient evidence on the age in which screening should be initiated and effective screening intervals for prostate cancer,[21] 2 definitions for prostate cancer screening were used: if at least 1 male household member had completed a blood test or rectal examination for prostate cancer within 1 year before the survey, and if at least

1 male household member had ever completed a blood test or rectal examination for prostate cancer. Compliance with the use of blood stool test (BST), one of the recommended screening methods for colorectal cancer screening, was defined as the use of BST by any household member within the year before the survey.[22] Respondents provided data on the use of sigmoidoscopy or colonoscopy by any household member at any point before the survey. Completion of a bone density test was defined as any household member having ever been tested for brittle bones. Health outcomes were defined as the diagnosis of blood pressure, heart attack or heart disease, cancer, diabetes, anxiety or depression, obesity, or asthma within at least 1 household member within the 5 years before the survey. Cigarette smoking was categorized as never, former, and current. Former-smoking households were defined as those in which at least 1 member has tried a cigarette (even a puff or two), but no member has smoked within the 30 days before the survey. Current-smoking households were defined as those in which at least 1 member has tried a cigarette (even a puff or two), and at least 1 member has smoked within the 30 days before the survey.

Statistical Analysis

Analyses were restricted to households that contained at least 1 member aged 65 years or older. Of the 3224 households that completed the survey in the 3 study areas, 935 (29.0%) met this criterion (Figure 2). Data are presented using counts and percentage of total, or prevalence and 95% confidence intervals, stratified by study area. Missing data for household income was high in each study area (north MDC = 33.5%; Little Haiti = 33.7%; South Miami = 35.9%). Missing values were imputed separately for each study area using linear regression models. Predictors were selected using backward elimination with a removal P of 0.20, and included available socioeconomic factors that had the potential to influence income, or those that may be related to nonresponse. Poverty status was computed using both valid and imputed data for income. All analyses were performed using SPSS (Statistical Package for the Social Sciences) version 19.0.0 (SPSS Inc, Chicago, IL).

RESULTS

Demographics

The mean age of the survey respondent was 60 years (Table 1). Respondents from the households in South Miami were slightly older than those from the other study areas. Nearly 3 of 5 respondents were female. Race/ethnicity varied greatly by study area. Overall, there was a predominance of African-American respondents, followed by Hispanic respondents. However, there were half as many Hispanic respondents in South Miami compared with north Miami-Dade and over 6 times as many non-Hispanic white respondents in South Miami compared with north Miami-Dade. Half of the respondents in the Little Haiti area self-identified as Haitian Black. The primary language of the respondent varied by study area as well, with approximately three-fourths of respondents from north Miami-Dade and South Miami speaking English. The proportion of English-speaking respondents from Little Haiti was about half that of the other study areas, with nearly as many respondents speaking Creole as English. Half of all heads of the households had a high school degree or less. Heads of the households from Little Haiti and South Miami were more educated than those from north Miami-Dade. Two of 5 heads of the households were married, whereas nearly one-quarter were single and one-quarter were divorced or widowed. A greater proportion of heads from South Miami were widowed, and fewer were single. Half of all heads of the households were retired, and 1 of 10 was unemployed. A greater proportion of heads from South Miami were retired, and fewer were unemployed. One-third of all households fell below the US poverty thresholds. Poverty was twice as prevalent in Little Haiti and 60% more prevalent in north Miami-Dade compared with South Miami.

Health Care Access and Utilization

One-quarter of all households had at least 1 member who was uninsured at some point within the year before the survey (Table 2). Lack of continuous insurance coverage was greatest in Little Haiti, with twice as many households from Little Haiti compared to South Miami having at least 1 uninsured member. Three of 5 households had at least 1 member who used Medicare as their primary source of health insurance coverage. Approximately 50% more households in South Miami had at least 1 member using Medicare compared to the other 2 study areas. Nearly all households had at least 1 member that visited a doctor within the year before the survey. Among those households, most had at least 1 member that had a regular doctor and the majority had at least 1 member whose regular place of care was a doctor's office or private clinic. Following a doctor's office or private clinic, places of regular care varied by study

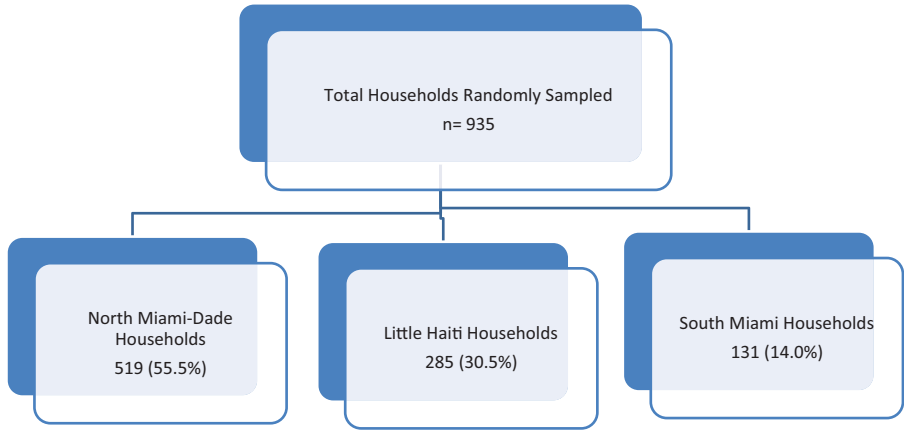

FIGURE 2. Overview of 3 surveys conducted by the department of medical and population health sciences research in households having at least one 65 years and older member during 2010 to 2014—Miami-Dade County, Florida, United States.

TABLE 1. Demographics of Households That Contain At Least 1 Member 65 Years Old and Older, By Study Area (n = 935)—October 2009 to June 2013, Miami-Dade County, Florida, United States

	Community			
Characteristic	**North Miami-Dade n (%) N = 519***	**Little Haiti n (%) N = 285***	**South Miami n (%) N = 131***	**Total n (%) N = 935***
Age of respondent, y				
Mean (SD)	59.7 (18.20)	56.9 (19.35)	66.8 (15.76)	59.8 (18.49)
Median (range)	66 (18–91)	65 (18–89)	70 (19–93)	66 (18–93)
Sex of respondent, % female	299 (57.7)	162 (56.8)	73 (55.7)	534 (57.2)
Race/ethnicity of respondent				
NHW	21 (4.1)	32 (11.3)	35 (26.7)	88 (9.4)
African American	280 (54.2)	43 (15.1)	58 (44.3)	381 (40.9)
Hispanic	158 (30.6)	49 (17.3)	23 (17.6)	230 (24.7)
Haitian black	— (—)	137 (48.2)	— (—)	137 (14.7)
Others	58 (11.2)	23 (8.1)	15 (11.5)	96 (10.3)
Primary language of respondent				
English	361 (70.0)	111 (38.9)	107 (82.3)	579 (62.2)
Spanish	134 (26.0)	45 (15.8)	1 (0.8)	180 (19.3)
Creole	17 (3.3)	124 (43.5)	2 (1.5)	143 (15.4)
Others	4 (0.8)	5 (1.8)	20 (15.4)	29 (3.1)
Education level of head of household				
Less than HS	109 (21.2)	74 (27.2)	26 (20.0)	209 (22.8)
HS or equivalent	183 (35.7)	75 (27.6)	26 (20.0)	284 (31.0)
Vocational/technical or some college	133 (25.9)	55 (20.2)	31 (23.8)	219 (23.9)
Bachelor's degree	48 (9.4)	49 (18.0)	23 (17.7)	120 (13.1)
Master's/doctoral/professional/other	40 (7.8)	19 (7.0)	24 (18.5)	83 (9.1)
Marital status of head of household				
Divorced	67 (12.9)	25 (8.9)	18 (13.8)	110 (11.8)
Married	213 (41.1)	139 (49.3)	49 (37.7)	401 (43.1)
Single	123 (23.7)	67 (23.8)	22 (16.9)	212 (22.8)
Widowed	90 (17.4)	36 (12.8)	34 (26.2)	160 (17.2)
Other	25 (4.8)	15 (5.3)	7 (5.4)	47 (5.1)
Employment of head of household				
Unemployed	60 (11.7)	44 (15.5)	5 (3.8)	109 (11.8)
Employed part-time	29 (5.7)	28 (9.9)	4 (3.1)	61 (6.6)
Employed full-time	136 (26.6)	81 (28.6)	29 (22.3)	246 (26.6)
Retired	287 (56.1)	130 (45.9)	92 (70.8)	509 (55.0)
Household income ($US)				
Under $10,000	67 (13.2)	63 (22.8)	12 (9.3)	142 (15.6)
$10,000–$150,000	433 (85.2)	212 (76.8)	112 (86.8)	757 (82.9)
Over $150,000	8 (1.6)	1 (0.4)	5 (3.9)	14 (1.5)
Below US poverty threshold	170 (33.6)	117 (42.5)	27 (21.1)	314 (34.5)

North Miami-Dade: Households surveyed between October 2009 and April 2010; Little Haiti: Households surveyed between November 2011 and December 2012; South Miami: Households surveyed between February 2013 and June 2013. $US = United States dollars, HS = High SCHOOL, NHW = Non-Hispanic white, SD = standard deviation. Primary language of respondent: 'Other' category includes ''French'' (n = 8), ''Hebrew'' (n = 1), and ''Others'' (n = 20). Marital status: 'Other' category includes the responses ''Living with someone'' (n = 11) and ''separated'' (n = 36). Below US poverty threshold: Calculation is based on the 2014 US poverty thresholds and takes into account reported household income (median of response category), household size, and number of children younger than 18 years residing in the household. (Available at: https://www.census.gov/hhes/www/poverty/data/threshld/).

*Denominator used in the calculation of percentages may not equal the sample size (N) because of nonresponse.

location. The second and third most commonly used place of care in north Miami-Dade was an emergency room and community health center/public clinic, respectively. The opposite was observed in Little Haiti; the second most commonly used place of care was a community health center/public clinic, followed by an emergency room. In South Miami, emergency rooms and hospital outpatient departments were the most commonly used places of care after doctor's offices and private clinics. Among the households that had at least 1 member visiting a doctor within the year before the survey, 1 of 10 had at least 1 member that postponed medical care and at least 1 member that did not fill a prescription within that time.

TABLE 2. Health Care Access and Utilization Among Households That Contain at Least 1 Member 65 Years Old and Older, By Study Area (n = 935)—October 2009 to June 2013, Miami-Dade County, Florida, United States

Characteristic	Community			
	North Miami-Dade n (%) N = 519*	Little Haiti n (%) N = 285*	South Miami n (%) N = 131*	Total n (%) N = 935*
Health insurance, uninsured**	124 (24.3)	102 (37.9)	23 (18.1)	249 (27.5)
Source(s) of health insurance coverage†				
Employer-provided	129 (25.6)	89 (31.6)	39 (30.0)	257 (28.1)
Self-insured	38 (7.6)	13 (4.6)	13 (10.0)	64 (7.0)
Medicare	297 (59.2)	159 (56.4)	112 (86.2)	568 (62.1)
Other government/state	12 (2.4)	7 (2.5)	9 (6.9)	28 (3.1)
Visited a doctor within prior year	496 (95.8)	266 (93.3)	126 (96.2)	888 (95.1)
Regular place(s) of care†,‡				
Doctor's office/private clinic	387 (79.8)	206 (77.7)	110 (88.0)	703 (80.3)
Community health center/ other public clinic	77 (16.3)	54 (20.4)	17 (13.6)	148 (17.2)
Hospital outpatient department	32 (6.8)	11 (4.2)	31 (24.8)	74 (8.6)
Emergency room	113 (23.8)	39 (14.7)	47 (37.6)	199 (23.0)
Other	11 (2.4)	10 (3.8)	2 (1.6)	23 (2.7)
Regular doctor or health professional‡	456 (94.0)	246 (92.8)	120 (96.8)	822 (94.0)
Postponed medical care within prior year‡	67 (13.7)	20 (7.5)	17 (13.5)	104 (11.8)
Postponed needed medical care because of cost‡,§	26 (43.3)	9 (45.0)	4 (25.0)	39 (40.6)
Did not fill prescription within prior year‡	61 (12.6)	22 (8.3)	13 (10.3)	96 (11.0)
Did not fill prescription because of cost‡,‖	32 (59.3)	8 (44.4)	5 (45.5)	45 (54.2)

North Miami-Dade: Households surveyed between October 2009 and April 2010; Little Haiti: Households surveyed between November 2011 and December 2012; South Miami: Households surveyed between February 2013 and June 2013. *Did not fill prescription because of cost*: Missing values, 13.5% (North Miami-Dade: 11.5%; Little Haiti: 13.6%; South Miami: 15.4%).

*Denominator used in the calculation of percentages may not equal the sample size (N) because of nonresponse.

**Characteristic reported for the head of the household.

†Response categories are not mutually exclusive. Respondents were allowed to select multiple responses for the household.

‡Reported only for households who had visited a doctor within the year before the survey.

§Reported only for households who had postponed needed medical care within the year before the survey.

‖Reported only for households who did not fill a prescription within the year before the survey.

Utilization of Preventive Care Services

Nearly 9 of 10 households had at least 1 member that was compliant with annual physical examinations, blood pressure checks, and cholesterol checks (Table 3). Only 6 of 10 households had at least 1 member that had a dental examination within the year before the survey. Among households that had at least 1 female member aged 40 years or older, 8 of 10 had at least 1 female member that was up-to-date with breast cancer screening by means of a biennial mammogram. Among households that had at least 1 male member aged 50 years or older, 6 of 10 had at least 1 male member that had completed an annual blood test or rectal examination to screen for prostate cancer, whereas 8 of 10 had at least 1 male member that had ever completed one of these tests. Half of all households had at least 1 member that was compliant with an annual BST, and nearly 7 of 10 had at least 1 member that had undergone sigmoidoscopy/colonoscopy before the survey, tests that are commonly used to screen for colorectal cancer. Eight of 10 households had at least 1 member that completed either an annual BST or ever underwent sigmoidoscopy/colonoscopy. In 2 of 5 households, at least 1 member had completed a bone density test before the survey to check for brittle bones. The use of these preventive care services were comparable between study areas, with the exception of physical examinations, prostate cancer screening, and use of sigmoidoscopy/colonoscopy, which were approximately 6%, 18% and 34% greater, respectively, among households in South Miami compared with those in the other study areas. Furthermore, completion of a bone density test was approximately 13% lower among households in Little Haiti compared with the other areas. The percentage of missing values was high for breast cancer screening (14.7%), prostate cancer screening (11.6%), annual BST (13.3%), and colorectal cancer screening by either test (10.4%).

Health Outcomes

The most prevalent health outcomes reported by the surveyed households were cardiovascular diseases and associated risk factors (Table 4). One-quarter of all households had at least 1 member who had a heart attack or was diagnosed with heart disease within the 5 years before the survey. Eight of 10 households had at least 1 member that was diagnosed with high blood pressure, whereas 4 of 10 households had at least 1 member that was diagnosed with diabetes mellitus within the 5 years before the survey. Other health outcomes reported by the households included cancer, anxiety or depression, obesity, asthma, and bone fractures, with 11% to 17% of households having at least 1 member diagnosed with at least 1 of these conditions. One-quarter of all households had at least 1 member

TABLE 3. Utilization of Preventive Care Services Among Households That Contain At Least 1 Member 65 Years and Older, By Study Area (n = 935)—October 2009 to June 2013, Miami-Dade County, Florida, United States

	Community			
Characteristic	**North Miami-Dade % (95% CI) N = 519**	**Little Haiti % (95% CI) N = 285**	**South Miami % (95% CI) N = 131**	**Total % (95% CI) N = 935**
Physical examination	83.5 (80.3–86.7)	84.6 (80.3–88.9)	90.1 (84.9–95.3)	84.8 (82.4–87.1)
Blood pressure check	89.6 (87.0–92.3)	85.6 (81.5–89.8)	90.8 (85.8–95.9)	88.6 (86.5–90.6)
Cholesterol check	86.5 (83.5–89.5)	85.3 (81.1–89.5)	90.7 (85.6–95.8)	86.7 (84.5–88.9)
Dental examination	58.3 (53.9–62.7)	58.0 (52.1–63.9)	54.6 (45.9–63.3)	57.7 (54.4–60.9)
Breast cancer screening	84.5 (81.0–88.0)	82.4 (77.2–87.6)	79.6 (71.2–87.9)	83.2 (80.5–86.0)
Prostate cancer screening	65.1 (59.6–70.6)	58.9 (51.1–66.6)	63.5 (52.3–74.7)	63.0 (58.8–67.1)
Colorectal cancer screening				
Blood stool test	49.9 (45.3–54.5)	45.2 (38.7–51.7)	53.4 (44.3–62.5)	49.1 (45.6–52.5)
Sigmoidoscopy/colonoscopy (ever)	64.9 (60.6–69.1)	64.6 (58.8–70.5)	87.0 (81.0–93.0)	67.9 (64.8–71.0)
Either test	81.4 (77.9–85.0)	79.8 (74.7–84.8)	91.0 (85.8–96.1)	82.3 (79.8–84.9)
Bone density test (ever)	46.0 (41.5–50.4)	40.0 (33.9–45.8)	45.5 (36.5–54.5)	44.0 (40.7–47.3)

North Miami-Dade: Households surveyed between October 2009 and April 2010; Little Haiti: Households surveyed between November 2011 and December 2012; South Miami: Households surveyed between February 2013 and June 2013. Physical examination: Defined as any household member having had a physical examination within the year before the survey. Blood pressure check: Defined as any household member having had his/her blood pressure checked within the year before the survey. Cholesterol check: Defined as any household member having had his/her cholesterol checked within the year before the survey. Dental examination: Defined as any household member having had a dental examination within the year before the survey. Breast cancer screening: Households are deemed compliant with screening for breast cancer if at least 1 female member completed a mammogram within 2 years before the survey. Denominator used for percent calculation is the number of households that contain at least 1 female member aged 40 years or older. Missing values, 14.7% (North Miami-Dade: 13.2%; Little Haiti: 16.3%; South Miami: 17.0%). Prostate cancer screening: Households are deemed compliant with screening for prostate cancer if at least 1 male member completed a blood test or rectal examination to screen for prostate cancer within 1 year before the survey. Denominator used for percent calculation is the number of households that contain at least 1 male member aged 50 years or older. Missing values, 11.6% (North Miami-Dade: 10.7%; Little Haiti: 15.1%; South Miami: 7.5%). Blood stool test: Households are deemed compliant with blood stool test if at least 1 member has completed a blood stool test within the year before the survey. Missing values, 13.3% (North Miami-Dade: 10.8%; Little Haiti: 19.3%; South Miami: 9.9%). Colorectal cancer screening, either test: Missing values, 10.4% (North Miami-Dade: 9.6%; Little Haiti: 13.3%; South Miami: 6.9%). CI = confidence interval.

TABLE 4. Prevalence of Health Outcomes Among Households That Contain At Least 1 Member 65 Years Old and Older, By Study Area (n = 935)—October 2009 to June 2013, Miami-Dade County, Florida, United States

	Study Area			
Characteristic	**North Miami-Dade n (%) N = 519***	**Little Haiti n (%) N = 285***	**South Miami n (%) N = 131***	**Total n (%) N = 935***
High blood pressure	410 (79.0)	221 (77.8)	93 (71.5)	724 (78.1)
Heart attack or any heart disease	119 (23.3)	67 (23.8)	32 (24.8)	218 (23.6)
Cancer	67 (13.1)	30 (10.6)	15 (11.6)	112 (12.1)
Diabetes	230 (44.9)	113 (39.9)	34 (26.4)	377 (40.8)
Anxiety or depression	101 (19.7)	30 (10.6)	21 (16.2)	152 (16.4)
Obesity	94 (18.3)	30 (10.6)	16 (12.3)	140 (15.1)
Asthma	96 (18.7)	44 (15.5)	19 (14.6)	159 (17.1)
Physical limitations	138 (26.8)	58 (20.4)	32 (24.4)	228 (24.5)
Mental/emotional limitations	51 (10.0)	17 (6.0)	9 (6.9)	77 (8.3)
Require use of special equipment	149 (28.8)	51 (18.1)	32 (25.0)	232 (25.0)
Bone fractures	71 (14.9)	24 (8.5)	5 (3.8)	100 (11.2)
Tooth loss	266 (53.4)	112 (39.9)	56 (43.4)	434 (47.8)

North Miami-Dade: Households surveyed between October 2009 and April 2010; Little Haiti: Households surveyed between November 2011 and December 2012; South Miami: Households surveyed between February 2013 and June 2013. Require use of special equipment: Defined as any household member having any health problem that requires the use of special equipment, such as a cane, wheelchair, special bed, or special telephone. Bone fractures: Defined as any household member having ever had a wrist fracture, spine fracture, or hip fracture. Tooth loss: Defined as any household member having lost permanent teeth or had teeth removed due to tooth decay or gum disease (includes teeth lost to infection, but not to injury or orthodontics).

*Denominator used in the calculation of percentages may not equal the sample size (N) due to nonresponse.

with physical limitations or a health condition that requires the use of special equipment. Half of all households reported that at least 1 member had lost permanent teeth because of tooth decay or gum disease. High blood pressure, diabetes, and bone fractures were notably less common within households of South Miami compared with the other study areas, whereas anxiety or depression, obesity, and tooth loss were less common within households in Little Haiti.

Health Behaviors

Half of all households reported having at least 1 member that had tried a cigarette in the past; 1 of 5 households contained at least 1 current smoker (Table 5). Cigarette smoking was less prevalent among households in Little Haiti compared to those in the other study areas. Specifically, the proportion of households with at least 1 current smoker was 32% lower in Little Haiti compared to South Miami, and 54% lower in Little Haiti compared to north Miami-Dade. One-quarter of all respondents do not exercise during a typical week. Half of the respondents that exercise during a typical week reported completing more than three 20-minute exercise sessions per week. Exercising >3 times per week was more common among respondents in South Miami; 61% of respondents in South Miami that exercise during a typical week reported exercising >3 times a week. Seven of 10 respondents consumed fruits and/or vegetables at least once a day, on average; daily consumption was approximately 15% greater among respondents in South Miami compared with those in the other study areas. Fourteen percent of respondents drank soda at least once a day; daily consumption of soda was approximately 45% lower among respondents in Little Haiti compared with those in the other study areas. One-third of all respondents reported using alternative medicines, such as herbal vitamins/nutrients, acupuncture, a chiropractor, or a traditional healer or herbalist. Use of alternative medicines was notably greater among respondents in north Miami-Dade compared with those in Little Haiti and South Miami (62% and 116% greater, respectively).

Differences in Demographics, Health Care Access/Utilization, and Health Behaviors by Race/Ethnicity

Differences in education, employment, poverty, regular place of care, and smoking status were observed by race/ethnicity among households in north Miami-Dade. One-quarter of Hispanic households had a head of the household with less than a high school education (27%); this was nearly 60% higher than that of African-American households (17%) and nearly triple that of NHW households (10%) ($P < 0.001$). Unemployment was twice as prevalent among the heads of African-American households (12%) and 3 times as prevalent among the heads of Hispanic households (14%) compared with those of NHW households (5%) ($P = 0.025$). Nearly half of Hispanic households fell below the poverty threshold (45%); this was 55% higher than that of African-American households (29%) and over 4 times that of NHW households (10%) ($P = 0.001$). One-quarter of Hispanic households had at least 1 member who used community health centers or other public clinics as a regular place of care (25%); this was double that of African-American households (13%) and 5 times that of NHW households (5%) ($P = 0.007$). Nearly one-third of NHW and Hispanic households had at least 1 current smoker (33% and 29%, respectively); this was approximately 50% higher than that of African-American households (21%) ($P = 0.009$). (Additional data are available from the author upon request.)

TABLE 5. Health Behaviors Among Households That Contain At Least 1 Member 65 Old and Older, By Study Area (n = 935)—October 2009 to June 2013, Miami-Dade County, Florida, United States

	Study Area			
Characteristic	North Miami-Dade n (%) N = 519*	Little Haiti n (%) N = 285*	South Miami n (%) N = 131*	Total n (%) N = 935*
Cigarette smoking				
Never	231 (45.4)	202 (71.4)	58 (45.0)	491 (53.3)
Former	161 (31.6)	51 (18.0)	51 (39.5)	263 (28.6)
Current	117 (23.0)	30 (10.6)	20 (15.5)	167 (18.1)
Weekly moderate physical activity				
None	134 (26.0)	95 (33.6)	31 (23.7)	260 (28.0)
1–3 times per week	178 (34.6)	93 (32.9)	39 (29.8)	310 (33.4)
More than 3 times per week	203 (39.4)	95 (33.6)	61 (46.6)	359 (38.6)
Daily consumption of fruits/vegetables	354 (69.0)	205 (72.2)	106 (81.5)	665 (71.7)
Daily consumption of soda	87 (16.9)	24 (8.5)	19 (14.5)	130 (14.0)
Use of alternative medicines	212 (41.2)	72 (25.4)	25 (19.1)	309 (33.3)

North Miami-Dade: Households surveyed between October 2009 and April 2010; Little Haiti: Households surveyed between November 2011 and December 2012; South Miami: Households surveyed between February 2013 and June 2013. Cigarette smoking: never-smoking households defined as household in which no member has ever tried a cigarette, not even a puff or 2. Former-smoking households defined as those in which at least 1 member has tried a cigarette, but no member has smoked within the 30 days before the survey. Current-smoking households defined as those in which at least 1 member has tried a cigarette, and at least 1 member has smoked within the 30 days before the survey. Weekly moderate physical activity: Moderate physical activity defined as the frequency of exercising (ie, walking, swimming) for at least 20 minutes in a typical week. Daily consumption of fruits/vegetables defined as the consumption of any fruit and/or green salad at least once a day, on average. Use of alternative medicines includes the use of herbal vitamins/nutrients, acupuncture, chiropractor, or traditional healer (such as a ''Curandero'') or herbalist.

*Denominator used in the calculation of percentages may not equal the sample size (N) due to nonresponse.

In Little Haiti, differences in education, poverty, source of insurance, regular place of care, postponement of medical care, and smoking status were observed by race/ethnicity. One-third of Hispanic and Haitian households had a head of the household with less than a high school education (35% and 35%, respectively); this is more than double that of African-American households (13%) and nearly 12 times that of NHW households (3%) ($P = 0.001$). Poverty was twice as prevalent among Hispanic households (40%) and 3 times as prevalent among Haitian households (57%) compared with NHW and African-American households (19% and 20%, respectively) ($P < 0.001$). Twice as many African-American households had at least 1 member with an employer-provided health insurance (49%) compared with NHW, Hispanic, and Haitian households (25%, 26%, and 28%, respectively) ($P = 0.020$). One-third of NHW households had at least 1 member who used emergency rooms as a regular place of care (29%); this was 38% higher than that of African-American households (21%) and nearly triple that of Hispanic and Haitian households (11% and 10%, respectively) ($P = 0.024$). Postponement of needed medical care by at least 1 household member was 3 times as prevalent among NHW households (19%) compared with African-American and Haitian households (7% and 7%) ($P = 0.019$). A higher proportion of NHW and Hispanic households residing in Little Haiti had at least 1 current smoker (16% and 18%, respectively) compared with African-American and Haiti households (13% and 6%, respectively) ($P < 0.001$).

In South Miami, differences in education, regular place of care, and smoking status were observed by race/ethnicity. One-third of Hispanic households had a head of the household with less than a high school education (35%); this was 35% higher than that of African-American households (26%) and nearly 12 times that of NHW households (3%)($P = 0.002$). Over half of African-American households had at least 1 member that used emergency rooms as a regular place of care (57%); this was nearly triple that of NHW and Hispanic households (21% and 22%, respectively) ($P = 0.001$). A higher proportion of African-American households had at least 1 current smoker (21%) compared with NHW and Hispanic households (6% and 13%, respectively) ($P = 0.018$).

DISCUSSION

Findings of these 3 HWCOM household surveys conducted among 65 years and older population in MDC, FL, describe a diverse, minority population, with high levels of lack of health insurance coverage and poverty. Approximately 1 of 4 households reported having at least 1 individual lacking health insurance coverage during the year before to the survey. This finding is consistent with reports from the United Health Foundation: Florida ranks 48 in the nation in terms of lack of health insurance coverage with 1 of 5 Floridians not having health insurance coverage.[23] In addition, one-third of all households surveyed in our study fell below US poverty thresholds; this is >3 times the proportion of 65 years and older Floridians reported for years 2013 to 2014 by the United Health Foundation.[24]

Use and access to preventive services were high as reported by household respondents across the 3 surveys. Cancer screening rates in the three study areas were comparable to state and national rates.[25–28] In addition, the proportion of households that were compliant with screening for breast and colorectal cancer were nearly equivalent to, if not higher, than the Healthy People 2020 targets of 81.1% and 70.5%, respectively. The second and third most commonly used place of care was an emergency room in north Miami-Dade and Little Haiti, respectively. In South Miami, emergency rooms were the most commonly used places of care after doctor's offices and private clinics. These findings support the fact that a high proportion of patients who do not have a life-threatening condition, lack health insurance coverage and do not have an established primary care physician, often seek care in the emergency room instead of in a more appropriate care setting for their condition. Similarly, according to the CDC, a total of 19.6 million emergency room visits in the United States during 2009 to 2010 were made by persons aged 65 years and older. Most encounters (83%) resulted in treatment and release.[29]

In the 3 surveys, a disproportionate number of respondents reported that household members suffered from chronic diseases, particularly cardiovascular diseases and their risk factors. For example, 8 of 10 households had at least 1 member that was diagnosed with high blood pressure; this is higher than the overall 72% reported by the American Heart Association in 2014 for the 65 years and older US population.[11] In addition, 4 of 10 respondents reported having at least 1 member diagnosed with diabetes within the 5 years before the survey; this is almost double the proportion (25.9%) of US nationals diagnosed with diabetes reported by the National Diabetes Statistics Report in 2014.[30] Other reported chronic diseases included cancer, anxiety/depression, obesity, asthma, and bone fractures, which are similar findings reported in the scientific literature.[31]

Although the distribution of health behaviors varied widely between the 3 surveys, all were reported in higher proportions than in the United States. For example, the overall prevalence of cigarette smoking in the 3 surveys was 18%, which is almost double the 10% of current smokers who are 65 years and older in the United States.[32] Similarly, the overall reported proportion of weekly moderate activity less than 3 times a week was 60.4%, which is higher than the 46% reported by the American Heart Association for a similar age group in the United States.[11]

Strengths and Limitations

This is the first study to profile the older population living in these underserved, minority communities of MDC. The sampling methods used in the 3 surveys resulted in large, random samples of households within each area. Completion rates were high for all 3 surveys and exceptional effort was made to contact unreachable households in attempt to reduce potential selection bias. The main limitation of the study was the use of secondary data collected at the household-level, data that were not primarily collected to study specific issues of older populations. Nonetheless, a large amount of data on demographics, health outcomes, risk factors, and health assess, and utilization were available for analysis. Owing to the sampling unit of the surveys (the household), it is important to note that it cannot be determined which household member(s) had the reported health problems, completed the preventive services, or exhibited the health behaviors presented in this study. In addition, all data were self-reported by a single household member on behalf of the entire household. Accuracy of the responses was not validated. However, self-reported data on health behaviors tend to overestimate the prevalence of healthy behaviors.[33,34] Thus, rates of screening for cancer and other health outcomes in these communities of MDC may be lower than the rates presented in this study, whereas those of unhealthy habits such as smoking may be even higher.

One-third of the households did not provide data on household income; however, missing values were predicted using available socioeconomic variables. Other variables with high percentage of missing data included compliance with breast cancer screening, prostate cancer screening, annual blood stool test, and colorectal cancer screening; and reason for not filling prescriptions. Since the surveys were conducted to the household-level, it cannot be determined whether data on potential predictors of these variables (eg, factors relating to assess and utilization of health services) correspond to the household member(s) who were recommended for these screening tests, or to the member(s) who did not fill a prescription. For this reason, missing data for the aforementioned variables were not imputed. By excluding these missing data, it is assumed that they are missing at random. Lastly, generalizability of the findings of this study to other populations aged 65 years or older should be done with caution given the intrinsic limitations to the cross-sectional design, self-reporting, and the household-based approach, especially when comparing to individual-level data from state and national surveys.

Limited health access, high prevalence of chronic diseases, and poor health behaviors were common among the older populations of north Miami-Dade, Little Haiti, and South Miami. Large differences in risk factors, preventive measures, and healthy lifestyle were observed between South Miami and the other 2 communities. These differences may be at least partly explained by higher educational attainment and employment status of the head of the household, and the overall greater household income in the South Miami community compared to north Miami-Dade and Little Haiti. There is a need for additional research relating to these health outcomes (eg, subgroup analyses and identification of determinants of specific outcomes), and subsequent development of targeted interventions that aim to improve the health of the older populations living in these underserved, minority communities. Comprehensive efforts should be made to improve health care assess and strengthen behavioral changes that will ultimately improve chronic disease conditions, such as timely efforts to diagnosis, treat, and follow-up on chronic disease.

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